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APPENDIX A



MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding (MOU) is between the Boys & Girls Clubs of Greater Sacramento (hereinafter referred to as BGCSAC) and Capital College and Career Academy (hereinafter referred to as CAPCCA) collectively referred to as the Parties. It is expressly understood and agreed to by all Parties as follows:

PURPOSE

This MOU establishes a collaboration consisting of the above-mentioned Parties whose purpose is to develop, maintain, and sustain programs that are innovative and participatory, while offering CAPCCA students the opportunity to participate in BGCSAC programming.

OBJECTIVE

To provide CAPCCA community school students the opportunity to foster teamwork, participation, leadership, healthy lifestyles, and citizenship through continued outreach and after school enrichment opportunities. The Parties' primary interest is for teens to participate and learn in a fun supportive after-school atmosphere while engaging in new opportunities and fostering resources to support them in their efforts to graduate while positively moving forward in their lives.

TERM

The MOU will commence on _____ and will be in effect on a month-to-month basis until _____. The term will renew automatically on an annual basis unless otherwise terminated according to the terms of the MOU.

TERMINATION

The MOU may be terminated, at any time, by either Party with a 30-day written notice of intent to terminate.

ROLES AND RESPONSIBILITIES

Roles & Responsibilities – Boys & Girls Clubs of Greater Sacramento

- Provide a dedicated classroom (to accommodate no more than 25 students at one time) on Tuesdays & Thursdays from 8am-3:30pm.
- Location of classroom to be at the Boys & Girls Clubs of Greater Sacramento's Thomas P. Raley Teen Center (1117 G St. Sacramento, CA 95814).
- Provide internet access.
- Provide restroom access for staff and students.

- Provide a locked space to allow CAPCCA to store materials on site.
- Provide custodial services to the utilized classroom.
- Provide BGCSAC opportunities and assistance to all CAPCCA students enrolled.

Roles & Responsibilities – CAPCCA

- Provide month-to-month compensation in the amount of \$2,000.
- Ensure that no more than 25 staff/students are in the facility at one time.
- Agree to all CAPCCA staff who work at BGCSAC complete BGCSAC background checks prior to being admitted to the facility.
- Ensure that all CAPCCA staff/students are COVID vaccinated.
- Designate two (2) staff to assume responsibility to open and monitor the facility until BGCSAC arrives.
- Enroll all attending students in the BGCSAC program at the Thomas P. Raley Center and compensate BGCSAC for student's membership fees (\$20 per student).

INDEMNIFICATION

BGCSAC agrees to indemnify, defend and hold harmless CAPCCA, its officers, agents, and employees from and against any and all claims, demands, damages, costs, expenses of whatever nature including court costs and attorney's fees arising out of or resulting from the wrongful acts or negligence of BGCSAC's members, agents, employees, or students. It is understood that such indemnity shall survive the termination of the agreement.

CAPCCA agrees to indemnify and hold harmless BGCSAC and its Board of Directors, officers, agents, and employees from and against any and all claims, demands, damages, costs, expenses of whatever nature including court costs and attorney's fees arising out of or resulting from the wrongful acts or negligence of SCOEs members, agents, employees, or students. It is understood that such indemnity shall survive the termination of the agreement.

PAYMENT PROVISIONS

As compensation for services rendered under this Agreement, BGCSAC shall be entitled to receive compensation from CAPCCA in the amount of \$2,000 monthly. BGCSAC shall provide invoices for payment to occur on the 1st of each month to be paid by CAPCCA in accordance with CAPCCA standard practices and procedures.

NOTICE

Any notice demand, request, consent, or approval that either party hereto may or is required to give the other pursuant to this agreement or by law shall be in writing and shall be either personally delivered or sent by certified mail, addressed as follows:

To: BGCSAC
Kimberly Key, CEO
Boys & Girls Clubs of Greater Sacramento
5212 Lemon Hill Ave. Sacramento, CA 95824
kkey@bgcsac.org

To: CAPCCA
Kevin Dobson, Executive Director
Capital College & Career Academy
114 Santiago Ave. Sacramento, CA 95815
kdobson@capcca.org

INDEPENDENT AGENTS

This MOU is by and between two independent agents, CAPCCA and BGSAC, and is not intended to and shall not be construed to create the relationship of agent, servant, employee, partnership, joint venture and/or association between the two independent agents.

FINGERPRINTING/BACKGROUND CHECKS/TB TESTING

Each party is responsible for conducting criminal background checks on employees by submitting fingerprint cards to the California Department of Justice. Each party shall provide documentation to the other party that employees working with youth have been cleared per policies & procedures of each organization. In addition, all staff are required to have a current TB test on file.

INSURANCE

CAPCCA and BGSAC shall each carry during the term of this MOU comprehensive general liability insurance in an amount of not less than \$2,000,000 per occurrence. CAPCCA shall provide a certificate of insurance naming Boys & Girls Clubs of Greater Sacramento as an additional insured party.

AMENDMENTS

This MOU constitutes the entire agreement and understanding of the parties. All prior understandings, terms or conditions are deemed merged into this MOU. Any changes to this MOU must be agreed to in writing by both parties.

NONDISCRIMINATION

Any service provided by either party pursuant to this Agreement shall be without discrimination based on the actual or perceived race, religious creed, color, national origin, nationality, ethnicity, ethnic group identification, ancestry, age, marital status, pregnancy, physical or mental disability, medical condition, genetic information, gender, gender identity, gender expression, sex, or sexual orientation, in accordance with all applicable Federal and State laws and regulations.

AUTHORITY

The individuals executing this MOU have the capacity and are authorized to execute this agreement as the representatives of their respective party, and to bind their respective party to the terms of this MOU. This MOU may be executed in counterparts.

Kimberly Key, CEO

Boys & Girls Clubs of Greater Sacramento

Date

Kevin Dobson, Executive Director

Capital College & Career Academy

Date

**Officers**

Deborah Rubens, Chair
Kristina Launey, Past Chair
John Lockwood, Vice Chair
Ed Unwin, Treasurer
Steve Barrilleaux, Secretary

Board Members

Ashil Abhat
Robert Bonner
Julianne Campbell
Mike Frame
Zach Hatch
Bindu Jaduram
Maggy Krell
Khaim Morton
Ted Wolter
Becky Vierra

BOARD OF TRUSTEES

Gordon Beatie
Tim Fry
Rob Miller
Fred Teichert
John Lenkt

tdeceased

CEO

Kimberly Key

Mission

To inspire and enable all young people, especially those who need us most, to reach their full potential as productive, caring and responsible citizens

Administrative Offices

Teichert Branch
5212 Lemon Hill Ave.
Sacramento, CA 95824
Ph: (916) 392-1350
Fx: (916) 392-1835
www.bgcsac.org

Federal Tax ID: 68-0338324

May 18, 2021

Sacramento County Office of Education
10474 Mather Blvd.
Mather, CA 95655

To Whom It May Concern,

I have had the opportunity to talk with Kevin Dobson, Executive Director of CCCA about the opportunity to partner with the Boys & Girls Clubs of Greater Sacramento.

The Club's Teen Center is located in the heart of Downtown Sacramento at 1117 G Street and is within blocks of light rail. We are happy to consider allocating space at the Boys & Girls Club for a CCCA resource center. It is my understanding that the space would be utilized on Tuesdays and Thursdays between 8:00AM-3:30PM.

Locating a resource center at the Boys & Girls Club would allow students to have access to a wide range of Club programs at the conclusion of their school day. We appreciate the opportunity to partner with CCCA.

Please let me know if you have any questions at all.

Thank you,

A handwritten signature in black ink that reads "Kimberly Key".

Kimberly Key
CEO
kkey@bgcsac.org



Chair of the Board

Alana Mathews, Esq.
Prosecutors Alliance California

Vice Chair

Kimberly Bedford
Intel Corporation

Past Chair

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Ángelica Balderas
Entravision

George Claire
VSP-The Shop

Catherine Cardoza Conner
Conner Investments

Sierra Garrett
Girl Scout & Student

Fawzia Keval, Ed.D.
Elk Grove Unified School District

Robin Kren
Community Volunteer

LeShelle May
CNN, Turner Communications

Lynne Meredith
Superior Court of California,
County of Stanislaus

Kate Reid
Intel Corporation

Stacey Shelnut-Hendrick
Crocker Art Museum

CEO
Linda E. Farley, Ed.D.

May 12, 2021

Sacramento County Office of Education
10474 Mather Blvd.
Mather, CA 95655

To Whom It May Concern:

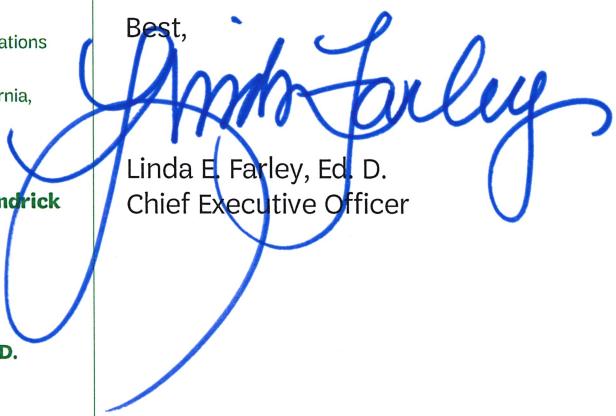
Girl Scouts Heart of Central California has been in conversations with Kevin Dobson, Executive Director of Capital College and Career Academy (CCCA) concerning the use of our Sacramento Program Center for an Academy Resource Center.

We have a 25,000 square foot building at 6601 Elvas Avenue that includes office space, a kitchen, restroom and shower facilities, meeting rooms and a STEM Center and MakerSpace. We are within blocks of light rail and down the street from the west entrance to CSUS.

We offer our space to Girl Scout troops throughout the area and are happy to consider a portion of our space for CCCA and its students. It is our understanding that the anticipated need of this resource space is Tuesdays and Thursdays between 8:00 am and 3:30 pm.

Please let me know if you have any questions. I am happy to discuss our consideration with you. I can be reached at linda.farley@girlscoutshcc.org.

Best,


Linda E. Farley, Ed. D.
Chief Executive Officer

APPENDIX B

California Department of Transportation

OFFICE OF THE DIRECTOR
P.O. BOX 942873, MS-49 | SACRAMENTO, CA 94273-0001
(916) 654-6130 | FAX (916) 653-5776 TTY 711
www.dot.ca.gov



May 28, 2021

Mr. Kevin Dobson
Executive Director
Capital College and Career Academy
114 Santiago Avenue
Sacramento, CA 95815

Dear Mr. Dobson:

The California Department of Transportation (Caltrans) manages more than 50,000 miles of California's highway and freeway lanes, provides intercity rail services, permits more than 400 public-use airports and special-use hospital heliports, and works with local agencies.

Caltrans is entering a new era of transportation and will be at the forefront of making transformative and favorable changes to our vast transportation network. These changes include a renewed emphasis on safety, a greater focus on sustainability and climate action, and strengthening our role as stewards of public funds that increase the equity and livability of our state.

As such endeavors begin, Caltrans wants to support education and career pathways for California's youth that encourage their involvement in the construction trades and the many industries they support, including transportation. Upon review of the Executive Summary for the Capital College and Career Academy (CCCA), Caltrans believes its partnerships with community colleges and industry leaders will guide its students to a future with upwardly mobile careers.

Caltrans is in support of CCCA because of their vision and plans for a more equitable, sustainable, and prosperous capital region. As the leaders for our state's transportation network, Caltrans wants to be a part of efforts that engage the underserved, young jobseekers, and future leaders in the industry that connects our communities across the state.

"Provide a safe and reliable transportation network that serves all people and respects the environment"

Mr. Kevin Dobson, Executive Director
May 28, 2021
Page 2

We look forward to seeing the achievements of the school, its students, and partners, and to employing the future graduates on our many public works projects.

If you have questions, please contact Ramon Hopkins, Chief, Division of Construction, at (916) 947-0057.

Sincerely,



Janice Benton
Acting Deputy Director
Project Delivery

c: Ramon Hopkins, Chief, Division of Construction, Caltrans

"Provide a safe and reliable transportation network that serves all people and respects the environment"

Powering forward. Together.



February 1, 2021

Dear Interested Community Partners:

SMUD is the nation's sixth-largest community-owned electric utility, recognized nationally and internationally for our innovative energy efficiency programs and renewable power technologies. We're proud to serve the Sacramento area with low-cost, reliable, and environmentally conscious power.

SMUD has long been a leader in clean energy and carbon reduction. Our Board of Directors recently reaffirmed this leadership with an ambitious 2030 Zero Carbon Vision. Our goal is to reach zero carbon emissions in our power supply by 2030 – the most aggressive goal of any utility in the nation.

We live in one of the dirtiest air basins in the country. A recent report by the American Lung Association ranked Sacramento the 5th most polluted city in the nation. SMUD's 2030 Zero Carbon Vision seeks to address global climate change while working to improve air quality across the region. It also seeks to protect economic prosperity and improve health outcomes for all, with special consideration for our most vulnerable communities.

SMUD's customers, community and partners are at the heart of what we do, and we know we cannot achieve zero carbon without their active participation and partnership. That's why we support the establishment of the Capital College and Career Academy. We are going to need a new generation of young people committed and trained in the construction and energy related trades. If we can recruit those young people from our most underserved communities, we can help lift the entire region and improve prosperity for everyone. We look forward to working with the Capital College and Career Academy to engage and prepare our region's youth for the future.

Sincerely,

A handwritten signature in black ink, appearing to read "Jacobe Caditz".

Jacobe Caditz
Manager, Community Education and Technology Center
SMUD



May 6, 2020

To Whom It May Concern:

The Sacramento Regional Builders Exchange (SRBX) was founded in 1901 and represents the interests of the commercial construction industry in the Greater Sacramento Region. Our 1,000+ membership roster consists of General Contractors, all subcontracting trades, architects, engineers and material suppliers. SRBX is pleased to support the development of the Capital College and Career Academy.

The one constant we hear from our members is that they are concerned with the future employment needs of their companies. For every five construction trade professionals that retire from the industry, only one apprentice is entering. In order to meet the growing needs of the industry, the pipeline of skilled workers must be expanded. The Capital College and Career Academy is sorely needed.

SRBX looks forward to working with the students, teachers, and parents of the Capital College and Career Academy in creating a charter school that will benefit the greater Sacramento Community. Please do not hesitate to contact us with any questions you may have.

Sincerely,

A handwritten signature in black ink, appearing to read "Timothy A. Murphy".

Timothy A. Murphy
Chief Executive Officer



Board of Trustees

David Lawson, Chair

Lawson Mechanical
Contractors

May 6, 2020

John Bell, Vice Chair
Urata & Sons Concrete, Inc.

Shawn Krogh, Secretary
Krogh & Decker, LLP

Randy Gregg, Treasurer
Enterprise Fleet & Truck
Rental

Heather Basinger
CliftonLarsonAllen

Kevin Brennan
Landmark Construction

Tim Blood
Turner Construction

Will Cates
Hensel Phelps

Karen Conrod
The Boldt Company

Jenny Freitas
Concrete North, Inc.

Darrin Henry
Brown Construction, Inc.

Dina Kimble
Royal Electric Company

Vance Lancaster
LB Construction, Inc.

Matt Perry
Sacramento County Office of
Education

Rich Perrymann
Northern California Tile &
Stone

Mick Penn
Swinerton

Kevin Stillman
Capital Engineering
Consultants

Erik Tickler
Valdez Painting, Inc.

TAX ID # 20-0595531

To Whom It May Concern:

The Construction Industry Education Foundation (CIEF), founded in 2004 for the mission of developing unique and expanded workforce development programs in the built environment throughout the California, is pleased to support the development of the Capital College and Career Academy.

Annually, we work with more than 400 companies in construction, architecture, and engineering, and 75 high schools throughout California, providing competitions, summer camp, and mentorship opportunities for students to explore career opportunities in the built environment. When opened, Capital College and Career Academy is planned to be the only high school in the region that blends rigorous college courses with real-world curriculum which culminates in a college degree or certificate and industry-recognized credentials.

In order to meet the growing needs of our community members – housing, education, health care, entertainment – we must expand the pipeline of skilled workers and this school has the opportunity to do just that.

CIEF is presently acting as the fiscal agent for the Capital College and Career Academy's fundraising efforts and will continue to assist in the development and fundraising efforts in accordance with the school's charter petition and under advisement from the school's board of directors.

We look forward to working with the students, teachers, and parents of the Capital College and Career Academy in creating a charter school that will benefit the greater Sacramento Community. Please do not hesitate to contact us with any questions you may have.

Sincerely,

Jordan Blair
Executive Director
SRBX Education Foundation

Construction Industry Education Foundation

5370 Elvas Ave., Sacramento, CA 95819 | 916.465.8345 | cie.foundation



NORTH STATE
BUILDING INDUSTRY
ASSOCIATION
FOUNDATION

May 26, 2020

Interested persons:

The North State Building Industry Association Foundation (BIAF) supports the establishment and development of the Capital College and Career Academy. When opened, Capital College and Career Academy is planned to be the only high school in the region that blends rigorous college courses with real-world curriculum which culminates in a college degree or certificate and industry-recognized credentials. We will recruit industry members to participate in curriculum/program advisory committees, engage in work based learning activities including internships, and offer employment to graduating students.

A variety of employment opportunities continue to exist. The BIAF was founded in 2007 for the purpose of meeting the workforce development, research, and community service needs of the home building industry. We work with more than 550 companies in 22 high schools five community colleges, two universities, and a variety of community based and government training organizations in the greater Capital region.

We look forward to working with the students, teachers, and parents of the Capital College and Career Academy in creating a charter school that will provide students the opportunity to seek gainful and meaningful careers in the construction industry.

Respectfully,

Rick Larkey

Rick Larkey
Executive Director

1536 Eureka Road
Roseville CA, 95661
916 677 5717



February 23, 2022

To Whom it May Concern:

Steeped in history with an unparalleled commitment to leading our industry, the International Brotherhood of Electrical Workers Local 340 represents the finest electricians in Northern California.

Our nearly 2,000 members are sought after for their extensive training, including our apprenticeship program, in the electrical, telecommunications, and low voltage fields.

IBEW 340 is excited to support the Capital College and Career Academy countywide charter petition. We are always looking for young men and women to enter our apprenticeship program as we seek to ensure that we have a strong workforce here in the Sacramento region.

We are currently exploring how we can make our apprenticeship school available to CCCA students during the daytime (our apprentices attend school in the evenings) to expose those students to our crafts, and to prepare them for entering our apprenticeship program after they graduate from high school.

We are excited to support CCCA's innovative approach to education and a career in the trades and ask that you give their charter petition your full consideration.

Sincerely,

A handwritten signature in blue ink, appearing to read "Robert D. Ward".

Robert D. Ward
Business Manager

SACRAMENTO ELECTRICAL
CONTRACTORS ASSOCIATION
1129 D STREET
SACRAMENTO, CA 95814

February 23, 2022

To Whom it May Concern:

The National Electrical Contractors Association (NECA) is the voice of the \$130 billion industry responsible for bringing electrical power, lighting, and communications to buildings and communities across the United States.

The Greater Sacramento Chapter of NECA represents contractors in the Sacramento, Reno and Redding Divisions. NECA is dedicated to enhancing the industry through continuing education, labor relations, current information and promotional activities. It is the voice of the electrical contracting industry, working to promote higher standards, quality workmanship and training for a skilled workforce.

The Greater Sacramento Chapter of NECA is happy to submit this letter of support for the Capital College and Careers Academy countywide charter petition. Our member electrical contractors employ the highly skilled and trained union electrical workers, and are always interested in finding and supporting the next generation of talented electrical workers.

We are currently exploring how our members can offer internships to the CCCA students who might be interested in pursuing a rewarding career in a union trade.

We are excited to support CCCA's innovative approach to education and a career in the trades and ask that you give their charter petition your full consideration.

Sincerely,



Mr. Fran McDermott
Manager

U. A. Local Union 447

5841 Newman Court
Sacramento, CA 95819
Tel (916) 457-6595
Fax (916) 454-6151



Richard D. Bertacchi

President

Todd A. Schiavo

Financial Secretary &
Business Manager

February 24, 2022

To Whom it May Concern:

U.A. Local 447 Plumbers, Pipefitters, Refrigeration Fitters and HVAC Service Technicians was chartered on February 18, 1905. We have a membership of approximately 1,500 Journeypersons, Retirees and Apprentices. Our membership has been serving the piping industry in the greater Sacramento region and 5 surrounding counties for over 117 years.

Local 447 Apprentices and Journeymen receive the highest level training and education in the industry. Our Apprentices attend a certified and accredited program registered with the State of California which is taught by Local 447 Journeymen instructors with many years of experience and are credentialed from the U.A.'s Instructor Training Program. The apprentices are required to have 9000 field hours worked and over 1,000 hours of classroom time before they graduate to Journeyman status.

We are excited to support the Capital College and Career Academy countywide charter petition. We are always looking for young men and women to enter our apprenticeship program as we seek to ensure that we have a strong and diverse workforce here in the Sacramento region.

We are currently exploring how we can make our apprenticeship school available to CCCA students during the daytime (our apprentices attend school in the evenings) to expose those students to our craft, and to prepare them for entering our apprenticeship program after they graduate from high school.

We are excited to support CCCA's innovative approach to education and a career in the trades and ask that you give their charter petition your thoughtful consideration.

Sincerely,

Todd A. Schiavo
Financial Secretary &
Business Manager

Encls.
TAS:hs
opeiu#29/afl-cio



**Associated Plumbing &
Mechanical Contractors
of Sacramento, Inc.**

February 23, 2022

To Whom it May Concern:

APMC of Sacramento, Inc. represents the best union plumbing and mechanical contractors in the greater Sacramento area. We are proud to submit this letter of support for the Capital College and Career Academy countywide charter petition.

There is clearly a shortage of construction trade professionals, which the Academy will help address. Our member companies are excited about the potential for helping recruit and train the next generation of highly skilled workers for our region.

As the only high school of this type in the region, Capital College and Career Academy will be able to offer high school students an opportunity to pursue both a career and higher education at the same time through its dual enrollment and CTE/internship curriculum.

Thank you in advance for giving this charter petition your thoughtful consideration.

Sincerely,

Claire Donnenwirth

Claire Donnenwirth
Executive Vice President

To Whom it May Concern,

McCarthy Building Companies is a commercial construction company whose Northern California Region has projects all over the Sacramento area. Our company is pleased to support the establishment and development of the Capital College and Career Academy.

Our three Northern California offices specialize in healthcare and education projects as well as a variety of other projects, which are complicated and require the expertise of many talented individuals and teams. We have experienced in recent years the difficulties of building complex projects without enough knowledgeable manpower and we are passionate about helping our youth get into the construction industry. The construction industry is a multi-faceted, interesting, challenging, and very well-paying career, and those who choose this path can be as successful as many other career fields. We believe that Capital College and Career Academy has a well-thought-out education plan for balancing hands-on experience with technical knowledge. This will surely be a crucial establishment in developing our local construction workforce and bringing success to our community.

Please contact me if you have any further questions.

Sincerely,



Rodney G. Riddle
Senior Vice President Operations
McCarthy Building Companies, Inc.
Email: Riddle@mccarthy.com





CA License #624683

The Boldt Company
2150 River Plaza Drive
Suite 255
Sacramento, CA 95833

916-583-5600 phone
www.boldt.com

June 1, 2021

To Whom It May Concern:

Since 1889, The Boldt Company has stayed true to what our founder Martin Boldt first set out to be—an honest and reliable contractor. Hard work, an innovative spirit and a commitment to our values have helped us grow into one of the largest professional construction services firms in the United States. Today, we are a fourth-generation family and employee-owned company with offices throughout the country. We are proud of how far we have come, but we are not in this business for ourselves. We are in it for everyone who benefits from what we do.

The Boldt Company also provides meaningful, inclusive opportunities to engage women, minorities, veterans and the LGBTQ community. We take great pride in our commitment to diversity and engaging a skilled, local workforce. We are looking for people and partners who share in that commitment.

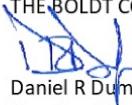
As an industry, we need to create a steady, motivated, and skilled workforce pipeline. To do this we have to change perceptions about the construction industry as it exists today in order to increase the potential number of construction professionals available. Here are a few facts that people seeking careers need to know about the construction industry in California:

- There are currently 868,000 tradespeople and construction professionals across the state.
- Over 139,000 new construction jobs will need to be filled by 2026.
- In construction, you can earn an average of 10.8% more than in other industries.

In addition, 70% of today's college students currently graduate with student loans averaging about \$40,000. Job prospects in their desired majors have been dwindling and despite increased media attention about on-going labor shortages, people simply are not considering careers in construction, especially in the trades.

We must collectively change perceptions and redefine our industry. We have to educate our communities and commit to investing in future generations who can then aspire to be construction professionals and tradespeople. The Capital College and Career Academy's program and vision provides opportunities for grassroots engagement while promoting the lucrative, long-term benefits of careers in construction. The Boldt Company looks forward to supporting these efforts and providing opportunities to students who have made the choice to have a career in the construction industry.

Sincerely,
THE BOLDT COMPANY


Daniel R. Dumke
Vice President | General Manager

CONSULTING SOLUTIONS / TECHNICAL SOLUTIONS / CONSTRUCTION SOLUTIONS

February 18, 2022

To Whom It May Concern,

Charge and its affiliate companies are a leading provider of EPC (Engineer, Procure, Construct) services for the West Coast utility industry. Our companies include Accu-Bore Directional, Veteran Power Infrastructure, Veteran Pipeline Construction and Extreme Excavating.

Charge designs and builds infrastructure and utility systems with the highest regard for the safety and well-being of all. This is not a goal. The health and safety of our employees and the public is the foundation of our core values. Our sole reason for being in business has always been to help the communities we serve thrive.

PO Box 639
Benicia, CA 94510
ChargeEPC.com

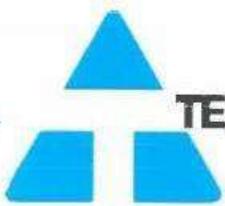
We have experienced an industry wide growing need in the communities we serve, one of them being Sacramento County, for skilled manpower and a knowledgeable workforce that is specific to our unique industry. We also read about the decline of the domestic job market and the limited prospects for meaningful employment for American youth. The construction industry offers outstanding career employment opportunities but there remains a disconnect between that and our potential future leaders.


Capital College & Career Academy (CCCA) will be an incredible asset to the Sacramento community by providing an alternate pathway to a rewarding career for the next generation. Charge EPC is proud to support CCCA and look forward to recruiting students as we believe their program will provide a solid foundation to ensure students are prepared to enter into and have successful careers in the construction industry.

Sincerely,



Michael Robirds
CEO / Owner



TEICHERT, INC.

Established 1887

Corporate Office
3500 American River Drive
Sacramento, CA 95864-5802
(916) 484-3011

September 28, 2021

Via email: ktalamantes@scoe.net

Sacramento County Office of Education Board of Trustees
Ms. Karina Talamantes, Board President, Trustee
PO Box 269003
Sacramento, CA 95826-9003

Re: Capital College & Career Academy

Dear Ms. Talamantes,

The purpose of this letter is to provide an endorsement from Teichert for the Capital College & Career Academy.

The construction industry provides outstanding career employment opportunities complete with excellent pay including robust health and retirement plans. The work itself is challenging, exciting and offers great opportunities for advancement. The work is also essential both in terms of currently enduring throughout the COVID-19 pandemic and, more broadly, providing the infrastructure necessary for modern life.

At the same time that the industry struggles to meet staffing needs, we read about the hollowing out of the domestic job and the limited prospects for meaningful employment for American youth. Those of us in the industry are befuddled that we cannot seem to effectively convey to prospective candidates our need for workers to fill excellent jobs.

For the construction industry, there is a gap between what our educational system is preparing students for and what the industry job market actually requires. In addition, there is an information gap regarding the existence of terrific career opportunities in the construction industry. As an industry, we obviously have failed to effectively promote the expansive opportunity to a current generation of youth.

CCCA is designed to effectively bridge these gaps. Teichert is delighted to voice our strong support for this new effort. We believe it meets a vital need not only for the construction industry, but also for young people seeking meaningful employment opportunities. We look forward to working cooperatively with Kevin and the entire CCCA team.

Sincerely,

Judson T. Riggs
Chairman & CEO

JTR/pdj

cc: Kevin Dobson – Founder & Executive Director, Capital College & Career Academy



To Whom it May Concern,

Roebbelan Contracting, Inc. has been building exceptional projects in and around Sacramento since 1959. We currently provide careers for over 300 dedicated professionals and are the largest locally owned building contractor in the region.

To be successful at Roebbelan, one must demonstrate our purpose of *living to improve the lives of others*. This ethos is in alignment with Capital College & Career Academy's mission, that is why we wholeheartedly endorse its establishment and pledge our support to ensure its success.

The CCCA will provide a unique opportunity not currently available to our community's youth and is exactly what our area needs. This endeavor will expand students' options and provide an unparalleled pathway into a dynamic and lucrative career in the construction industry.

It is not everyday that we are given the opportunity to have a profound effect on the lives of next generation....this is one of those rare opportunities. Please join Roebbelan Contracting, Inc. in supporting the establishment of the Capital College & Career Academy.

Please feel free to contact me if you have any questions or desire additional information.

Sincerely,



Kenneth J. Wenham
President/CEO



SEBASTIAN
Putting people first.

May 20, 2020

To Whom It May Concern:

Sebastian, was founded in 1946 for the mission to provide people with a great place to work and the opportunity to prosper, serving our communities, company and customers. Throughout the years the company has evolved to include communications, low voltage, electrical and underground construction services throughout central and northern California valleys. Sebastian supports good works and charities and encourages civic improvements and better education. We are pleased to support the development of the Capital College and Career Academy.

Annually, we work with many companies in construction, and many high schools and colleges throughout California, providing mentorship opportunities for students to explore career opportunities in the built environment. When opened, Capital College and Career Academy is planned to be the only high school in the region that blends rigorous college courses with real-world curriculum which culminates in a college degree or certificate and industry-recognized credentials.

In order to meet the growing needs of our community members – housing, education, health care, entertainment – we must expand the pipeline of skilled workers and this school has the opportunity to do just that.

Sebastian is presently acting as a support agent for the Capital College and Career Academy's fundraising efforts and will continue to assist in the development and fundraising efforts in accordance with the school's charter petition and under advisement from the school's board of directors.

We look forward to working with the students, teachers, and parents of the Capital College and Career Academy in creating a charter school that will benefit the greater Sacramento Community. Please do not hesitate to contact us with any questions you may have.

Kind regards,

A handwritten signature in black ink, appearing to read "W.S. Barcus".

William S. Barcus, President
Sebastian

4/19/21

To Whom it May Concern,

This letter is to support all efforts by Capital College & Career Academy to locate here in North Sacramento. The District 2 leaders represent neighborhood associations throughout the district and have been meeting monthly as a group since 2015. We are writing to express our support for the approval of the (CCCA) charter petition. We believe that the Academy will be a great asset to the authorizing district and be of great benefit to the children, families, and local community for the following reasons:

- North Sacramento supports school choice
- The early college/high school curriculum opportunity is unique and exciting
- District 2 needs jobs and this is a great opportunity for our students to have access to good jobs
- Construction trades would come to this area for skilled workers/safely trained

And from the Executive Summary: "***The purpose of a school is to be a representative of the community within which it is situated***"

This community needs something positive and something that we can be proud of. The CCCA is just the opportunity our kids and families could use at this time. Please consider an approval.

Sincerely,

Jane Macaulay
All Eyes on Deck D2

Gordon Lew
Noralto Neighbors United

Sondra Betancourt
Ben Ali Community Association

Ramona Landeros
Benito Juarez

RHM Installations
Commerce Parkway

BBBS of the Greater Sacramento Area
800 Howe Avenue, Suite 440
Sacramento, CA 95825
www.bbbs-sac.org



January 10, 2022

Sacramento County Office of Education Board of Trustees
PO Box 269003
Sacramento, CA 95826-9003

Re: Capital College & Career Academy

To Whom it May Concern,

Big Brothers Big Sisters of the Greater Sacramento Area (BBBS GSA) is pleased to fully support the creation of the Capital College and Career Academy as a vital piece of ensuring Sacramento's commitment to defending the potential of all youth in our region by providing them diverse opportunities and options to earn a livable wage.

BBBS GSA ignites potential in children and youth through strong and enduring, professionally supported one-to-one relationships that change lives forever. Children and youth enrolled in our program achieve measurable outcomes, including educational success, avoidance of risky behaviors, higher aspirations, greater confidence, and healthier personal relationships. This mission has been the cornerstone of our organization's 57-year history in the Sacramento area.

When asked what they fear most, most of the youth in our program list not being able to go to college or concerns about finding a good job after high school as one of the things that causes them the most stress and anxiety. Many of our families have expressed interest in enrolling in the Capital College & Career Academy once their doors are opened, as they feel the school's vision and curriculum will keep them more engaged since they will be studying and learning skills that are tangible and will lead to a more immediate return on investment of their time. Over 60% of the enrolled in our program are expected to begin contributing monetarily to help cover household expenses shortly after high school. These students often do not have the luxury of attending a traditional four-year college and waiting up to 6 years before entering the workforce, and only after incurring thousands in student loan debt.

BBBS GSA is in support of CCCA because of their vision and strategies planned to achieve a more equitable, sustainable, and prosperous capital region for youth from all walks of life and economic backgrounds.

A handwritten signature in black ink, appearing to read 'Dimitrius Stone'.

Dimitrius Stone
CEO, Big Brothers Big Sisters of the Greater Sacramento Area
Dimitrius@bbbs-sac.org
916.929.1635



Chair of the Board
Jenni Murphy, Ed.D.
CSU Sacramento

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Reese Ferriman
Girl Scout & Student

Sierra Garrett
Girl Scout & Student

Fawzia Keval
Elk Grove Unified School District

Robin Kren
Community Volunteer

LeShelle May
CNN, Turner Communications

Lynne Meredith
Superior Court of California,
County of Stanislaus

Kate Reid
Intel Corporation

Jaana Remes, Ph.D.
McKinsey & Co.

Stacey Sheinut-Hendrick
Crocker Art Museum

Elena Soto-Chapa
San Juan Unified School District

CEO
Linda E. Farley, Ed.D.

May 20, 2020

To Whom It May Concern:

Girl Scouts Heart of Central California (GSHCC) serves nearly 18,000 girls in 18 counties in Northern and Central California. As the premier leadership development organization for girls, we not only encourage girls to engage in STEM, we provide many different types of STEM activities.

Though not gender-specific, the Capital College and Career Academy will be a wonderful school option for girls to take their STEM interests to another level. The combination of college courses and hands-on curriculum that results in industry-recognized credentials will give girls a significant advantage.

As the only high school of this type in the region, Capital College and Career Academy has the opportunity to influence and impact the needs of the area. There is clearly a shortage of trade professionals and the Academy will help address this shortage.

GSHCC is pleased to support the creation of Capital College and Career Academy and looks forward to encouraging girls to participate.

Sincerely,

A handwritten signature in black ink, appearing to read "Linda Farley".

Linda E. Farley, Ed.D.
Chief Executive Officer

girlscoutshcc.org

**Sacramento Regional Program Center
and STEM Center + MakerSpace**
6601 Elvas Avenue
Sacramento, CA 95819
t 800.322.4475 • f 916.452.9182

**Modesto Regional Program Center
and STEM Center + MakerSpace**
3330 Oakdale Road
Modesto, CA 95355
t 209.545.3620 • f 209.545.3621

Stockton Regional Office
1212 W Robinhood Drive
Stockton, CA 95207
t 800.322.4475 • f 209.473.4446



February 18th, 2022

To Whom It May Concern,

We are writing to express our support for the approval of the Capital College & Career Academy (CCCA) charter petition. We believe that Capital College & Career Academy will be an incredible asset to the Sacramento County Office of Education and be of great benefit to the children, families, and local community for the following reasons:

Not only is CCCA providing much-needed education alternatives for students here in North Sacramento, in opening their facility, CCCA is also making a huge investment in the struggling business corridor. Students, staff, and visitors to the campus would be a huge win for our restaurants and cafés on the Blvd. We're proud to have CCCA be an anchor for Arden Way and Oxford Street. As Arden Way and Del Paso make way for more than 240 new affordable housing units, CCCA will truly be part of an ecosystem of change coming to the 95815-zip code.

Respectfully,

A handwritten signature in black ink, appearing to read "DS".

Daniel Savala
Executive Director
Del Paso Boulevard Partnership & BIA





April 16, 2021

To Whom It May Concern:

It is a pleasure and privilege to be writing this letter of support for Capital College & Career Academy (CCCA) charter petition.

The California Coalition of Early & Middle Colleges (CCEMC) is an educational non-profit organization that provides professional development and technical assistance to educators, both at the community college level and the K-12 level, in the area of dual enrollment. We exist to not only promote dual enrollment, but to assure that dual enrollment is implemented with best practices that meet the needs of students and implemented following legalities associated with dual enrollment. We promote dual enrollment programs that are student focused, especially students of color and socially-economically disadvantaged. Numerous studies have determined the benefits associated with dual enrollment including a finding that the completion of even one college course during high school is associated with a higher likelihood that a student will attend college.

CCEMC has been impressed with the mission and goals determined for CCCA. The partnerships CCCA has fostered to-date go beyond the typical high school – college partnership; they have already built a strong partnership with the community of Sacramento, especially the building trades. Also impressive, is the targeted student population. There are always challenges associated with starting a new school; but challenges and benefits associated with targeting those students who are most vulnerable can be daunting. CCCA has charged ahead, determined to serve and assure students who need them the most will be embraced and provided a pathway to success.

The students of Sacramento need and deserve a dual enrollment early college high school that is focused on assuring a student graduates college and career ready and more important, graduate with the knowledge that they can thrive and prosper. CCEMC strongly supports the approval of the Capital College & Career Academy to serve the students in the Sacramento community.

Yours truly,

Sherry Balian
Executive Director
CCEMC
*The California Coalition
Dedicated to Dual Enrollment*

6507 PACIFIC AVENUE #323, STOCKTON, CA 95207
(888) 372-2362
WWW.DUALENROLLMENT.ORG



To Whom This May Concern,

NCCER is a not-for-profit 501(c)(3) education foundation created in 1996 as The National Center for Construction Education and Research. It was developed with the support of more than 125 construction CEOs and various association and academic leaders who united to revolutionize training for the construction industry. This progressive program has evolved into curricula for more than 70 craft areas and a complete series of more than 70 assessments offered in over 6,000 NCCER-accredited training and assessment locations across the United States.

We offer construction and maintenance curriculum and assessments with portable credentials. These credentials are tracked through NCCER's Registry System that allows organizations and companies to track the qualifications of their craft professionals and/or check the qualifications of possible new hires. NCCER's Registry System also assists craft professionals by maintaining their records in a secure database.

Our workforce development process of accreditation, instructor certification, standardized curriculum, registry, assessment, and certification is a key component in the industry's workforce development efforts. NCCER also drives multiple initiatives to enhance career development and recruitment efforts for the industry, primarily through its Build Your Future initiative.

As shown above, NCCER has a number of resources from research to curriculum that can support Capitol College and Career Academy as they develop their school and construction program. With a nationwide need of 1.5 million craft professionals by 2023, we are excited that Capital College and Career Academy understands the importance of building our future industry craft workers and leaders, and has taken the initiative to help this cause. This program will not only benefit the industry as a whole; however, it truly will change the lives of all students, parents and community members involved. It will take a village to accomplish this task and we at NCCER are committed to helping those that believe in building the next generation of craft professionals. CCCA has proven to be a great partner and leader with driving this mission and we are here to support them throughout their endeavors.

Best Regards,

Ashleigh Potuznik
Senior Workforce Development Director
NCCER

13614 Progress Boulevard, Alachua, Florida 32615
p. 888.622.3720 f. 386.518.6303
www.nccer.org



To Whom It May Concern,

I have known Kevin Dobson, and of his project to establish a trades-based school program for several years now. Kevin himself is an experienced, dedicated educator who has the skill and commitment to make this program a much needed resource for the community. We are writing to express our support for the approval of the Capital College & Career Academy (CCCA) charter petition. We believe that Capital College & Career Academy will be an incredible asset to the authorizing district and be of great benefit to the children, families, and local community for the following reasons:

- Youth for whom a trade is the appropriate and chosen post-secondary path to a fulfilling life often struggle with traditional school structures, and are often marginalized in the "college for all" climate of our educational system.
- These youth deserve the respect and support that their native intelligence and problem-solving skills deserve.
- The trades are essential to our society's economic and cultural well-being, and are experiencing a critical shortage of youth entering the trades as the current workforce ages out.
- The economic opportunities for youth are significant. Trades-persons earn up to \$100,000 per year, have no college loan debt, and are uniquely positioned to become entrepreneurs and business owners.

We at Big Picture Learning and its Harbor Freight Fellows Initiative support the approval of the Capital College & Career Academy to serve students in our community without reservation. Please feel free to contact me if I can help in any way.

Sincerely,

Charlie Plant
National Coordinator, Harbor Freight Fellows Initiative
cplant@bigpicturelearning.org
401-741-8954

MJ Kiwan Gomez Ed.D.
Leticia Kiwan Ed.D.

4188 Cavitt Stallman Rd.
Granite Bay, Ca 95746

Esteemed Trustees of the Sacramento County Board of Education,

We ask you to consider our support for Capitol College and Career Academy as specialists in the field of English Language Development. Leticia and I have worked together with English learners as educators since we started our professional careers together at Sherman Elementary in downtown San Diego in 1996. Since then, we have received extensive training and participated in years of education as we both achieved our Masters and Doctorates in Education with specializations in meeting the needs of culturally and linguistically diverse students in California's public schools.

Together, Leticia and I worked for the California Teachers Association, CTA, throughout the state to deliver ELD training for new and veteran teachers who needed to have their cross-cultural and linguistic and academic development, CLAD, training. Through our decades of university education in the UC and California State system, our decades of experience in the classroom, and our continued participation in professional associations such as CABE, CTA, & ACSA, we have dozens of connections with other experts in the field who can further provide support and direction when needed. Leticia and I are committed to offering quarterly training through professional development sessions with the teachers and administrators at CCCA through the initial charter term.

As research continues to provide more evidence for successful classroom practices teachers can use to improve the academic outcomes for multilingual students, Leticia and I will maintain our position as specialists in the field by learning about these improvements and sharing our research-based findings on best practices for first instruction with all of our peers, teachers, and colleagues at CCCA. Please let us know if you have any further questions about our willingness or ability to provide essential academic support for our team of educators at CCCA.

Sincerely,

MJ Kiwan Gomez, Ed.D.

Leticia Kiwan, Ed.D.

APPENDIX C

Founding Team Members

Kevin Dobson is the founder and Director of Capital College & Career Academy. He is focusing on educational related elements including Career Tech Education and community and youth engagement. Kevin Dobson has worked in the field of education for the past nine years as both a classroom teacher and a principal. This includes time at a large inner city high school in Springfield, Massachusetts, working with homebound students in New Castle, Delaware, four years in Center Joint Unified School District, and five years at Natomas Charter School. During these nine years, he participated in a wide range of leadership activities on a variety of school campuses and demonstrated a continued passion for hands-on learning. He possesses two masters degrees. The first from the University of San Diego in Education and Curriculum with an emphasis on technology in the classroom. The second masters from the University of California Sacramento in Educational Leadership and Policy Studies. In his classroom, students have received national and local recognition for their work. For two straight years multiple students placed in the national CSPAN StudentCam documentary competition. In addition, a 7th grade class received local notoriety for their collaborative presentation with the City of Sacramento's Special Project Manager to the planning and design commission

As a high school principal, he helped develop a school-wide system of support and led the effort to build a dual enrollment program between Natomas Charter and American River College. In two years, he increased enrollment by nearly 200%. He also spearheaded the creation of a unique math pathway to address the diverse learning needs of all the students. Kevin also led numerous teacher initiatives and instituted a systemic approach to professional learning communities.

Kevin has also coached numerous sports and is a recent graduate from the City Management Academy. He was also recognized as the teacher of the year for his academy in 2018 and was nominated for the Gilder Lehrman History Teacher of the year for the 2018-19 school year prior to moving into administration.

Armando Cornelio is leading our construction and trade outreach. A first-generation Mexican American entrepreneur he is the president of A&A Developers. He currently operates three companies and has a diverse set of professional experiences. This includes being a licensed contractor for almost 20 years; working with both union and non-union companies. Originally from the Bay area peninsula, he is passionate about building for the future through innovation and hard work.

Current Board of Directors

Since our school looks to bridge the gap between education and industry our forming a strong board was an immediate priority for the executive team. We have been extremely fortunate to have such a strong and diverse board composed of industry, community, and educational leaders. Our board brings with them a diverse set of experiences that all touch on some aspect of our mission. We intentionally recruited board members who had an array of experiences that ultimately would contribute to our school development.

John Belperio is the Northern California Carpenters Regional Council Northern District Manager. John brings with him nearly 10 years of field experience working as an apprentice and journeyman carpenter and foreman on a multitude of projects ranging from bridges, water

treatment plants, wind turbines, schools and hospitals. In his role as a political field representative, he represented over 40,000 members while helping to develop and maintain the relationships needed to create work opportunities for employees. He has experience negotiating project labor agreements and working directly with candidates seeking election for political office.

John is highly motivated in advancing the construction industry and creating a workforce to maintain it through career pathways. This is evident through his time serving on the Career Technical Education Advisory Committee for Berkeley Public Schools. John notes that he has a passion for helping folks who need a second chance as he once did.

Timothy Blood works as the preconstruction manager for Turner Construction. Turner Construction is one of the largest commercial general contractors in the Sacramento Region. Recognizing an increasing lack of skilled workers, Turner has spent considerable time and effort on workforce development. This has included partnering with high schools and community colleges across Northern California. Prior to Turner Construction Tim worked with Sundt Construction where he utilized the National Center for Construction Education and Research (NCCER) curriculum for training employees.

Jacobe Caditz manages SMUD's Community Education and Technology Center, which helps promote sustainable practices and technologies for a zero-carbon future. Jacobe's background is in public engagement and sustainable communities. He combined his MBA studies at the

University of the Pacific with two years as a Peace Corps volunteer in Paraguay. He has a passion for partnering with community organizations on creative ways to lift up our region.

Benjamin Fell is the Interim Director of College-to-Learner, Academic Programs at California State University, Sacramento's College of Continuing Education (CCE). Ben holds a PhD. and MS in Civil and Environmental Engineering along with a BS in Civil Engineering. Within this role, he has led the delivery of a portfolio of degrees, certificates, credentials, workshops, youth programs, and contract education. As a part of this role, Ben manages 15 full-time and 1 part-time (hourly intermittent) staff in Academic Programs within the College of Continuing Education. He has also been responsible for initiating and leading staff promotions and hiring while restructuring efforts for organizational effectiveness and ensuring high quality and inclusive program development and delivery across multiple disciplines. In addition, he has overseen the rebranding or repositioning of existing programs while leading feasibility studies and market analysis. This includes working with advisory groups from a variety of industry sectors all while ensuring self-support budget adherence for programmatic offerings totaling \$9.6M in projected revenue for 2021-22.

Prior to his current role, Ben was the Department Chair of Civil Engineering at the College of Engineering and Computer Science (ECS) where he managed 18 full-time and 30 part-time faculty and staff in a department with 900 undergraduate and 100 graduate students, an enrollment that accounted for approximately 25% of the College of Engineering. During this time, ECS increased its national ranking among non-PhD granting civil engineering programs (#11) and Increased Fundamental of Engineering (FE) pass rates by 20%. He also led the

restructuring of undergraduate advising to improve student success. As department chair, he collaboratively set departmental budget priorities and oversaw fundraising activities via private donors and annual department fundraising events. These efforts led to the establishment and growth of department endowment funds thanks in part to strengthened industry relations via his role serving on two advisory boards.

In addition to these accomplishments Ben is a published author, presenter, and active Engineering Professional via his role with numerous organizations and committees. He also has significant grant writing experience which has resulted in nearly \$7M of funding over the past 11 years.

Sheri Graciano is the Human Resource Business Partner at The Boldt Company. In her role, she oversees Human Resources for the west region which annually performs over 1 billion dollars of work. Sheri has more than 35 years of experience in recruiting, leadership & employee development, coaching, performance management, compensation planning, compliance, and coaching. She holds a Business Management degree from California State University, Sacramento. Her HR experience includes working in a variety of industries including biotech, high tech, hospitality, real estate, and construction.

In the community, Sheri is a founding member of the Sacramento Children's Museum where she served as Director of Marketing and was responsible for community outreach and fundraising. She sat on the board for nearly 8 years to help bring a children's museum to the Sacramento area,

which resulted in a 2011 Grand Opening. She has a passion for supporting organizations that help make the Sacramento region a better place to work and live.

Stephanie Hannah is a Certified Public Accountant and Certified Construction Industry Financial Professional (CCIFP) who currently works as the Chief Financial Officer for Sebastian Enterprises. She previously served as CFO for Lund Construction, and has served hundreds of Northern California construction and real estate companies during her tenure in public accounting. She has been in the construction industry for over 25 years and was drawn to Capital College & Career Academy because of the current lack of workforce availability and the need to build a pipeline of future tradesmen and women.

Ramon Hopkins is a registered civil engineer and current Chief of the Division of Construction at the California Department of Transportation. With nearly 30 years of industry experience Ray has led a number of notable projects up and down the state of California. Ramon holds a B.S. in Civil Engineering from the University of Arizona. He has proven management and leadership skills and a diverse engineering background developed during twenty-three years of State service and seven years of Marine Corps Engineering experience. Ramon has earned a number of accolades during his career including being twice named resident engineer of the year. He also received a Certificate of Recognition from the state of California and is a three-time recipient of the Caltrans Superior Accomplishment Award.

Representing the California Department of Transportation and as the acting Chair of the AASHTO Committee on Construction Technical Subcommittee on Safety, Environment,

and Workforce Development, Ramon has demonstrated an ongoing commitment to addressing the labor pipeline and creating real world learning experiences for young people around the Sacramento region.

James Moore was chosen as a board member due to his vast experience working with community nonprofits throughout Sacramento County. This has included the Sacramento Food Bank, Volunteers of America, the Department of Veterans Affairs. He has also invested a considerable amount of his time mentoring at risk youths living in Del Paso Heights community of Sacramento. He currently works for Volunteers of America as an outreach coordinator.

Timothy Murphy joined the Sacramento Regional Builders Exchange in February of 2015, bringing an established track record of executive leadership, corporate public affairs, strategic communications and governmental relations to the association.

Founded in 1901 and serving over 900 member companies, the Sacramento Regional Builders Exchange (SRBX) is the construction industry's oldest and largest association in the region. Members include general contractors and subcontractors, suppliers and industry support organizations. SRBX serves the industrial and commercial construction industry by providing education programs, safety programs, bidding information, political advocacy, networking opportunities, and other related information and events for the construction industry within the greater Sacramento Region. In concert with the SRBX Board of Directors, Murphy assists in the formulation of strategic goals and objectives to implement the mission of the organization, in

order to advance the issues important to, and the economic success of SRBX's members in the commercial and industrial construction industry.

From 2000 to 2015, Murphy directed the corporate responsibility program for Aerojet Rocketdyne Holdings, Inc. and its Easton Development Company subsidiary, overseeing planning, strategy and execution of community and governmental relations, corporate philanthropic giving and environmental community affairs. Prior to that, Murphy served in Kaiser Permanente's Government and Community Relations Department, and also served on the staff of California State Senator Tim Leslie. Murphy was also a public affairs consultant for the McClellan Air Force Base Department of Environmental Management, supporting their community affairs programs.

Murphy is a past member of the Executive Committee of the Sacramento Metro Chamber of Commerce Board of Directors. Murphy has served the Metro Chamber as chair of Leadership Sacramento from 2006-2008, the 2011 Cap-to-Cap program chair and the 2014 Nashville Study Mission. For his service to the Metro Chamber, Murphy was honored as the organization's 2008 Volunteer of the Year.

Murphy also serves as a board officer for the Capital Airshow Group, a California 501(c)(3) organization that annually hosts the California Capital Airshow. In addition, Murphy has served as an appointed planning commissioner for both Sacramento County and the City of Elk Grove, and currently serves as the Public Member (Alt.) on the Sacramento County LACCO Board.

Ian McQuoid is the Vice President of Operations at McCarthy Building Companies Inc. which is one of the largest general contractors in the country. Ian is responsible for integrating McCarthy's various departments, including estimating, scheduling, accounting, safety, quality control, management information systems, and contracts into projects as they become necessary. Ian also over sees staffing, overall job cost, schedule, quality, and safety for McCarthy's Sacramento office.

Ian brings with him over 20 years of experience and a range of notable projects. Ian is committed to increasing the long-term pipeline into the construction trades. McCarthy Building Companies as a whole has led numerous nationwide initiatives focused on getting underrepresented groups into the construction industry.

Michel Kiwan Gomez is a distinguished bilingual educator with more than 25 years of classroom experience. He holds a Ed. D. in Educational Leadership, a MA in Multicultural Counseling, and a BA in Psychology. He has presented at numerous educational conferences and led various initiatives within the Twin Rivers Unified School district. Outside of teaching, Mich has a range of professional experiences ranging from a licensed contractor to an educational consultant. Mich has also worked as a SCOE mentor and an Educational Advisor for Tribal Eye Productions.

Ken Wenham is a former Marine and trusted community leader. He began his construction career as a Journeyman Carpenter in 1989. He holds a B.S. in Construction Management from California State University, Sacramento.

He joined Roebbelin in 2000. In 2007, Ken became a partner in the organization. Mr. Wenham moved upward within the company, as Project Manager, Division Manager, Operations Manager, and Vice President of Construction Operations. In March 2011 Mr. Wenham was appointed President and Chief Executive Officer of Roebbelin.

As Vice President of Operations, Mr. Wenham was responsible for overseeing all construction activities through successful completion. He managed construction projects worth over \$300 million annually and oversaw the successful completion of over one hundred public works projects. He has experience in all types of construction delivery methods that include design build, lease-leaseback, construction management, service agreements and design-bid-build projects.

In the community, Ken has served as a volunteer board member for the Sacramento Children's Museum, Teach for America, and the Vistage Executive Group. Ken also was the past school board president for Rising Sun Montessori School.

Deborah Wilder is a native Californian, raised in the San Francisco Bay Area. She is a graduate of U.C. Davis with a degree in Political Science and Public Service and has her law degree from Northwestern School of Law of Lewis and Clark College in Portland, Oregon. Deborah is a member of both the Oregon and California Bar and specializes in labor and employment law in the construction industry.

Deborah is the president and owner of Contractor Compliance and Monitoring, Inc., a company which monitors prevailing wage and public works compliance. Deborah is the author of What Every Contractor Should Know About Prevailing Wages, AGC of America's Davis Bacon Manual-Fourth Edition, The Davis Bacon Handbook for Public Agencies and is considered an industry authority on the subject.

Deborah served two years as Mayor of Foster City and eight years on the Foster City Council. She is currently the Secretary and Member of the Board of Directors of the California Republican Party. She is the past national president of Women Construction Owners and Executives.

Past Board Members

Jerry Bell is the president and cofounder of Bell Brothers which provides Sacramento and the surrounding areas with Air Conditioning, Heating, Windows & Plumbing services and is a household name in the region. With over 200 employees and 140 service trucks they too have seen a critical need for skilled workers and have been seeking ways to bridge the gap between education and the industry in recent years.

Jordan Blair currently oversees all communications, marketing, public relations, and workforce development efforts for the Sacramento Regional Builders Exchange and the Construction Industry Education Foundation. He holds a Bachelor of Arts from the College of William and Mary, a Master of Arts with honors from California State University, Sacramento, a Master of Public Administration with honors from the University of Southern California, and is a doctoral candidate in the communication of policy and campaign management. He has developed a reputation as a skilled communicator, having previously managed media relations, external relations, publications, and website communications for a variety of large state agencies, nonprofits, and educational institutions. He was named the Sacramento Young Professional of the Year in 2012 and to the Sacramento 40-under-40 list in 2016.

Interested in giving back to the community, he currently serves as a member of the KVIE Public Television Community Advisory Board, as Chairman of the Board for the Capital College & Career Academy and is a Founding Member of the Metro Inspire Project. He has also served as President of the Board of Directors for Fairytale Town and River City Food Bank, is a former President of the USC Alumni Association - Sacramento Chapter, and is a former member of the

College of William and Mary Alumni Association's and the Phi Kappa Tau Gamma Iota Colony's Board of Governors. He is a 2012 graduate of Leadership Sacramento, a program of the Sacramento Metro Chamber of Commerce and received Special Congressional Recognition in 2013 for his service to the Sacramento Community. He was recognized in 2014 with the Phi Taus Under 40 National Award by the Phi Kappa Tau Fraternity.

Dan Dumke is the Vice President and General Manager at The Boldt Company. Dan has over 40 years of construction management and executive leadership experience centered on strong strategic planning skills and ethical business practices. He holds a Mechanical Engineering degree from the University of Wisconsin, Milwaukee. His experience includes working in various facets of the construction industry in multiple states.

He previously directed operations of a large civil/infrastructure group with revenue totaling \$120M annually with 100 employees. As a business leader he has led corporate initiatives for safety, quality, diversity, inclusion and small/disadvantaged business enterprise utilization (including mentor-protégé programs). Dan was drawn to CCCA largely because of the impact that the program can have on a historically underserved part of our community.

Edith Espinoza holds a Masters of Art in Multicultural Education as well as an administrative credential. She is a well-respected educator in the Elk Grove Unified School district and frequently serves as the teacher in charge. She has worked since 2006 as an EL Coordinator and elementary school teacher. Since 2014 she has helped facilitate and organize an after-school intervention program.

Linda Farley holds a masters in curriculum and instruction from Michigan State University and a doctorate of education in leadership from the University of St. Thomas, St. Paul. She currently serves as the CEO of Girl Scouts Heart of Central California. This Girl Scout council serves nearly 18,000 girls in an 18-county region, including Sacramento County. One of the Girl Scouts main priorities is science, technology, engineering and math (STEM). They have three STEM Centers—two building sites and one mobile unit—that serve girls throughout their region. In her role on the Board, Linda, will work to ensure the culture of CCCA is welcoming and inclusive for young women who are interested in entering the trades. She will help with recruitment and will participate in on-going evaluation of the school culture.

Brooke Higman is a well-respected construction leader with over 20 years of experience delivering nearly a billion dollars in construction projects throughout Northern California for education, healthcare, civic and commercial clients. As Project Executive, she helps to build business for the company, strengthens client relationships and oversees project teams to assure they have the necessary resources to achieve client expectations and project goals.

The majority of her career has been in the Sacramento area where she has fostered many long-lasting relationships with architects, design engineers and both the general contracting and sub-contracting community. Her approach to every project is to ensure that there is an environment of collaboration and transparency, focusing on delivering a quality product, safely, on time and under budget.

As a member of the Boldt leadership team, she provides mentorship to younger staff, develops opportunities for team growth and is committed to fostering a corporate culture of collaboration, continuous learning/improvement and fun. Giving back to the community and “paying it forward” are values Brooke takes to heart. She looks for opportunities where she can share her passion for the construction industry and inspire others, especially young women, to consider construction as a career path.

JOHN BELPERIO

1050 Mattox Rd. Hayward CA 94541 · (510) 932-1666

jbelperio@nccrc.org

I am currently employed by Northern California Carpenters Regional Council. I am highly motivated in advancing the construction industry and creating a workforce to maintain it through career pathways. I have a great passion in helping folks who need a second chance as I once did.

EXPERIENCE

08/05/2003-09/12/13

CARPENTER, COMPANIES- KIEWIT, DPR, SWINERTON, MORTENSON

Worked as an apprentice & Journeyman Carpenter and Foreman on a multitude of projects ranging from bridges, water treatment plants, wind turbines, schools and hospitals.

09/13/13-PRESENT

POLITICAL/FIELD REPRESENTATIVE, NOR CAL CARPENTERS REGIONAL COUNCIL

Represent 40,000 +- members, develop & maintain relationships needed to create work opportunities, Negotiate PLA's, Market our Contractors, Work with candidates seeking election.

EDUCATION

JULY 2004

GED, SONOMA COMMUNITY COLLEGE

MAY 2010

GRADUATE, CARPENTERS APPRENTICESHIP PROGRAM

SKILLS & STRENGTHS

- Leadership & Communication
- Public speaking
- Extensive construction industry knowledge
- First Aid & CPR Certified
- Negotiations
- Team building
- Contractor relations
- OSHA 10 Certified

ACTIVITIES

Creating and maintaining partnerships with area school districts to expose students to the trades.
Strengthening political relationships to create more work opportunities for current and future workers.
Fighting for worker rights.
Marketing our general contractors to increase market share.
Representing apprentices and journeyman while helping guide them through a successful career.



BIO

We all have our motivations for doing what we do – choosing the career we've chosen and putting our time and energy into something. For me, I chose the dedicate my time and energy to the construction industry for two primary reasons: First - It aligns with my desire to continuously learn and effectively scratches my curiosity itch. Second, I love the challenge and the process of creating alignment amongst the diversity of stakeholders required to put our built environment in place.

I've contributed to this process through various capacities throughout my career but have always gravitated toward the design and preconstruction aspects of a project's life cycle due to the creative processes involved during that stage, and the need to create alignment amongst diverse people in order to achieve best value. I currently contribute to this process as Preconstruction Manager / Chief Estimator at Turner Construction.

PROFESSIONAL REFERENCES

"I worked with Tim most recently on the Bridget Hall Learning Commons for Chandler-Gilbert Community College. Sundt provided all the pre-construction services and Tim was the lead coordinator and estimator for Sundt. I was the Project Architect for Will Bruder + Partners. Usually these types of working relationships are not favored by many architects because of the non-competitive pricing and high allowances that take place early on. That was not the case with Tim; his estimates were some of the most accurate and thorough that I have been a part of to date. Tim brought every possible resource to the table, made every effort to understand design intent and most importantly he was creative. Tim has the ability to bring real solutions to projects that challenge convention. His suggestions and thought-provoking inquiries on many items proved that Tim had a true grasp of the project."

Tim's approach to estimating and construction is holistic; he is part of a new breed of building professionals who understand that the future of estimating and construction are built on collaboration, team work and sharing of ideas. Tim's technical proficiencies with estimating/building software and desire to test new working methods are also invaluable. The industry is changing for the better and Tim is not just keeping up, but he is part of the cause.

Tim is a pleasure to work with on every level; I hope we get the opportunity to collaborate again in the near future."

- Daniel Olic, Associate, Project Manager, Architect at HDR

"With Tim leading the team, you can count on a commitment to project success, and plenty of fun along the way. He is often very open about the project challenges and welcomes feedback for best approaches. It is evident that he takes pride in problem-solving through collaboration with the entire team in an effort to achieve the best solution for the client. Tim's ability to consistently exceed expectations is unsurpassed."

- Tania Nunez, AIA, Project Manager, California State University, Sacramento

of Water Resources, Department of Forestry, and other key groups. The new office tower will feature 10,000 sf of retail and public space, an auditorium, a multi-vendor food court, and a pedestrian plaza. The project also includes exterior improvements to the nearby historic Heilbron House, and a childcare facility.

**CALIFORNIA STATE UNIVERSITY, SACRAMENTO SCIENCE II REPLACEMENT BUILDING,
SACRAMENTO, CA (\$91.5M)**

Collaborative Design-Build, five-story, 94,000 sf building which will house both wet and dry biology and chemistry science teaching and research laboratories, prep rooms and storage areas. In addition, there will be faculty offices, collaborative spaces, various support spaces, a rooftop observatory, a planetarium, and the Dean's office suite. Target LEED Gold certification.

GREAT WOLF LODGE, MANTECA, CA (\$175M)

Preconstruction and construction services for the development of a new resort and amusement park totaling approximately 516,000 sf. The Great Wolf Lodge in Manteca will include 500 rooms, 10,000 square feet of meeting space, 95,000 sf of indoor water park space, an outdoor pool, bowling, retail, miniature golf course, restaurants and several branded amenities and entertainment activities.

TAHOE TRUCKEE USD - TRUCKEE HIGH SCHOOL AND ELEMENTARY SCHOOL, TRUCKEE, CA (\$80M)

CM Multi-Prime to replace modular buildings with new construction for classrooms, science labs, elective space, and library; and modernization of existing buildings which will include classrooms, common areas, theater upgrade, reconfigure performing arts, enhance girl's locker room, front facade enhancement, upgrade classroom roofs for snow loads, technology upgrades, and mechanical upgrades. Site work includes parking lot additions and upgrades, ADA access compliance, upgrades to site utilities, exterior lighting, and fencing. Construction is scheduled to start in spring of 2017 and be completed by fall of 2019.

MAPLE STREET CORRECTIONAL CENTER, REDWOOD CITY, CA (\$165M)

Three-story, 260,000 sf self-sustaining comprehensive correctional facility including 832 secure beds and 88 non-secure transitional beds for transitioning inmates. The project had a fast-tracked delivery, including phased design and construction, to accelerate the construction timeline and hasten the facility's opening. The project faced many cost challenges as it was designed prior to the bay area construction boom, and procured in the midst of it. Significant value engineering efforts, including an integrated team of design-build trade contractors, allowed us to deliver this LEED Gold facility on time and on budget.

**ARIZONA STATE UNIVERSITY DOWNTOWN PHOENIX CAMPUS SUN DEVIL FITNESS COMPLEX,
PHOENIX, AZ (\$19.8M)**

CM at Risk, 74,000 sf recreation facility at Arizona State University's downtown campus which includes a large gym, weight room, indoor running track, multi-purpose space, locker rooms, and leisure roof-top pool. Exercise Nutrition, Wellness, and Kinesiology academic programs are co-located at this facility.

PROJECT EXPERIENCE

**NEW NATURAL RESOURCES
HEADQUARTERS BUILDING,
SACRAMENTO, CA (\$520M)**

Design-build, 838,000 gsf 20-story office tower in downtown Sacramento, new headquarters for the State of California Natural Resources Agency, Department

CHANDLER-GILBERT COMMUNITY COLLEGE COYOTE ATHLETIC CENTER -
PRECONSTRUCTION, CHANDLER, AZ (\$21.9M)

CM at Risk 78,256 sf project consists of a 2,500 seat arena with a 10,000 sf practice gymnasium, wellness classrooms and gyms, as well as spaces for community and college events. Additional features include taping and treatment areas with hydrotherapy, locker-rooms supporting men's and women's basketball, volleyball, soccer, softball and baseball, as well as offices for academia and staff. A generous exterior performance area includes a four lane, 60 meter sprint track and other turf areas for outdoor training. The scope included hardscape upgrades, landscaping, new concrete benches and parking lot renovations as well as installation of a hot water solar array system on the roof, an energy-efficient HVAC system that ties into the campus's central plant, and underground utilities to connect to the existing campus communications infrastructure.

PHOENIX BIOMEDICAL CAMPUS, HEALTH SCIENCES EDUCATION BUILDING (HSEB), PHOENIX, AZ, (\$129M)

CM at Risk, state-of-the-art, six-story, 268,000 sf, interdisciplinary biomedical building, includes administrative offices, lecture halls, classrooms, clinical skills suite, simulation suite, laboratories and much more—merging elements of health programs that were formerly taught separately. Exterior comprised of an extremely complex and unique design incorporating nearly 2,500 custom copper metal panels to emulate the cross-section of the Grand Canyon, a signature statement of the Arizona landscape. LEED Gold Certified. Estimator

ARIZONA STATE UNIVERSITY INTERDISCIPLINARY SCIENCE & TECHNOLOGY BUILDING 4 (ISTB 4), TEMPE, AZ (\$112M)

CM at Risk, state-of-the-art, eight-story, 298,000 sf, education building, bringing three functions together under one roof. An office component with collaboration rooms, meeting rooms and offices for faculty and administrators, an inviting public space component in the center of the building, similar to a museum, with classrooms, a 245-seat auditorium, and a meteorite gallery, and laboratory component housing 166 cutting-edge lab modules with both wet and dry labs, a rooftop laboratory, clean rooms, research offices, and auditorium space. Exterior comprised of structural concrete with aluminum cladding panels, face brick and glass curtain wall exterior. LEED Gold Certified.

MARICOPA COMMUNITY COLLEGE - BRIDGET HALL, MESA, AZ (\$4M)

CM at Risk, new 17,600 sf, single story, integrally colored "Integra" block masonry used as a multi-use education and library building. Constructed on the existing Williams campus of Chandler Gilbert Community College. Program elements in this project include student life, library space, mediated classrooms, and a multi-purpose space that can be reconfigured to host community events. LEED Silver Certified.

SCOTTSDALE CRIME LAB AND POLICE EVIDENCE FACILITY, SCOTTSDALE, AZ (\$41M)

CM at Risk, 87,000 sf, Forensic Crime Lab and Police Evidence facility on an 18 acre site. The two-story building houses one of the most advanced forensic laboratories in the State of Arizona, including spaces for an Automated Fingerprint Identification Systems (AFIS), controlled substances, toxicology, firing range and bullet retrieval tank, biology lab, dark room to support photo forensic; trace/impurities/arson investigation systems, and a Polymerase Chain Reaction (PCR) lab for genetic testing. The lab also includes ultra-clean rooms and higher-level performance standards for temperature, humidity, filtration and vibration control to create an environment suitable for forensic science. LEED Silver

Certified.

SKYSONG BUILDING TWO, SCOTTSDALE, AZ (\$14.3M)

CM at Risk, Core and shell construction of a 151,000 sf, four-story office building with a rooftop mechanical penthouse. The building has a steel frame with composite floor slabs and an EIFS exterior. LEED Silver Certified.

SKYSONG BUILDING ONE - ASU TENANT IMPROVEMENTS, SCOTTSDALE, AZ (\$6M)

CM at Risk, tenant improvements totaling 42,000 sf, which includes approximately 6,000 sf on the first floor and the entire second floor. The finished look will be modern and technical.

AVONDALE CITY CENTER INFRASTRUCTURE, AMERICAN SPORTS COMPLEX AND RETAIL CENTER, AVONDALE, AZ (\$19M)

CM at Risk, 83,000 sf athletic facility and indoor sports club with basketball courts, volleyball courts, and indoor soccer fields. Support functions include food preparation areas, multipurpose rooms, concessions and flexible space for functions. This project also included extensive urban site improvements including mass grading, underground site utilities, paving, sidewalks, site lighting and construction of a new park 16.6 acres of greenfield.

POSTON BUTTE HIGH SCHOOL, QUEEN CREEK, AZ (\$50M)

CM at Risk, phase I of a new 207,000 sf expansion of a high school campus including general purpose classrooms, science, special education, fine arts and administration facilities, a cafeteria and full service kitchen. The work also included a 25,000-sf competition gymnasium, with a grade one maple basketball floor, new stadium seating football field, two baseball fields and tennis courts.

KING'S COUNTY COURTHOUSE, HANFORD, CA (\$86M)

Four-story (+ basement), 144,000 sf Courthouse includes 10 courtrooms plus a jury assembly room, subterranean parking structure / holding cell area and an underground tunnel that connects to the nearby county jail. Early CMAR engagement allowed for extensive parametric cost estimating which resulted in robust target value design and cost certainty throughout preconstruction.

Parametric Estimator

PORTEVILLE COURTHOUSE (SOUTH COUNTY JUSTICE CENTER), PORTEVILLE, CA

Three-story (+ basement), 96,000 sf Courthouse includes 9 courtrooms, judges' chambers, courtroom holding areas, jury deliberation rooms, support services, clerk's office and work areas, public walk-up windows and queuing, holding cells and a below grade sally port. This LEED Silver building's façade is a rain screen consisting of cement composite façade, which is unique because it is multi-colored and challenging to install due to its lap joints. Several mock-up scenarios were constructed during design to determine the best interior support and joint strategies, and Building Information Modeling was leveraged to allow pre-cut panels to ensure the best quality fit and field installation.

Jacobe Caditz

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(916) 502-2335 · jccaditz@gmail.com

EXPERIENCE

Sacramento Municipal Utility District (SMUD)
MANAGER, COMMUNITY EDUCATION

Sacramento, CA

NOVEMBER 2020-PRESENT

SUPERVISOR, ENERGY EDUCATION & TECHNOLOGY CTR.

FEBRUARY 2016-NOVEMBER 2020

- Managed SMUD's seven person educational outreach team, promoting renewable energy, efficiency, and increased comfort and convenience. Major educational channels included residential and commercial classes, teacher and student workshops, regional educational stem competitions, and electric technology exhibits.
- Created and implemented units first digital outreach strategy, delivering for the first time webinars, on-demand videos, and info-graphics in order to reach a more diverse, broader slice of SMUD's customer base.
- Significant expanded unit's educational outreach by developing MOU's with local school districts for teacher workshops, stem competitions, and other personalized services.
- Implemented robust quantitative metrics to evaluate unit's performance against its own goals as well as compare our performance against programs companywide.

STRATEGIC ACCOUNT ADVISOR II / III

AUGUST 2014-FEBRUARY 2016

- Highest rated account manager by third-party consultant – responsible for managing relationships with SMUD's biggest customers including major school districts and the County of Sacramento.
- Developed strategic partnerships with key customers to improve electric infrastructure, such as upgrading to LED streetlights, installing commercial scale solar, and installing new substations.
- Developed SMUD's prop 39 implementation plan and guided team in understanding scope and potential for Prop 39 related energy efficiency projects throughout regional school systems.

PROJECT MANAGER (LIMITED TERM)

APRIL 2013-AUGUST 2014

- Created program to train high school students in energy efficiency and auditing and fund \$100k in school efficiency upgrades. Was brought on to manage program four months behind schedule and developed and publically launched program within weeks of being hired. After six months, program was awarded CMUA "program of the year."
- Partnered with school districts officials to create region-side interest in program. Wrote RFP for educational services and managed contractor.
- Generated significant media coverage for project, spoke on NPR, KEAR radio, and KCRA channel 3.

Foundation for California Community Colleges

Sacramento, CA

PROGRAM MANAGER, SUPERVISOR

DECEMBER 2011-MARCH 2013

- Supervised Sales and Contract staff, working on negotiating new system-wide contracts for California Community Colleges and managing existing customer accounts. Worked with College purchasing, facilities, and other professionals to identify and address business issues that were not being solved through existing vendors or contracts.

- Developed, released, and awarded cooperative purchasing agreements, and coordinated participating agencies in a statewide advisory board. Supervised three staff members.
- Advocated for and was instrumental in securing a cornerstone partnership with Microsoft Corporation to make low-cost software products available to Community College Students.

Sacramento Tree Foundation

PROGRAM DIRECTOR

Sacramento, CA

NOVEMBER 2006-DECEMBER 2011

- Directed multiple projects and programs, supervised staff of 16 employees, wrote grants and assisted with fundraising, and worked as a member of the Executive Team to draft annual and strategic plans, build the organizational budget, and set policy and procedure.
- Reorganized and combined 3 departments and retrained staff to achieve 39% growth in performance while eliminating seasonal variations in employee work loads. Led program to meet and exceed goals for the 1st time in 5 years, resulting in over \$100,000 worth of bonuses.
- Developed and implemented cutting edge technology projects such as transforming an outdated workflow system into an integrated map based Salesforce CRM tool, and developing the methodology and securing the funding to use remote sensing techniques to monetize the carbon offset benefit of urban shade trees, including recruiting a coalition of local and national partners.
- Planned and implemented new programs including fulfilling the organization's commitment to the first ever parking lot retrofit project by soliciting and winning the support of the Leadership Sacramento Class of 2012, and partnering with the California Department of Public Health to implement the first ever fruit tree distribution program. Cultivated a group of regional partners (SMUD, City of Sacramento, North Natomas Unified School District, Sacramento Municipal Air Quality District, etc.) and led the effort to submit a \$20M urban ecology center grant.
- Delivered key presentations to the Sacramento Tree Foundation and SMUD Board of Directors, local and national conferences, partner organizations, and community groups. Regular media interviews, including Spanish television. Facilitated staff meetings and monthly trainings.
- Chaired the Technical Advisory Committee, organizing a group of regional experts and coordinating trainings and educational classes. Implemented and wrote on-line customer newsletter for educational, promotional, and fund-raising purposes.

Clean Start

FOUNDING PROGRAM COORDINATOR

Sacramento, CA

NOVEMBER 2005-NOVEMBER 2006

- Marketed clean energy business plan competition for regional green-tech incubator.
- Identified eligible clean energy organizations and interviewed potential contestants.
- Researched the California bio-fuel industry and wrote a report detailing the current state of the industry and the potential for exporting technologies to China (Renewable Energy Institute Int).

Katalysis Bootstrap Banking

RESEARCH ASSISTANT

Stockton, CA

OCTOBER 2005-JUNE 2006

- Researched micro-finance programs in Central America and assessed their market ROI and investment requirements. Developed a multi-media based report for executive officers.
- Explored the market potential for programs focusing on micro-finance for youth in Central America.

US Peace Corps Master's International Program

MUNICIPAL SERVICES COORDINATOR

Paraguay, South America

AUGUST 2002-MAY 2006

Curriculum Vitae – Benjamin Fell

Contact Information

3000 State University Drive
California State University, Sacramento
530-574-1345 (cell)
fellb@csus.edu

Education

PhD	Civil and Environmental Engineering	University of California, Davis
MS	Civil and Environmental Engineering	Stanford University
BS	Civil Engineering	Rensselaer Polytechnic Institute (summa cum laude)

Professional Experiences and Responsibilities **California State University, Sacramento (CSUS)**

Interim Director of College-to-Learner, Academic Programs, 2021 – present

College of Continuing Education (CCE)

Leading delivery of current portfolio of degrees, certificates, credentials, workshops, youth programs, and contract education; Managing 15 full-time and 1 part-time (hourly intermittent) staff in Academic Programs within the College of Continuing Education; Initiating and leading staff promotions and hiring; Restructuring efforts for organizational effectiveness; Ensuring high quality and inclusive program development and delivery across multiple disciplines; Rebranding or repositioning of existing programs; Leading feasibility studies and market analysis; Working with advisory groups from a variety of industry sectors; Ensuring self-support budget adherence for programmatic offerings totaling \$9.6M in projected revenue for 2021-22

Department Chair of Civil Engineering, 2015 – 2021

College of Engineering and Computer Science (ECS)

Managed 18 full-time and 30 part-time faculty and staff in a department with 900 undergraduate and 100 graduate students, an enrollment that accounted for approximately 25% of the College of Engineering; Increased national ranking among non-PhD granting civil engineering programs (#11); Increased Fundamental of Engineering (FE) pass rates by 20%; Developed curriculum and departmental governance policies; Restructured undergraduate advising structure to improve student success; Served on the Dean's administrative council; Collaboratively set departmental budget priorities; Led strategic planning for the college and department; Fundraising activities via private donors and annual department fundraising events; Scheduled and managed courses and class enrollments; Led first year and transfer orientation; Established and grew department endowment funds; Effectuated significant curriculum development; Managed faculty recruitment and hiring; Developed and disseminated public and media relations; Strengthened industry relations through two advisory boards.

Assistant Director of Sustainable Technology Outdoor Research Center (STORC), 2019 – 2021

Assigned by the Dean to expand a multidisciplinary research center at Sacramento State housed within the College of Engineering; Organized and directed campus facility planning groups; Directed outside consultant on physical infrastructure design; Fundraising efforts; Initiated strategic plan of research center.

Faculty Advisor, Sacramento Area Science Project, 2017 – 2021

Served as the faculty advisor for a \$1.3 million center focusing on professional development opportunities for Sacramento area science teachers; Strategic planning and budget management in collaboration with center's staff director; Principal Investigator (PI) on annual grant from the California Science Project; Co-PI on \$2.0 million NSF Grant *Sacramento Math and Science Teacher Leaders (SacMAST-L)*, Lead engineering faculty on \$2.04 million California Department of Education grant *Integrating Science and Engineering Education (iSEE)*

Professor, Department of Civil Engineering, 2018 – 2021

Associate Professor, Department of Civil Engineering, 2013 – 2018

Assistant Professor, Department of Civil Engineering, 2008 – 2013

Curriculum Vitae – Benjamin Fell

Fund Raising from Private Sources and Corporations

[Total funds raised for CSUS Department of Civil Engineering, ECS, 2015-2020, \$1.6M]

2020	Received \$40,000 annual (recurring) gift for environmental engineering; Raised \$38,000 through annual fundraising program.
2019	Secured a \$1.0M estate gift for environmental engineering, and a \$40,000 annual (recurring) gift until estate gift initiates; Received \$50,000 gift from Odin Construction for STORC research lab; Worked with faculty to secure a \$25,000 gift from APWA Sacramento Section for STORC lab; Raised \$62,000 through annual fundraising program and individual donations.
2018	Raised \$43,500 through annual fundraising program and individual donations.
2017	Secured a \$200,000 gift from Clark Pacific for concrete lab; secured a \$20,000 gift from Wood Rodgers for water resources engineering lab; Worked with faculty to secure a \$21,500 gift from APWA Sacramento Section for environmental engineering lab; Raised \$29,250 through annual fundraising program and individual donations.
2016	Secured a \$25,000 gift from Magnus Pacific for geotechnical engineering lab, with \$25,000 matching from College of Engineering; Raised \$31,250 through annual fundraising program and individual donations.
2015	Raised \$31,500 through annual fundraising program and individual donations.

Grant Awards

[Total grants received, 2009-2020, ECS \$6.58M]

2020	\$30,000 , California Science Project Site Allocation Grant to Sacramento Science Project as PI
2019	\$30,000 , California Science Project Site Allocation Grant to Sacramento Science Project as PI
2018	\$30,000 , California Science Project Site Allocation Grant to Sacramento Science Project as PI
2017	\$6,800 , Industry Grant from <i>Polargy</i> , “Static Testing of Hybrid Ceiling Grid Frame” as PI
2016	\$30,000 , California Science Project Site Allocation Grant to Sacramento Science Project as PI
2016	\$2.04M , Elk Grove Unified School District/California Department of Education, “Integrating Science and Engineering Education (iSEE)” as lead engineering faculty
2014	\$2.0M , NSF, “Sacramento Math and Science Teacher Leaders (SacMAST-L)” as Co-PI
	\$9,050 , Industry Grant from <i>BarrelSafe</i> , “Seismic Testing of Innovative Wine-barrel Rack System” as PI
2012	\$3,000 campus mini-grant, University Enterprises, Inc., to supplement student support on 2011 NSF award
	\$1,000 campus mini-grant, University Enterprises, Inc., to supplement equipment support on 2011 NSF award
2011	\$1.2M , NSF, Project NEESR-CR, “Development and simulation of seismically isolated unibody residential buildings for enhanced life-cycle performance” with Stanford University as Co-PI; amount to CSUS \$139,052
2009	\$1.2M , NSF, Project NEESR-CR, “Collapse simulation of multi-story buildings through hybrid testing” (Senior Personnel) with Stanford University as Co-PI; amount to CSUS \$100,014
	\$2,450 Young researcher travel grant, NSF, to attend NEESWood shake-table test in Japan

University Service and Engagement in Faculty Governance

- Antiracist Curriculum, Pedagogy, and Assessment Action Planning Group (2020-21) – Support faculty and departments in building antiracism curriculum and anti-bias pedagogy
- Faculty Senate Executive Committee (2014-16) – Established priorities and agendas for faculty senate consideration; collaborated with senate/faculty leaders, provost and vice-provost, for senate action.
- University Curriculum Policies Committee, Chair (2014-16), member (2011-16) – Oversaw three subcommittees, including the curriculum subcommittee responsible for reviewing and approving all course or program changes in the university; wrote and revised university curriculum policies by consulting with faculty and the Dean of Undergraduate Studies.
- College of Engineering & Computer Science Academic Council, Chair (2012-15), vice chair (2011-12), member (2011-15) – Reviewed course and program change proposals; engaged the Council in faculty governance projects in the college to re-establish shared governance in curricular and strategic planning;

Curriculum Vitae – Benjamin Fell

Major Accomplishments

Strategic, Financial, Student Enrollment, and Physical Planning and Improvement

- Leading integration of Inside Track into undergraduate and graduate programs for inquiry management (CCE);
- Expanding off-campus lease space for Paramedic and EMT programs (CCE);
- Leading budget projection process for Academic Programs and self-support adherence for \$8-9M in program revenues (CCE);
- Led the development of the College of Engineering 2015 strategic plan vision, mission and values statements as Chair of the College’s Academic Council (ECS);
- Established civil engineering departmental policies in collaboration with faculty to promote collegiality, fairness and transparency (ECS);
- Developed and executed \$1.65 million annual civil engineering department budget (ECS);
- Managed undergraduate student enrollment – increase of 26% from fall 2014 to fall 2019 (ECS);
- Developed strategies to reduce “bottleneck” courses and promote student success – BS degrees awarded increased from 93 graduates in 2014-15, to 134 in 2018-19 (ECS);
- Quadrupled the 4-year graduation rate of undergraduate civil engineering students – from 3.6% for spring 2016 graduates to 16.0% in spring 2018 (ECS);
- Completed *CSU Certificate Program in Student Success Analytics* in spring 2020 (ECS);
- Managed multiple lab renovation projects – financial planning and collaboratively engaging campus project managers, technical support staff, outside equipment vendors, and faculty (ECS);
- Led the development of a concrete durability and multidisciplinary sustainability lab (STORC)

Community and Industry Engagement

- Strengthened engagement with Sacramento-area industry through two industry advisory boards by developing strategic goals for each board (ECS);
- American Society of Civil Engineers Sacramento Section Board member, 2015-2019 (ECS);
- Manage development and publication of tri-annual department newsletter “CE Connection” (ECS);
- Initiated service-based learning into senior project class, working with local Loaves & Fishes (ECS);
- Conducted *Writing Partners* in freshman seminar class – a pen pal writing program between university and K-6 students at local Title I schools (ECS);

Faculty Recruitment, Staff Hiring and Administrative Search Committees

- Three approved staff recruitments for a total of seven positions, two hires and five in progress (CCE);
- Increased full-time faculty composition in the department by 43% (5 new hires) (ECS);
- Increased diversity of faculty with strategic recruitment efforts (ECS);
- Established faculty and staff professional development policies in civil engineering (ECS);
- Completely revised the civil engineering hiring, tenure and promotion policy to establish consistent and transparent expectations, approved unanimously by faculty (ECS);
- Established a new staff position and implemented office workflow processes and procedures (ECS);
- Served on two Provost Search Committees and one Engineering Associate Dean Search Committee.

Curriculum Development and Accreditation

- Launched program for K12 teachers to add supplemental authorization in computer science (CCE);
- Finalized a 6-year ABET accreditation in civil engineering in 2016 (ECS);
- Appointed to ASCE Committee on Accreditation Operations – assigns and evaluates ABET reviewers, and develops training materials, processes and guidelines (ECS);
- Implemented significant curriculum changes to upper-division course offerings in civil engineering – introduced additional technical elective, established a one-year senior project experience, and added a prerequisite course in environmental engineering principles (ECS);
- Reorganized GE requirements for engineering majors to follow CSU Executive Order (ECS);

Curriculum Vitae – Benjamin Fell

encouraged faculty discourse and engagement in strategic planning and shared governance; organized and led meetings for course and program curricular review; led effort to re-write and uniformly adopt a Student Evaluation of Teaching (SET) form by all departments in the college; led effort to pass strategic plan vision, mission and values; developed draft proposal to re-write college constitution.

- Academic Affairs Budget Advisory Committee (2012-15) – Worked collaboratively with other committee members to recommend budget structure and priorities to Academic Affairs
- Faculty Senator (2008-13) – attended Senate meetings, debated and voted on numerous campus policies and resolutions.
- Civil engineering Retention, Tenure and Promotion (RTP) committee (2014 – current)
- American Society of Civil Engineers (ASCE) student chapter advisor (2008-14)
- Structural Engineers Assoc. of Central CA (SEAOC) student chapter advisor (2008-17)
- Tau Beta Pi engineering honor society advisor (2009 – current)

Leadership and Service to the Engineering Profession and Community

- Member of Department Heads Coordinating Council (DHCC), ASCE (2016-present) – Encourage and improve communications on educational matters among all civil engineering departments, the profession, and ASCE; plan and organize annual department heads meeting, including leading sessions and open discussions.
- DHCC liaison and member of Committee on Accreditation Operations, ASCE (2018-present) – Organize, evaluate and establish best practices for program evaluators (PEV) assigned to ABET reviews of civil and environmental engineering programs
- Board member (secretary), ASCE Sacramento Section (2015-2019) – Participate in financial decisions and allocation of section budget; plan two awards banquets per year; oversee Golze student scholarship
- Associate Member, American Society of Civil Engineers (ASCE)
- Member, American Institute of Steel Construction (AISC)
- Licensed Professional Engineer, California (no. 73522)
- Peer reviewer for the Journal of Structural Engineering, ASCE publishing
- Peer reviewer for the Journal of Bridge Engineering, ASCE publishing
- Peer reviewer for Materials Transactions A, Elsevier publishing
- Peer reviewer for Engineering Structures, Elsevier publishing
- Peer reviewer for Arabian Journal for Science and Engineering, Springer publishing
- Peer reviewer for Mechanics Research Communications, Elsevier publishing

Honors and Awards

Outstanding University Service Award, College of ECS, Sacramento State, 2016

President's Award for Research and Creative Activity, Sacramento State, 2013

Outstanding Scholarly & Creativity Award, College of ECS, Sacramento State, 2012

Outstanding Teaching Award, College of ECS, Sacramento State, 2011

Jonathan Burdette Brown Education Award, ASCE, 2011

Pedagogy Enhancement Award, Sacramento State, 2010

Excellence in Civil Engineering Education (ExCEEd) Fellowship, ASCE, 2010

STEM Fellow, Sacramento State, 2009

Outstanding Graduate Student Teaching Award, UC Davis, 2008

AISC/Structural Steel Educational Council Fellowship, UC Davis, 2005

Graduate Fellowship, Stanford University, 2003

Rhodes Scholarship Nominee, Rensselaer Polytechnic Institute, 2003

Peer-Reviewed Publications

Curriculum Vitae – Benjamin Fell

Journal and Professional Publications

- Yazhi, Z., **Fell, B.V.** and Kanvinde, A.M. (2021). “Continuum damage mechanics based ductile fatigue-fracture prediction in buckling steel braces.” *Journal of Constructional Steel Research, Elsevier*, 184.
- Jampole, E.A., Deierlein, G.G., Miranda, E.M. **Fell, B.V.** Swensen, S.D., Acevedo, C. (2016). “Full-Scale Dynamic Testing of a Sliding Seismically Isolated Unibody House.” *Earthquake Spectra*, 32 (4), 2245-2270.
- Fell, B.V.** and O’Rourke, M.J. (2014). “Loss of the pressure boundary through buckling induced fracture in the Ciudad Nezahualcoyot pipeline.” *Journal of Pipeline Systems Engineering and Practice, ASCE*.
- Shaw, S.M., Kanvinde, A.M. and **Fell, B.V.** (2010). “Earthquake-induced net section fracture in brace connections - experiments and simulations.” *Journal of Constructional Steel Research, Elsevier*, 66(12), 1492-1501.
- Fell, B.V.** and Kanvinde, A.M. (2010). “Tensile forces for seismic design of braced frame connections - experimental results.” *Journal of Constructional Steel Research, Elsevier*, 66(4), 496-503.
- Fell, B.V.** and Kanvinde, A.M. (2009). “Steel braced frames: Enhancing seismic response.” *The Structural Engineer, Institution of Structural Engineers*, 87(21), 22-26.
- Myers, A.T., Kanvinde, A.M., Deierlein, G.G. and **Fell, B.V.** (2009). “Effect of weld details on the ductility of steel column baseplate connections.” *Journal of Constructional Steel Research, Elsevier*, 65(6), 1366-1373.
- Fell, B.V.** and Kanvinde, A.M. (2009). “Recent fracture and fatigue research in steel structures.” *Structure Magazine*, February 2009, 14-17.
- Kanvinde, A.M., Gomez, I.R., Roberts, M., **Fell, B.V.** and Grondin, G.Y. (2009). “Strength and ductility of fillet welds with transverse root notch.” *Journal of Constructional Steel Research, Elsevier*, 65(4), 948-958.
- Fell, B.V.**, Kanvinde, A.M., Deierlein, G.G. and Myers, A.T. (2009). “Experimental investigation of inelastic cyclic buckling and fracture of steel braces.” *Journal of Structural Engineering, ASCE*, 135(1), 19-32.
- Kanvinde, A.M., **Fell, B.V.**, Gomez, I.R. and Roberts, M. (2008). “Predicting fracture in structural fillet welds using traditional and micromechanics-based models.” *Engineering Structures, Elsevier*, 30(11), 3325-3335.

Conference Publications

- Canney, N.E., Fogarty, J.E., and **Fell, B.V.** (2020). “Effect of Letter Exchange Program on Student Development, Persistence and Interest in Civil Engineering,” ASEE Annual Conference & Exposition, 2020, Montreal, Canada, June 2020.
- Miranda, E.M., Medina, R., Mosqueda, G., Lignos, D., **Fell, B.V.**, Eads, L., Hashemi, J., Zargar, S., Negrete, M. (2014). “Collapse assessment of multi-story buildings through hybrid testing,” 10th National Conference in Earthquake Engineering, 2014, Anchorage, Alaska, July 2014.
- Swensen, S.D., Acevedo, C., Jampole, E.A., Hopkins, A., **Fell, B.V.**, Miranda, E.M., Deierlein, G.G. (2014). “Toward Damage Free Residential Houses Through UniBody Light-Frame Construction with Seismic Isolation,” SEAOC Convention 2014, Indian Wells, CA, September 2014.
- Swensen, S.D., Deierlein, G.G., Miranda, E.M., **Fell, B.V.**, Acevedo, C., Jampole, E.A. (2014). “Finite element analysis of light-frame unibody residential structures,” Proceedings of the 10th National Conference in Earthquake Engineering, Earthquake Engineering Research Institute, Anchorage, AK, 2014.
- Jampole, E.A., Swensen, S.D., **Fell, B.V.**, Miranda, E.M., Deierlein, G.G. (2014). “Dynamic testing of a low-cost sliding isolation system for light-frame residential structures,” Proceedings of the 10th National Conference in Earthquake Engineering, Earthquake Engineering Research Institute, Anchorage, AK, 2014.
- Deierlein G., Kanvinde, A.M., Myers, A.T., and **Fell, B.V.** (2011). “Local cyclic void growth criteria for ductile fracture initiation in steel structures with significant yielding,” Proceedings, Eurosteel 2011, Budapest, Hungary, August-September 2011.
- Fell, B.V.** (2011). “Exchange – Multi-day earthquake engineering workshop for middle school students,” 2011 Annual Conference and Exposition, ASEE, Vancouver, BC, Canada, June 2011.
- Salveson, M.W. and **Fell, B.V.** (2011). “Effect of abutment shear keys on the seismic response of bridges,” 2011 ASCE Structures Congress, Las Vegas, NV, April 2011.

Curriculum Vitae – Benjamin Fell

- Fell, B.V.**, Kanvinde, A.M., and Deierlein, G.G. (2009). “Micromechanics-based parametric simulation of earthquake-induced fracture of steel pipe bracing components,” *NSF-CMMI Grantees Meeting 2009 (NEES 7th Annual Meeting)*, Honolulu, HI, June 2009.
- Kanvinde, A.M., **Fell, B.V.**, and Deierlein, G.G. (2008). “An examination of the fracture susceptibility of square HSS braces under seismic actions - experiments, simulations and data synthesis,” *SEAOC Convention 2008*, Big Island, HI, September 2008.
- Fell, B.V.**, Kanvinde, A.M., and Deierlein, G.G. (2008). “Parametric simulation of the fracture performance of inelastic buckling steel braces using micromechanics- based models,” *NEES 6th Annual Meeting, Portland, OR*, June 2008.
- Myers, A.T., Kanvinde, A.M., Deierlein, G.G., **Fell, B.V.**, and Fu., X (2007). “Large scale tests and micromechanics-based models to characterize ultra low cycle fatigue in welded structural details,” *ASCE Structures Congress 2007*, Long Beach, CA, May 2007.
- Fu., X., **Fell, B.V.**, Kanvinde, A.M., Myers, A.T., (2007). “Experimental and analytical investigations of net-section fracture in brace-gusset plate connections,” *ASCE Structures Congress 2007*, Long Beach, CA, May 2007.
- Fell, B.V.**, Myers A.T., Deierlein, G.G., and Kanvinde A.M. (2006). “Testing and simulation of ultra low cycle fracture and fatigue in steel braces,” *8th National Conference on Earthquake Engineering*, San Francisco, April 2006.

Technical Reports

- Hopkins, A., **Fell, B. V.**, Deierlein, G.G. and Miranda, E.M. (2014). “Large-scale tests of seismically enhanced planar walls for residential construction.” Blume Earthquake Engineering Center Technical Report #186, Stanford University, Stanford, CA.
- Fell, B.V.**, Kanvinde, A.M. and Deierlein, G.G. (2010). “Large-scale testing and simulation of earthquake induced ultra low cycle fatigue in bracing members subjected to cyclic inelastic buckling.” *Blume Earthquake Engineering Center Technical Report #172*, Stanford University, Stanford, CA.
- Fell, B.V.**, Kanvinde, A.M., Deierlein, G.G., Myers, A.T. and Fu, X. (2006). “Buckling and fracture of concentric braces under inelastic cyclic loading.” *SteelTIPS, Technical Information and Product Service, Structural Steel Educational Council*.

Talks and Presentations

- “Construction Methods to Increase Lateral Stiffness and Strength in Light-Framed Residential Buildings”, University of California, Davis, March 2018 and February 2019.
- “Micromechanics-Based Simulation of Ultra-Low Cycle Fatigue (ULCF) and Fracture in Steel Structures”, University of California, Berkeley, May 2014.
- “Construction Methods to Increase Lateral Stiffness and Strength in Light-Framed Shear Wall Construction”, SEAOC Structural and Cold Formed Steel Seminar, Sacramento, CA, November 2015.
- “Recent developments and applications of ductile fatigue and fracture models for earthquake loading conditions”, Rensselaer Polytechnic Institute Invited Lecture, Troy, NY, November 2014.
- “Earthquake resilient housing: light-frame ‘uni-body’ construction and low-cost seismic isolation”, SEAOC Seismology Committee Meeting, Sacramento, CA, October 2014.
- “The Earthquake-Proof Home: Is it in Our Future?”, STEM Fall Lecture Series, Sacramento, September 2013.
- “Design Implications from Recent Fracture and Fatigue Research on Steel Braced Frames”, Buehler and Buehler Structural Engineers, Sacramento, August 2011.
- “Exchange – Multi-day earthquake engineering workshop for middle school students”, ASEE Conference, Vancouver, June 2011.
- “Effect of abutment shear keys on the seismic response of bridges”, ASCE-SEI Conference, Las Vegas, April 2011.
- “Design Implications from Recent Fracture and Fatigue Research on Steel Braced Frames”, SEAONC Seminar, San Francisco, CA, December 2009.
- “Earthquakes in California - Are we ready for the big one?” Invited guest lecture in undergraduate seminar class, University of California, Davis, November 2009.

Curriculum Vitae – Benjamin Fell

- “Design implications from recent fracture and fatigue research on steel structures”, Seminar presented at Rutherford and Chekene Structural Engineers, San Francisco, CA, July 2009.
- “Micromechanics-based parametric simulation of earthquake-induced fracture of steel pipe bracing components” at the 7th Annual Network for Earthquake Engineering Simulation (NEES) Meeting, Honolulu, HI, June 2009.
- “Ductility of SCBF bracing components”, Invited guest lecture in graduate steel design class, University of California, Davis, June 2009.
- “Parametric Simulation of the Fracture Performance of Inelastic Buckling Steel Braces Using Micromechanics-Based Models” at the 6th Annual Network for Earthquake Engineering Simulation (NEES) Meeting, Portland, OR, June 2008.
- “Fracture in Inelastic Buckling Braces – Experiments, Modeling and Design Implications”, International Workshop on the Inelastic Seismic Response of Steel Bracing Members, Montreal, Canada, November 2007.
- “Abnormal Grain Growth by Dynamic Recrystallization”, Seminar presented at the University of California, Davis, to Los Alamos National Lab Researchers, October 2007.
- “Experiments and Simulation of Ultra-Low Cycle Fatigue and Fracture in Steel Bracing Members and Connections” at the 8th National Conference on Earthquake Engineering, San Francisco, CA, 2006.
- “Performance Observations from an Experimental Study on Steel Braces”, Seminar presented at Rutherford and Chekene Structural Engineers, San Francisco, CA, April 2006.

Teaching Experience and Interests

California State University, Sacramento

- Mechanics of Materials
- Introduction to Structural Analysis
- Structural Design in Steel I
- Seismic Behavior of Structures
- Computer Methods of Structural Analysis I (graduate)
- Dynamics and Earthquake Response of Structures (graduate)
- Advanced Steel Design (graduate)
- Nonlinear Structural Analysis (graduate)

University of California, Davis

- Probabilistic Systems Analysis for Civil Engineers (Summer 2008)
- Mechanics of Materials (Spring 2007)

- Developed a county-wide rural farmers market. Coordinated technical assistance from national agencies and NGOs and fostered community support and participation.
- Designed and implemented a recycling program and coordinated work on a sanitary landfill.
- Partnered with a national NGO to implement a budgetary transparency program for a local municipality. Promoted participation in budget process and evaluated funding requests.
- Drafted curriculum and taught classes on Vermiculture, Bee Keeping, English, and Gardening
- Note: My Peace Corps service was combined with my MBA studies (1 year of school, 2 years' service, and final year of school)

United Way/Grupe Commercial Company
PROJECT FEASIBILITY INVESTIGATOR

Stockton, CA

JANUARY-MAY 2003

- Designed and implemented a study for the feasibility of centrally housing local area nonprofits.
- Conducted interviews with over 150 organizations to engender support for the project.
- Developed access database to organize information, evaluated results, and presented findings.

Sierra Foothills Aids Foundation
CASE MANAGER /PROGRAM MANAGER

Auburn, CA

SEPTEMBER 2000-AUGUST 2002

- Administered \$1M dollar budget and preformed cost/benefit analysis to ensure cost effectiveness.
- Managed a caseload of 80 individuals ranging from adult male professionals to homeless women and children. Provided guidance to clients on a range of issues from severe health complications, substance abuse issues, physical and emotional assault, and navigating public health and financial support agencies.
- Wrote grants, responded to RFPs, and negotiated contractual relationships with service providers.
- Planned fundraising events, organized volunteers, and provided public information about services.

The Population Institute
PUBLIC POLICY INTERN

Washington, D.C.

JANUARY -JUNE 1999

- Met with Members of Congress to promote international family planning and women's rights.
- Attended public hearings, wrote press releases, and researched legislative trends.
- Organized award ceremonies for Congressional Members, arranged media promotions, and attended congressional briefings.

EDUCATION

University of the Pacific, Eberhardt School of Business
MBA/ MASTER'S INTERNATIONAL (COMBINED MBA/PEACE CORPS)

Stockton, CA

AUGUST 2002-MAY 2006

University of Chicago
BACHELOR OF ARTS IN LATIN AMERICAN STUDIES

Chicago, IL

SEPTEMBER 1994 -JUNE 1998

National University of Costa Rica
UNIVERSITY OF CHICAGO STUDY ABROAD

Costa Rica, Central America

AUGUST 1996-DECEMBER 1996

AFFILIATIONS/SKILLS

AFFILIATIONS: Regional Water Authority “Blue Thumb” Partner 2011, Beta Gamma Sigma Honors Society (University of the Pacific MBA), Member of “Leadership Rancho Cordova Class of 2015” and class project president.

LANGUAGES: Fluent in Spanish (ranked advance high in official Peace Corps testing).

HOBBIES/INTERESTS: Rock Climbing (sport/trad), Mountain Biking, Backpacking, Gardening, Guitar, Hanging out with my wife, two kids, two dogs, and 5 chickens.

SHERI GRACIANO, PHR, SHRM-CP, CPC

smgraciano@yahoo.com · 916-203-1814

[linkedin.com/in/sheri-graciano](https://www.linkedin.com/in/sheri-graciano)

Innovative human resource business partner who easily strategizes at the executive level as well as effortlessly rolls up her sleeves to execute at the ground level

EXPERIENCE:

HUMAN RESOURCE BUSINESS PARTNER, WESTERN OPERATIONS - BOLDT

01-2021 - Present

- Collaborate with leadership to develop and execute strategies in relation to recruiting, retention, development, and engagement while ensuring alignment with and attainment of operational business goals.
- Engage, advise, and support leaders with strategic advice, training and resources to build robust, complementary teams.
- Lead the talent review process to identify high potentials for purposes of talent development and succession planning.
- Create and deliver training on topics including leadership, management, performance reviews, and more.
- Member: Western Operations Senior Leadership Team.
- Member: Western Operations Diversity, Equity, and Inclusion Team.

HUMAN RESOURCE DIRECTOR/BUSINESS PARTNER – VISIT SACRAMENTO

04-2002 – 12-2020

Reports to CEO

- Active member of Key Leader Team responsible for organizational growth, planning & development
- Develop and execute HR strategies, initiatives and programs that encourage a growth mindset while supporting the mission and goals of the organization
- Culture champion, continuously working to ensure a healthy company
- Coach and mentor to all levels of employees, from executive to individual team members
- Drive performance management and employee growth & development programs
- Partner with managers to ensure employee relations issues are handled consistently, fairly, and legally throughout the organization
- Develop and execute all workforce planning including recruitment, onboarding, growth, and retention efforts
- Employee trainer on topics including legal compliance, harassment, employee and leadership development, supervisory training, communication, *Smart & Healthy* and more
- Compensation development and implementation
- Propose, publish, and administer personnel policies and handbook

Major Accomplishments & Accolades (Visit Sacramento)

- Successfully led the effort to transform a toxic culture to one of high productivity and morale by adopting a *Smart & Healthy* approach to leadership and teamwork
- Created a successful rewards program for administrative staff that compensated them for pushing beyond their comfort levels, seeking learning opportunities, and presenting “Big Ideas”
- Built a performance management system that encouraged risk taking and a growth mindset
- Awarded ***Employer of the Year*** by Sacramento Area Human Resource Association
- Recognized as one of Sacramento’s top employers for more than 10 years by *Sacramento Magazine*

EDUCATION | CERTIFICATIONS | COMMUNITY INVOLVEMENT

Bachelor of Science, Business Administration
California State University, Sacramento

Certified Professional in Human Resources
Society of Human Resource Management & Human Resource Certification Institute

Accredited Facilitator, Five Dysfunctions of a Team™

Certified Professional Coach
Life Coaching Institute of Orange County

Sacramento Children’s Museum - Founding Board Member (2005-2011)

Sutter Middle School Parent Teacher Student Organization (PTSO)
Incoming President, 2016-2017
President, 2017-2018 and 2020-2021
Immediate Past President, 2021-2022

Active 20-30 #1032
New Member Chair - 2003, 2004
Board Member - 2004, 2005

Michel Jair Kiwan Gómez
4120 Douglas Blvd. 30650., Granite Bay, Ca 95746
mikiz4@me.com
916.735.2763

Professional Educational Experience

Adjunct Professor, William Jessup University	Rocklin	2021-Present
Cohort Team Leader, Spanish Bilingual Teacher TwinRivers Chair, Instructional Leadership Team	Sacramento	2015 - Present
Principal Designee, to assist School Administrators as needed		
Teacher Induction Mentor, Sacramento County Office of Education		
EdTech Leadership, Lego Robotics Coach		
Peer Coach and Pilot Teacher for new curriculum adoption for ELA, Swun Math, Next Generation Science, and History/Social Science.		
Bilingual Teacher, Team Leader 3rd-8th Grade	Tulare	2013 - 2015
Differentiated education for all learners by using a Competency Based approach		
Developed a curriculum for economics through game based learning		
Massachusetts Institute of Technology, Radix Endeavor Game Biology Pilot teacher.		
Founded Lindsay Unified Chess Club, Central Valley Champions 2015		
Bilingual Teacher San Diego City Schools	San Diego	1996 - 2004
GATE Teacher DePortola Middle School Honors 6/7/8th Gr.		
Coach Junior Model United Nations		
Governance Team Chair, Teacher of the Year		
2nd/3rd/4th Grade Spanish Bilingual Teacher		

Professional Business Management Experience

Licensed Fencing D-4 Contractor, President NorCal Safety Inc	Sacramento	2013 - 2021
Furnished and installed safety nets for residential pools.		
Award-Winning Sales Manager at Home Depot/USRemodelers	Sacramento	2010 - 2013
Recruited, trained representatives for sales on AutoCAD for residential kitchen remodels.		
Sales Manager at Katchakid Pool Safety Systems	Los Angeles	2004 - 2010
Southern California Regional Manager for sales and installations.		

Michel Jair Kiwan Gómez, (Mich)
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Pg 2.

Distinguished Leadership, Professional, and Academic Accomplishments:

Project Expansion Director, Green Ninja NGSS Middle School Curriculum
Educational Advisor, Tribal Eye Productions, Native American Literature
New Teacher Induction Mentor Sacramento County Office of Education
Teacher Consultant with THE BIGSPEARS, a History and Social Science Method
Teacher Consultant with the National Writing Program, Area 3 UC DAVIS Fellowship
Upward Bound, High School Summer Bridge EAOP Counselor, UCSD

National Conference Presentations:

Presenter, Stanford RILE Race Inequality and Language in Education Conference, 2018
Presenter, Sacramento State Multicultural Education Conference, 2018
Presenter, Conference on Academic Research in Education Las Vegas, 2018

Education

Ed.D. Educational Leadership	Sacramento State University	2021
Administrative Services Credential	San Diego State University	2002
MA Multicultural Counseling	San Diego State University	1996
BA PSYCHOLOGY	University of California, San Diego	1995

Press Releases

<https://thesungazette.com/article/education/2014/05/14/lindsay-moves-up-the-board/>
<https://thesungazette.com/article/education/2013/12/18/checking-the-competition/>

Stephanie Hannah, CPA, CCIFF

(916) 844-8300

West Sacramento, CA

stephie262@gmail.com

Education:

*Bachelor of Science, Business Administration; Concentration: Accounting
California State University Sacramento, 1996*

Certifications:

*Certified Public Accountant, State of California, #78773
Certified Construction Industry Financial Professional*

Memberships:

*Construction Financial Management Association, Sacramento Chapter
American Institute of Certified Public Accountants
Financial Executives International*

Experience Summary:

- Executive management team member
- Maintain professional relationships with banks, insurance brokers, CPA firms, and other advisors
- Supervise accounting department and train personnel
- Develop policies and procedures, integrate with other departments, and software implementation
- Prepare and review monthly and annual financial statements
- Budgeting and forecasting
- KPI analysis and industry benchmarking
- Strategic planning and presentation to board of directors
- Identify and resolves problems in a timely manner
- Ability to speak clearly and thoughtfully in front of board of directors and top level management

Professional Experience:

Director of Finance & Accounting, Sebastian Corp., Sacramento/Fresno, CA, March 2019 – Present

- Strategic planning with 10 year forecasting
- Hire and train accounting and administrative personnel
- Process evaluation for accounting and operations
- Develop processes and create culture of continuous improvement
- Branding and business development for Sacramento market growth
- Financial and tax strategies for multiple entities
- Cash flow and finance planning
- Review financials including consolidation and budget comparisons

CFO, Lund Construction Co., North Highlands, CA, 2016 – 2019

- ERP system implementation and customization
- Hire and train accounting and administrative personnel
- Equipment utilization and rate analysis
- Develop processes and create culture of continuous improvement
- Involved with rebranding and business development
- Financial and tax strategies for multiple entities
- Ownership transition strategies
- Collaborate with team to develop and communicate short term and long term goals
- Negotiate credit line and banking needs

Controller/CFO, Ford Construction Company, Inc., Lodi, CA, 2009 – 2016

- Financial reporting and analysis for multiple entities, including intercompany transactions
- Improved communications and processes between accounting, estimating and operations departments
- Equipment fleet tracking including finance negotiations and sales transactions
- Unit cost analysis for quarry productions
- Stockholder tax issues and personal financial statements
- Accounting department restructure, implementation and training
- Employee benefits and insurance renewals
- Worked with attorney and CPA firm on estate valuation and allocation of majority stockholder

Controller, Butterfield Electric, Inc., Woodland, CA, 2009

- Departmental financial reporting and analysis
- Overhead cost analysis and savings strategies
- Cash flow planning and pro-forma projections
- Worked closely with bonding agent to improve bonding capacity

Controller, RTH Contracting, Inc., Elk Grove, CA, 2006 – 2009

- Set up accounting system for start-up company
- Bid rate analysis
- Contract negotiation

CPA/Senior Manager, Burnett + Company LLP, Rancho Cordova, CA, 1998 – 2006

- Managed large client base of construction, real estate development and manufacturing entities
- Prepared and reviewed annual financial statement audits, reviews and compilations
- Tax planning for corporations and high net worth individuals with multiple pass-through entities
- Client projects included entity sale due diligence, general ledger cleanup, entity formation, succession planning and personnel hiring and training
- Provided business consulting on various matters

Staff Accountant, Stephan A. Hecox Accountancy Corp., Sacramento, CA, 1994 – 1998

- Monthly financial statement compilations
- Income tax preparation
- Special projects for developer clients

Technical Qualifications: Microsoft Office Suite, Spectrum, Vista by Viewpoint, Heavy Job Manager, BNA, QuickBooks

IAN McQUOID

MCCARTHY

Senior Vice President Operations



EXPERIENCE:

20 yrs with McCarthy
23 yrs Total Experience

EDUCATION:

Bachelor of Science
Construction Mgmt.
California State
University, Sacramento

ROLE/RESPONSIBILITIES:

As Vice President of Operations, Ian is responsible for integrating McCarthy's various departments, including estimating, scheduling, accounting, safety, quality control, management information systems, and contracts into projects as they become necessary. Ian also oversees staffing, overall job cost, schedule, quality, and safety for McCarthy's Sacramento office.

RELEVANT PROJECT EXPERIENCE:

Sierra College North Parking Structure - Rocklin, CA

This 488,000 SF design-build project is a five-level parking structure with 1,500 stalls. The project includes associated demolition, site utility relocation, 423,000 SF of site work including the addition of professional tennis courts, and solar elements.

San Juan USD, Del Paso Manor Elementary School New Construction - Sacramento, CA

This project transformed from a \$29 M renovation and modernization project to a \$40.6 M newly constructed elementary school with three single-story buildings that include 32 state-of-the-art classrooms, multi-purpose rooms, administration spaces, a kitchen and a library. The scope also included extensive site work, surface parking and four play structures.

San Juan USD El Camino Fundamental High School Center for the Arts - Carmichael, CA

This project consisted of designing and constructing a new performing arts center and fine arts exhibition venue to meet the needs of El Camino High School. The new PAC was a 11,600 sf building. Among other components, a tiered theater of 500 fixed seats and 100 portable seats in the orchestra area was installed, as well as a merchandise/ticket booth area, lobby/exhibit hall, restrooms, several dressing rooms, and necessary supporting elements. The theater is now used for a variety of school and community lecture and performance functions, including school assembly, lecture, drama, band and orchestra concerts, choral and dance performances, as well as video presentations.

San Juan USD Bella Vista High School Science Classroom - Fair Oaks, CA

The modernization portion of this project includes the repurposing and renovation of the H and J wings. Modernization of all existing classrooms generally included flooring and lighting replacement, as well as the addition of low voltage systems, interior painting, and a new teaching wall with built-in TV. McCarthy also was responsible for several window replacements. Modernization of the existing boys and girls restrooms was very intensive, with a completely new interior lay-out. The new construction portion of the project included the building of a flex space classroom/conference/science lab prep space, encompassing about 7,500 sf.

IAN McQUOID

MCCARTHY

Senior Vice President Operations

California Department of Corrections & Rehabilitation California Health Care Facility (CHCF) - Stockton, CA

This project consisted of a new 1.2 million sf, design-build correctional healthcare facility with housing for 1,722 patient-inmates, a diagnostics and treatment center, medical office, kitchen, plant maintenance, administrative and other miscellaneous support buildings. This project's scope included 144 acres of sitework and was completed with LEED Silver certification over the fast-paced span of just 18 months, made possible by the schedule control that came with McCarthy's self-performing concrete work.

Chukchansi Gold Resort & Casino Phase II Expansion - Coarsegold, CA

This \$103.3 million, 260,000 sf project was a for a thirteen-story hotel expansion. A basement and sub-basement were added, and McCarthy completed the renovation of the existing casino and five-level, 854-car parking structure. Meeting spaces and administrative offices were added for hotel personnel, while a full service spa, indoor/outdoor pool, restaurant, and arcade renovated for guests and entertainment.

Golden 1 Credit Union Corporate Headquarters - Sacramento, CA

This project was a \$28.4 million, 200,000 sf renovation for Golden 1 Credit Union. The six-story, Class "A" office building was refurbished with full interior improvements and now includes training facilities, an employee lunch room, data center, call center, 900 parking spaces and other general improvements consistent with a financial institution headquarters.

California State Prison Delano II BP 3 - Delano, CA

This project was a \$124 million, 861,000 sf state prison that included 16 "180" building type housing units, totaling 4000 beds and 14 guard towers.

JAMES MOORE * 916-661-1434* modexterj@gmail.com

QUALIFICATIONS

I am a committed, dependable employee that has experience and skills as a program manager, community support facilitator and loan counselor. I am an independent self-starter with the confidence to interact with individuals at all levels. Capabilities include:

Microsoft Power Point	Microsoft Word	Presentation and Public Speaking
Microsoft Excel	Type: 80wpm	Excellent Written Communication Skills
Data Base Management	Microsoft Publisher	Excellent Verbal Communication Skills
Case Management Exp.	Client Needs Assessment	Program Development Experience

EXPERIENCE HIGHLIGHTS

Adult Residential Facility Administrator

- Oversee staff operations, business planning and budget development in an assisted living facility.
- Ensure services are in compliance with professional standards, state and federal regulatory requirements.
- Oversee inventory, order processing and distribution of products and services.
- Plan and direct the administrative portion of the assisted living program.

Case Manager / Facilitator

- Developed, implemented, and monitored the individualized Person-Centered Plan (PCP) for up to 10 consumers in order to meet their community integration and service coordination goals.
- Assisted consumers in accessing benefits and services by providing information and education about community resources.
- Provided crisis intervention, guidance, and supportive counseling.
- Advocated for and promote full inclusion of individuals with disabilities in all opportunities in the community.
- Completed documentation and reports on a weekly and quarterly basis to ensure eligibility, funding, and compliance with state and agency policy.
- Ensure all enrollment activities adhere to established procedures of accountability and confidentiality according to contracts and regulatory entities.

Program Manager

Provided one-on-one tutoring, ESL, computer training and resume writing and job search assistance to clients

- Assist with program development, design and implementation
- Maintenance of student records / progress and hours of program participation
- Communicate effectively with students, volunteers and staff
- Establish and lead a computer basics class for students of varying levels
- Supervised over 200 volunteers throughout the adult education program
- Assist clients with basic job searches, resume creation and filling out forms/applications
- Supervised volunteers providing GED, ESL, resume writing, computer lab assistance to clients

Community Support Facilitator

Provided support services and advocacy for developmentally disabled persons and their families.

- Assisted clients in acquiring and maintaining support services
- Advocated on behalf of the clients with community agencies
- Conducted assessment of clients, assisted in the development of Individual Service Plans
- Monitored service plans and revised according to client accomplishments, conducted life skills training activities
- Completed required forms, reports, completed monthly case notes

JAMES MOORE * 916-661-1434* modexterj@gmail.com

Loan Counseling Area Director

Provided financial and home ownership counseling services to low and moderate income families.

- Implemented and managed first time homebuyer counseling program in Sacramento, CA
- Developed and facilitated classes on budgeting, credit, debt management and homeownership
- Implemented and maintained case files on clients
- Managed client cases for referral to associate lending agencies, created monthly reports.

Healthy Start Coordinator

Created and Coordinated services for students in the Del Paso Elementary School District

- Coordinated programs to identify and assist children who were unsuccessful in school.
- Coordinated services for children among agencies involved in the Healthy Start collaborative.
- Maintained computerized database on children identified as unsuccessful, in yearly reports to the state.
- Liaison between school and families; families and county agencies.

EMPLOYMENT HISTORY

<i>Case Manager</i>	Veterans Services VOA	Current	Mather	CA
<i>Residential Administrator</i>	Aacres California	2017 – 2018	Sacramento	CA
<i>Case Manager / Facilitator</i>	Strategies To Empower People	2014-2017	Sacramento	CA
<i>Adlt Education Program Manager</i>	Sac Food Bank & Family Services	2007- 2014	Sacramento	CA
<i>Community Support Facilitator</i>	Training Toward Self-Reliance	2003 - 2007	Sacramento	CA
<i>Loan Counselor</i>	ACORN Housing Corporation	2000 - 2002	Sacramento	CA
<i>Healthy Start Coordinator</i>	Sacramento Children's Home	1999 - 2000	Sacramento	CA

EDUCATION and AWARDS

Master's in Social Work	University of Southern California	In Progress
B.S. Psychology	University of Phoenix	Sacramento
CA		
Administrator Residential Facility	State of California Certification	Sacramento
CA		
Registered Behavioral Technician	CA Behavior Analyst Certification Board	Sacramento
CA		

Timothy A. Murphy

4617 Nottingham Circle | Sacramento, California 95864 | tim@murphyfour.com | (916) 947-8937

LEADERSHIP

Offering leadership skills, comprehensive experience and a broad range of talents in
Business | Organization Management | Communications | Strategy | Civic & Government Affairs

TALENTS

Experienced, capable and honest. More than 20 years of high-profile public and private business experience with a proven track record in association leadership, business development, relationship building, public affairs, and strategic communications.
Decisive, resourceful and self-directed. Ability to successfully design and direct organizational strategy, corporate objectives, and employee teams and functions in multi-unit operations.
Common sense and solution-based management style. Proficient in formulating and administering business plans, financial goals, annual budgets, corporate forecasting, marketing strategies, training, integrated programming and managing the employees who implement them.
Motivated, intuitive and mission-driven. Results oriented strategic planning, business objectives execution, employee motivation, and external relations with an extensive contact base across the Sacramento region business and elected community.

CAREER

Providing exceptional analytical, strategic, communications and leadership skills relating to association management, government/community relations, federal, state and local public policy, media relations and corporate responsibility, combined with a strong work ethic and a proven track record in collaboration and consensus building among diverse interests and all performed in steadily increasing positions of responsibility.

Chief Executive Officer — Sacramento Regional Builders Exchange | 2015 - Present
Corporate Responsibility Director — Aerojet Rocketdyne | Easton Development Company | 2000 – 2015
Public Affairs Representative — Kaiser Permanente | 1997 - 2000
District Representative — California State Senator Tim Leslie, District 1 | 1995 - 1997
Project Manager — Phoenix Systems and Technologies | 1993 – 1995
Sales Manager — Banner Software | 1992 - 1993
Field Representative — Kern County Supervisor Karl F. Hettinger | 1991 – 1992

EDUCATION

Bachelor of Arts Degree in Government, California State University, Sacramento.
Recipient - 2016 Distinguished Alumni Award

PROFESSIONAL & CIVIC SERVICE

Sacramento Metropolitan Chamber of Commerce — Board Director & Executive Committee Member | Metro Chamber Volunteer of the Year, 2009 | Cap-to-Cap Program Chair 2011 | MetroPAC Board of Directors | Leadership Sacramento Program Chair 2006-08 | Leadership Sacramento Class of 2001 | Transportation & Air Quality Committee | 2014 Nashville Study Mission, Chair
American Leadership Forum — Senior Fellow
County of Sacramento — Planning Commissioner 2013 – 2015 | Sacramento County Transportation Collaborative 2001-05 | Measure A Renewal Committee 2003
California Capital Airshow — Board of Directors 2011 – Present
Rancho Cordova Chamber of Commerce — Board of Directors 1999 – 2008, 2010 – 2015
Board President 2002 | Government Affairs Chair | RanchoPAC Board Chairman
City of Elk Grove — Planning Commissioner 2004-08
Drexel University, Sacramento — Board of Advisors 2013 - 2017
Greater Sacramento Safe Kids Coalition — Founding Board President 1998-2000
Women Escaping a Violent Environment (WEAVE) — Chair, Golf Tournament 1997-2000

Timothy A. Murphy

4617 Nottingham Circle | Sacramento, California 95864 | tim@murphyfour.com | (916) 947-8937

DETAILED CAREER RESPONSIBILITIES

Chief Executive Officer — Sacramento Regional Builders Exchange (SRBX) | 2015 – Present

Manage the Sacramento Region's premiere advocacy association serving the commercial construction industry. Responsible for long-term planning, administration and management of the SRBX operational activities, personnel, and programs. Responsible for developing and enhancing relationships with other construction related industry groups; the architectural, engineering, and supplier groups; and various regulatory agencies. Develop government relations strategies to respond to state legislative and regulatory issues impacting commercial construction industry. Develop and oversee member communications strategy, promoting industry safety offerings, networking functions, workforce development and educational programs. Oversee activities of not-for-profit SRBX Educational Foundation, promoting educational and workforce development opportunities in the construction industry. Serve as industry spokesperson in print and media news.

Corporate Responsibility Director — Aerojet Rocketdyne / Easton | 2000 – 2015

Design and execute corporate social and public affairs strategies and budget in concert with senior executive management. Develop strategic relationships and capturing opportunities with federal, state and local elected officials, agency directors and key staff to further company's business, real estate and environmental objectives. Manage communications department in planning, development and delivery of internal and external communication publications, internal announcements, newsletters, brochures, advertisements, market support tools and presentations, and various employee communication programs. Directed public relations activities for award-winning public/private transportation partnership. Provide volunteer leadership and company representation with strategic civic and nonprofit organizations to further company's objectives and image. Served as company news media spokesperson.

Public Affairs Representative — Kaiser Permanente | 1997 - 2000

Develop and maintain a distinct corporate presence in the Kaiser Valley Service Area while cultivating relationships with governmental and community leaders. Forecast and develop public policy and philanthropic opportunities aligned with company's philanthropic objectives. Forecast changes in political and regulatory climate and develop strategies for company response and management. Lead public/private partnerships promoting community health, youth safety and transportation management.

District Representative — California State Senator Tim Leslie | 1995 - 1997

Conduct constituent affairs for five counties within the California First Senate District. Build consensus among multiple parties pertaining to wide variety of legislative and public policy issues. Troubleshoot issues and disputes between federal, state, county and local governments, district constituents, civic groups and organizations.

Project Manager — Phoenix Systems and Technologies | 1993 – 1995

Provide community relations services for the Environmental Restoration Program at McClellan AFB. Organize public meetings for McClellan AFB's quarterly public meetings and for McClellan's Environmental Training Facility. Write and produce quarterly newsletters and bi-annual fact sheets for distribution to 3,000+ recipients.

Sales Manager — Banner Software | 1992 – 1993

Responsible for development, marketing and client support of sales markets in Canada and Midwestern United States. Responsible for production and layout of in-house marketing materials and newsletters.

Field Representative — Kern County Supervisor Karl F. Hettinger | 1991 – 1992

Assist constituency in affairs and inquiries dealing with county government. Analyze impact of proposed statewide legislation on local government. Address larger county issues in concert with county department managers and county executive's office. Write speeches, press releases and act as a media liaison.

Ramon L. Hopkins, PE

4880 Cameron Road, Cameron Park, CA · (916) 947-0057 · ramon.hopkins@dot.ca.gov

PROFESSIONAL PROFILE

- Registered Professional Engineer, Civil – California License Number 63708
- Executive Transportation Engineer with proven management and leadership skills and a diverse engineering background developed during twenty-three years of State service and seven years of Marine Corps Engineering experience.
- Extensive experience in construction contract interpretation and administration with a keen ability to identify and resolve issues that would potentially impact project delivery.

EXPERIENCE

Chief, Division of Construction, Caltrans – December 2020 – Present

- Lead the Division of Construction and responsible for the overall development, distribution, maintenance, and administration of the Department policies related to construction.
- Chair the AASHTO Committee on Construction Technical Subcommittee on Safety, Environment, and Workforce Development.
- Partner with the construction industry in the delivery of the Caltrans construction program. (Current ongoing construction valued at \$11.7 billion)

Principal Transportation Engineer, Assistant Division Chief, Division of Construction, May 2018 – December 2020

- Manage the Division of Construction activities, providing corporate support of the Department's construction program.
- Partner with internal and external stakeholders in the development and implementation of policy.
- Advise management, local transportation agencies and other governmental entities to ensure that departmental standards are consistently applied in the construction program.

Supervising Transportation Engineer, Construction Field Coordinator, February 2017 – May 2018

- Advised districts on construction policy and meeting statewide objectives. Collaborated with construction managers on required actions to comply with policy and achieve objectives.
- Provided expertise on contract administration including claims, arbitration, and engineering issues.
- Collaborated with other Caltrans divisions to improve statewide policies and practices.

Senior Transportation Engineer (Civil), Central Region, 2008 – January 2017

- Construction Manager for the Route 46 corridor widening projects east of Paso Robles. This series of projects was considered the first Major FHWA Project in District 5 and was valued at just over \$500 million.
- Conducted the District 5 project records review to ensure district wide consistency in contract administration and developed training for district staff in areas that were identified for improvement.

- Subject Matter Expert on Project Resourcing and Schedule Management (PRSM) and assigned as an instructor to teach Project Managers and Task Manager the proper use of the program.

Transportation Engineer (Civil), Central Region, 1998 – 2008

- As Resident Engineer, administered roadway construction contracts ranging from \$200,000 to \$54,000,000.
- Tracked construction resource expenditures, analyzed material quality testing reports to ensure compliance with specification, prepared Contract Change Orders, and monitored monthly work progress to deliver projects within scope and budget.

Program Director/Planning Officer, Marine Corps Reserve Center, Bakersfield, CA 1996 – 1998

- Directed the efforts and supervised the daily activities of ten mid-level managers who develop and maintain numerous support activities for 120 plus employees.
- Responsible for the development and management of employees while balancing an extremely limited operations and training budget.
- As Public Affairs Officer, represented the United States Marine Corps in front of numerous print and broadcast media in both taped and live interviews. Often attended benefits and meetings sponsored by community organizations as their guest speaker. Have addressed crowds as large as 3,000.

Engineer Officer/Project Director, 9th Engineer Support Battalion, Okinawa, Japan, 1993 – 1996

- Supervised 100 plus employees in the planning and construction of projects ranging from expedient road repair on the island of Okinawa to the construction of drainage facilities and roadways in Korea.
- Designed and oversaw the construction of a 2,000-man temporary base camp for exercises in Thailand. Facilities included sleeping and working areas, a freshwater production and distribution system, gray and black wastewater disposal systems, and an intricate electrical power distribution system.
- Directed health and safety programs and ensured compliance with Marine Corps Regulations and OSHA Standards as well as local Japanese Ordinances.
- Managed the construction of a library and school in a remote location of Thailand as part of an Engineer Civil Action Project (ENCAP) which had significant political importance.

EDUCATION

- B.S., Civil Engineering, University of Arizona, 1992
- Military Schools
 - Engineering Officer Course and Logistics Staff Planning Course, 1993
 - Maintenance Management Leadership Course, 1994
 - Safety Manager Course and Environmental Managers Course, 1995
- Caltrans Schools
 - Caltrans Project Management Certificate Program, Cal State Sacramento, 2007
 - Supervisory Training Program, 2008
 - Management Training Program, Cal State Sacramento, 2009
 - Leadership Training Program (I), Cal State Sacramento, 2019
 - Leadership Training Program (II), Cal State Sacramento, 2020

- Establishes policies and guidelines for operational excellence and regulatory compliance including local, state and federal markets
- Provides guidance and oversight in preparation of project understandings, schedules, budgets, fee proposals and negotiations
- Oversees the process for ensuring the proper work plans are in place, scheduling work, staffing and compliance in the execution of projects including resolution between departments
- Ensures quality processes are in place for all divisions specific to their project requirements
- Works with Human Resources regarding policies, salary administration, employee benefits to ensure interest and welfare of the employees as individuals are preserved and protected, including performance appraisal processes
- Works with the leadership team for approval of additional staffing based on the strategic and resources planning requirements
- Ensures there is firm-wide development and training strategy for all personnel
- Responsible for the development and implementation of a firm-wide technology strategy and infrastructure
- Develops and maintains strategic working relationship with key consultants, vendors and suppliers including execution of major contracts, e.g. leases and long term contracts
- Leads the development and implementation of a firm-wide internal communication strategy
- Ensures there is a collaborate work environment within and between regional offices
- Ensures the proper and required professional licenses are maintained to support a regional practice
- Skilled in applying the techniques of critical path method (CPM) scheduling for complex projects

FINANCIAL PERFORMANCE & CONTROL

- Full P & L responsibility for \$450M in commercial construction for a general construction operation in the California region for a \$2.5B U.S. general contractor
- Works with the leadership and finance teams to establish key performance indicators for each division and ensures that the key financial performance indicators are in place in order to achieve the company's overall financial goals
- Extensive experience and accuracy in cost analysis, projections and risk assessment/valuation
- Skilled in change order control and value engineering development
- Performed financial analysis, productivity impact evaluation, schedule impact analysis and claim validity on numerous municipal projects

MARKETING/BUSINESS DEVELOPMENT

- Directs the development and execution of state and local business sector development plans and monitors results
- Supports development and execution of the account planning process
- Actively develops and participates in development of strategic client relationships
- Ensures the firm's "go/no go" strategies and policies are executed in the best long term interest of the company
- Provides visible corporate leadership with potential and existing clients in all market sectors through panel participation or as a panel moderator at local, state and national industry events
- Maintains working dialog with key clients and state / local officials
- Participates in the development and execution of key project and client presentations
- Develops personal relationships/networking opportunities with allied market leaders, consultants and other professionals
- Maintains professional relationships with strategic industry peers for potential joint venture alignment

ESTIMATING/LABOR RELATIONS

- Maintained labor relations with union/non-union groups, government officials, and contractors
- Prepared preliminary and detailed estimates for major healthcare, commercial, multi-family, retail/mixed-use, industrial, institutional and heavy/civil infrastructure construction projects

RECOGNITION

- Honored as the Caltrans District 5 “Resident Engineer of the Year” – 2003
- Central Region “Resident Engineer of the Year” – 2010
- Caltrans Superior Accomplishment Award – 2003, 2010, 2011
- Excellence in Transportation Award – 2013
- State of California Senate Certificate of Recognition – 2014
- Excellence in Partnering (Gold Award) – 2015



KENNETH J. WENHAM

President, CEO

As President, Mr. Wenham creates and communicates the overall corporate vision and develops leaders within the organization who are strategic, courageous, and humble. Mr. Wenham believes that personal and professional development and strategic alliances enable Roebbelan "to build exceptional projects, enduring relationships and the most respected workforce in the construction industry."

Mr. Wenham oversees an average of \$300 million annually and is instrumental in putting \$2.5 billion of projects in place since 2006.

PROJECT EXPERIENCE

Construction Management Experience

Mr. Wenham began his construction career as a Journeyman Carpenter in 1989. He joined Roebbelan in 2000 and has many years of construction experience in the industry. He quickly moved upward within the company and served as Project Manager, Division Manager, Operations Manager and Vice President of Construction Operations. In March 2011, he was named President.

As Vice President of Operations, Mr. Wenham was responsible for overseeing all construction activities through successful completion. He managed construction projects worth over \$300 annually and oversaw the successful completion of over one hundred public works projects. He has experience in all types of construction delivery methods that include design-build, lease-leaseback, construction management, service agreements and design-bid-build projects.

Large Scale Projects

Mr. Wenham paid particular attention to planning and delivering large scale projects to avoid waste, excessive costs and project delays. Examples of his management abilities include Dougherty Valley High School and Vista del Lago High School. The Dougherty Valley High School, a new 54 acre, 368,000 square foot high school in the San Ramon area, was completed five months less than originally planned. Mr. Wenham also ensured continuous construction and safety on an occupied campus site - Vista del Lago High School, a school build within a tightly condensed neighborhood.

Programming and Preconstruction

Mr. Wenham has been actively involved in programming and preconstruction activities involving, but not limited to, code compliance, constructability reviews, value engineering, building efficiencies (Title 24), quality construction (ISO), sustainable practices, ADA compliance, as well as projects located in metro, suburban and rural areas.

32 industry years
Team member since 2000

EDUCATION

Bachelor of Science Construction Management California State University, Sacramento

AFFILIATIONS

Sacramento Children's Museum
Past Board Member

Vistage Executive Group
Member

Teach for America
Past Board Member

Rising Sun Montessori
School Board President

LICENSES/CERTIFICATIONS
License Qualifier for:
A Engineering
B General Building
C13 Fencing
C8 Concrete

REFERENCES

James Beckwith
Chief Executive Officer
Five Star Bank
(916) 798-3967
jbeckwith@fivestarbank.com

Cathy Allen
Chief Operations Officer, Facility Support Services
Sacramento City Unified School District
(916) 643-9233

Christopher Hoffman
Superintendent
Elk Grove Unified School District
(916) 686-7711
choffman@egusd.net

Deborah Wilder

Graduate University of California Davis, B.A

Graduate Northwestern School of Law of Lewis and Clark College, Portland, Oregon.

Deborah has been a licensed attorney for 39 years (Oregon 1981, California 1984) having argued labor and employment law cases in multiple states and before the 9th Circuit Court of Appeals. In 2002, she created Contractor Compliance and Monitoring Inc., (CCMI) a third party consulting company which assists public agencies and large developers/prime contractors monitor, audit, review and comply with state and federal prevailing wage requirements. CCMI is headquartered in the San Francisco Bay area and has additional offices in San Diego, Seattle and Maryland and performs work in over a dozen states. Deborah is a nationally recognized labor law attorney and authority in the field of prevailing wage and a successful small business owner.

Deborah has authored numerous articles over her 39-year career including the following books:

- *What Every Contractor Should Know About Prevailing Wages* © 2010, 2nd Edition © 2015' 3rd Edition 2021
- *AGC of America's Davis Bacon Compliance Manual* 3rd Edition © 2010, 4th Edition © 2012; 5th Edition© 2019
- *Davis Bacon Handbook for Public Agencies* © 2013, 2nd Edition © 2016

PROFESSIONAL TRADE ASSOCIATION SERVICE

- Women Construction Owners & Executives, USA (WCOE), member 1985 - present; National President 2007-2009.
- National Association of Women Business Owners (NAWBO), member 1995 - 2016; SF Chapter Board 1996-1997; National Public Policy Chair 2008
- Construction Craft Training Center 1995-1997 Board Member (Construction Apprenticeship Program)
- Associated Builders and Contractors current
- Associated General Contractors current
- American Public Works Association current

COMMUNITY SERVICE

- CERT Instructor (Community Emergency Response Team) 2005-present
- T-3 Trainer for CERT 2012-present
- Lifetime Girl Scout – 40+ years as scout, leader, Association Chair, currently Gold Award Advisor for Nevada County
- Boy Scout Merit Badge Counselor- current
- Volunteer The Friendship Club (recently renamed as Bright Futures of Youth)- supporting girls at risk- current

- Volunteer Sierra Nevada Hospital Foundation - current
- Volunteer Women of Worth (Domestic Violence Shelter and Services) - current
- Kare Crisis Nursery- offering support to family in crisis with young children- current
- Rotarian 1997 to present

PAST SERVICE OF BOARDS AND COMMISSIONS

- Foster City Council 1997 – 2005; Mayor 1998 – 2000
- Member of Women Construction Owners and Executives USA 1985 to present; National President 2007-2009; Current Board Member
- Nevada County Fire and Police Safety Council 2019-present
- Caltrans Business Advisory Council San Diego 2020-present Caltrans Business Advisory Council San Diego 2020-prese
- San Mateo County Library JPA – Chair from July 2001-2003
- CCAG (City and County Associations of Government – Chair – Finance Committee) 1997-2005; chair 2003-2005
- San Mateo County Domestic Violence Commission 1998-2005
- San Mateo County Criminal Justice Council 1999-2004
- AYSO Volunteer Soccer Referee 1989-1997
- Caltrans Small Business Advisory Council 1987-1997
- California Department of Correction Advisory Council 1989-1997
- President – Friends of Foster City Library 2006-2008. Current member

Past Directors

M. JORDAN BLAIR

SACRAMENTO, CALIFORNIA

Communications Leadership / Strategic Planning & Implementation / Relationship Management

*Advocacy · Issues Management · Fundraising · Media Engagement
Electronic and Print Media · Organizational Leadership · Legislative & Regulatory Liaison*

- An architect of strategic communications and marketing plans; exceptional track record of quality implementation
- Proven advocate on complex and sensitive business issues; deep experience in media engagements
- Proficient in the development of valuable relationships with senior stakeholders and policymakers
- Extensive business leadership experience in private, public and not-for-profit organizations
- Creator of provocative marketing and communications tactics; a dedicated team leader with a contagious can-do philosophy

Selected Professional Experience

Sacramento Regional Builders Exchange | Sacramento, California
Communications Director & Executive Director, SRBX Education Foundation

April 2015-Present

- Provide leadership and strategic direction for marketing, communications, and public relations by developing strategies, policies, and activities to build awareness and preference for the organization.
- Serve as spokesperson and primary media liaison.
- Develop and maintain strategic alliances with community leaders, local officials and the media to promote the organization's brand.
- Develop, implement, and control department budget.
- Oversee and maintain brand compliance among all areas.
- Oversee the development and implementation of a strategic communications plan.
- Plan, create, and produce advertisements, posters, programs, invitations, and other graphics materials as needed for both internal and external audiences; coordinate website updates including a new and responsive thematic design.
- Serve as editor-in-chief of the SRB-Xtra monthly newsletter.
- Manage the organization's 501(c)3 foundation which is responsible for scholarship and workforce development programs within the Builders Exchange.
- Provide strategic planning, effective leadership and execution of the foundation's goals.
- Organize, plan and execute fundraising events.
- Oversee support staff and assigned programs including the CREATE Mentoring Program, Design Build and NEXT Young Professionals.
- Provide support to multiple boards of directors and trustees.

Jesuit High School | Sacramento, California
Vice President for Marketing and Community Relations; previously Director of Communications July 2010-June 2014

- Launched Jesuit's Office of Communications; implemented comprehensive communications, marketing and technology campaign to maximize stakeholder preference, resulting in 33 percent increase in summer registrations.
- Conceptualized web, print and social media strategies to perfect Jesuit's image, making the institution Facebook's most-followed U.S. Jesuit high school.
- Served as public spokesperson and primary media liaison; represented Jesuit at various public events, forums and conferences. Hosted more than 200 media calls in four years. Garnered recognition for student and staff achievements.
- Managed community, government, and media relations; forged quality relationships with governmental and community leaders; led personal and group engagements with stakeholders.
- Oversaw video production services, including live broadcasts; provided event management of all-school events as needed including co-chairing 50th Anniversary Year events.
- Coordinated the development of the Technology Strategic Plan with the school's principal, which promoted the innovative use of technology across all areas of the organization.
- Directed website redesign, encompassing best practices from public and private sources. Increased user hits by 16 percent; integrated e-commerce campaigns shifting more than \$1 million annually into online transactions.
- Created editorial standards and guidelines for all school logo marks and website content; developed organization's first centralized style guide; more than 130 print and web edits were made using guidelines.
- Launched online logo wear store, resulting in more than \$40,000 in new annual online revenues.
- Oversaw third-party consultants, with collective contracts in excess of \$400,000.
- Supervised crisis communications management efforts; engaged senior staff and families in crisis plan development.



MJBLAIR.COM

Selected Professional Experience Continued

California Department of Mental Health | Sacramento, California

State Level Programs Administration; previously Director's Office of External Affairs

Jan 2009-June 2010

- Composed the County Performance Contract which distributed more than \$950 million in annual funding.
- Managed the Projects for Assistance in Transition from Homelessness federal grant; conducted site visits and reviews.
- Assisted in the development of the Operation Welcome Home state project for veterans.
- Led development of a \$60 million strategic plan for the Mental Health Services Oversight & Accountability Commission to reduce mental health stigma and discrimination. Oversaw a team of 15 contractors and staff and a committee of 56.
- Testified at oversight boards and public forums; represented the Director at functions throughout the state.
- Completed state hospital visits; assisted in the Gubernatorial Appointments of their advisory board members.

Volunteer Leadership Assignments

Oversaw annual organizational budgets in excess of \$1 million; performed executive performance planning and reviews; oversaw website redesigns; implemented social media programs; maximized brand management; negotiated and executed communication and personnel contracts.

- | | |
|--|--------------|
| ▪ KVIE Public Television Community Advisory Board | 2013-Present |
| ▪ Fairytale Town – a division of the City of Sacramento Board of Directors, Past-President | 2008-2018 |
| ▪ University of Southern California Alumni Club of Sacramento, President | 2009-2013 |
| ▪ River City Food Bank Board of Directors, President | 2008-2013 |
| ▪ Phi Kappa Tau Fraternity Gamma Iota Chapter Board of Governors | 2008-2013 |
| ▪ College of William and Mary Alumni Association Board of Directors | 2007-2010 |

University Education

University of Southern California | Los Angeles, California

Doctor of Policy, Planning, and Development (Communication of Policy and Campaign Management)
Master of Public Administration (Organizational Management)

Candidate
May 2007

California State University, Sacramento | Sacramento, California

Master of Arts | Government (Urban & State Politics and Political Theory)

Aug 2006

College of William and Mary | Williamsburg, Virginia

Bachelor of Arts | Government, Minor – History

Dec 2004

Notable Roles

University of Southern California | Office of Student Affairs | Los Angeles, California

Housing Advisor

2006-2008

University of Southern California | Sol Price School of Public Policy | Los Angeles, California

Dean's Office of Development and External Relations

2006-2007

Elaine Wright for Elk Grove Community Services District Board of Directors | Elk Grove, California

Campaign Manager

2006

California Strategies, LLC | Sacramento, California

Administrative and Research Assistant

2005-2006

Honors and Memberships

- Sacramento Young Professional of the Year (2012) | Sacramento Metro Chamber of Commerce
- 40 Under 40 Emerging Leader Award (2016) | Sacramento Business Journal
- Phi Taus Under 40 National Award (2014) | Phi Kappa Tau Fraternity
- Digital Social Media Campaign Gold Award (2012) | Sacramento Public Relations Association
- Leadership Sacramento (2012) | a program of the Sacramento Metro Chamber of Commerce
- Metro Inspire Project | Founding Member
- American Society for Public Administration
- International City/County Management Association
- Pi Alpha Alpha National Honor Society | Public Administration
- Pi Sigma Alpha National Honor Society | Political Science
- Public Relations Society of America
- United States House of Representatives Page Association



DANIEL R. DUMKE

331 Calle Felicidad | San Clemente, California 92672 | (949) 345-9500 | ddumke2002@gmail.com

PERSONAL PROFILE

- Over 40 years of construction management and executive leadership experience centered on strong strategic planning skills and ethical business practices
- Recent executive level leadership of a building construction operating group for the California region of an ENR top U.S. general contractor (currently ranked 52). Regional revenues currently at \$450M annually with 150% growth in less than four (4) years. The region includes three (3) offices; 175 operations and administrative employees
- Previously directed operations of a large civil/infrastructure group with revenue totaling \$120M annually, 100 employees, including 6 division managers
- Skilled in business planning, project recovery, claim development and resolution, scheduling, proposal development and presentations, contract management and negotiations, including labor relations and project labor agreements.
- Led corporate initiatives for safety, quality, diversity, inclusion and small/disadvantaged business enterprise utilization (including mentor-protégé programs)
- Developed, presented and sold construction contracting and management proposals for various projects
- Accomplished in risk assessment, liability identification, damage quantification, claim preparation, insurance claims, change management and change negotiations, and dispute resolution (mediation / arbitration)
- Trained, developed and supervised management, sales, estimating and field operations personnel
- Adept in all aspects of pre-construction, including BIM/VDC systems, drone quantification, model-based estimating and implementation of Lean practices

EXPERIENCE HIGHLIGHTS

LEADERSHIP AND MANAGEMENT

- Over 40 years experience directing multimillion dollar construction projects from concept through final completion, including programming / planning, design development, permitting, procurement, construction, commissioning and completion
- Guides and directs leadership teams, including Regional Vice Presidents / Project Executives, Vice Presidents of Preconstruction / Estimating, Finance, Human Resources and Business Development Managers
- Coaches and develops individual leadership team members
- Leads the development, execution and results of the strategic / tactical plan that ensures growth and operating income targets are achieved or exceeded
- Actively leads and supports a positive, proactive, results-oriented work culture that is regarded by peers and stakeholders as innovative and demonstrative of the firm's core values
- Extensive experience with all construction product and delivery types (Design-Build; IPD; CM @ Risk; P3 – developer and concessionaire contract structures; etc.)
- Proficient in restarting stalled projects, settling claims, performing corrective work, and resolving labor disputes to expedite the completion of contracts
- Acted as owner's representative in reviewing, analyzing, and approving contract documents, progress payments, change orders, and bid awards for contracts on a major OSHPD hospital expansion in Los Angeles, California

OPERATIONS

- Leads the regional operations of the firm to achieve the targeted key performance indicators
- Responsible to establish and maintain the operating results dashboard/processes and work with leadership team to make operating adjustments to meet targets
- Develops and monitors the overall organizational structure of the firm

RELEVANT CAREER HISTORY

Vice President | General Manager, THE BOLDT COMPANY, Sacramento, CA
(2020 – Present)

Senior Vice President – California District Manager, SUNDT CONSTRUCTION, INC., California Region (2016 – 2020)

Vice President – Commercial Business Unit Leader, BALFOUR BEATTY CONSTRUCTION LLC, California Region (2014-2016)

Vice President / General Manager, RUDOLPH & SLETTEN, INC., (PERINI CORP.), Irvine, CA
(2012-2014)

Project Director / Executive, McCARTHY BUILDING COMPANIES, INC., Newport Beach, CA
(2003-2012)

Director of Operations, THE HASKELL COMPANY – CIVIL GROUP, Jacksonville, FL
(2001-2003)

Mechanical Construction Manager / Preconstruction Manager, M.A. MORTENSON COMPANY, Minneapolis, MN and Los Angeles, CA (1996 - 2001)

Senior Project Manager/Estimator, J.F. AHERN COMPANY, Fond du Lac, WI
(1981 - 1996)

EDUCATION

University of Wisconsin - Milwaukee
Bachelor of Science – Mechanical Engineering, 1987

LICENSES

State of California
General Engineering "A" License – Current

AFFILIATIONS

- **AGC of California – Los Angeles Chapter Board of Directors**
2008 – 2014
- **AGC of California – Orange County Chapter Board of Directors / State Legislative Committee**
2014 – 2020

REPRESENTATIVE PROJECTS / ROLES – PARTIAL LIST

PROJECT	CONTRACT VALUE	ROLE (FIRM)
<u>HEALTHCARE FACILITIES</u>		
Oroville Hospital – New Hospital Wing Oroville, California	\$120MM	Senior Vice President (Sundt Construction, Inc.)
Scripps LaJolla Medical Center LaJolla, California Cardiovascular Institute and Central Energy Plant	\$270MM	Project Director (McCarthy Building Companies)
Santa Barbara Cottage Hospital Santa Barbara, California Energy Center Pueblo Parking Structure Knapp Building Parking Structure Patient Pavilions and D&T Building	\$ 35MM \$ 11MM \$ 11MM \$300MM	Project Director (McCarthy Building Companies)
Henry Mayo Newhall Memorial Hospital Valencia, California Parking Structure No. 1	\$ 10MM	Project Director (McCarthy Building Companies)
Kaiser Permanente Panorama City Medical Center Panorama City, California Hospital Replacement and Central Plant Northeast Parking Structure (Design-Build)	\$181MM \$ 14MM	Project Director (McCarthy Building Companies)
<u>HIGH TECH/INDUSTRIAL FACILITIES</u>		
Coherent, Inc. (Laser Technologies) San Jose, CA	\$ 50MM	Senior Vice President (Sundt Construction, Inc.)
LAX Central Utility Plant Replacement (Design-Build) Los Angeles, California	\$300MM	Project Executive (Clark/McCarthy Joint Venture)
<u>AVIATION</u>		
SDIA Airport Support Facilities San Diego, CA	\$150MM	Senior Vice President (Sundt Construction, Inc.)
<u>WATER/WASTEWATER/ENVIRONMENTAL</u>		
South Essex Wastewater Treatment Facility Salem, Massachusetts	\$116MM	Senior Project Manager (M.A. Mortenson)
Orange County Water District Groundwater Repl Sys (GWRS) Fountain Valley, California	\$115MM	Project Director (McCarthy Building Companies)
Town Creek Water Treatment Plant Macon, Georgia	\$ 75MM	Mechanical Construction Manager (M.A. Mortenson)
Hyperion C-112 Primary Battery & Technical Support Facility Los Angeles, California	\$ 75MM	Senior Project Manager (M.A. Mortenson)
Oxnard Advanced Water Purification Facility (AWPF) Oxnard, California	\$ 55MM	Project Director (McCarthy Building Companies)
Northwest River Water Treatment Facility Chesapeake, Virginia	\$ 45MM	Mechanical Construction Manager (M.A. Mortenson)
J.A. McCullough Water Treatment Plant Colorado Springs, Colorado	\$ 45MM	Mechanical Construction Manager (M.A. Mortenson)
Glades Road Water Treatment Plant Boca Raton, Florida	\$ 45MM	Director of Construction (The Haskell Company)
Appleton Wastewater Treatment Plant Appleton, Wisconsin	\$ 65MM	Senior Project Manager (J.F. Ahern Company)

Knollwood Wastewater Treatment Facility Chicago, Illinois	\$ 65MM	Senior Project Manager (J.F. Ahern Company)
Des Moines ICA Regional Wastewater Treatment Facility Des Moines, Iowa	\$ 45MM	Senior Project Manager (J.F. Ahern Company)
Tolt River Water Treatment Facility Seattle, Washington	\$100MM	Preconstruction Manager (M.A. Mortenson)
Milwaukee Ozone Treatment Facility Milwaukee, Wisconsin	\$ 45MM	Preconstruction Manager (J.F. Ahern Company)
North Wastewater Treatment Facility Green Bay, Wisconsin	\$ 60MM	Senior Estimator (J.F. Ahern Company)
Hollywood Wastewater Treatment Plant Hollywood, Florida	\$ 20MM	Director of Construction (The Haskell Company)
JEA Highlands/Cecil Field Water Treatment Plants Jacksonville, Florida	\$ 20MM	Director of Construction (The Haskell Company)

SPORTS/ENTERTAINMENT FACILITIES

Walt Disney Concert Hall (L.A. Philharmonic) Los Angeles, California	\$220MM	Preconstruction Manager (M.A. Mortenson)
The Excel Energy Arena (Minnesota Wild) St. Paul, Minnesota	\$130MM	Preconstruction Manager (M.A. Mortenson)
The Pepsi Center (Denver Nuggets/Colorado Avalanche) Denver, Colorado	\$160MM	Mechanical Construction Manager (M.A. Mortenson)

JUDICIAL/CORRECTIONAL FACILITIES

Maple Street Correctional Center Redwood City, CA	\$160MM	Senior Vice President (Sundt Construction, Inc.)
Kern County Justice Facility Bakersfield, CA	\$104MM	Vice President (Balfour Beatty Construction)
San Bernardino County Courthouse San Bernardino, CA	\$220MM	Vice President - Operations (Rudolph & Sletten)
Yazoo City Correctional Facility (FBOP) Yazoo City, Mississippi	\$100MM	Director of Construction (The Haskell Company)
Black River Falls Prison Black River Falls, Wisconsin	\$ 45MM	Senior Project Manager (J.F. Ahern Company)
Dodge County Correctional Facility Waupun, Wisconsin	\$ 10MM	Senior Project Manager (J.F. Ahern Company)

STUDENT HOUSING / MILITARY / MULTI-FAMILY FACILITIES

Sacramento State Student Housing – Hornet Commons Sacramento, CA	\$130MM	Senior Vice President (Sundt Construction, Inc.)
University of the Pacific Student Housing Stockton, CA	\$ 30MM	Senior Vice President (Sundt Construction, Inc.)
Pepperdine University Outer Precinct Student Housing Malibu, CA	\$ 55MM	Senior Vice President (Sundt Construction, Inc.)
Presidio AIT Barracks (USACE) Monterey, CA	\$ 55MM	Senior Vice President (Sundt Construction, Inc.)
The Park at Bankers Hill (Luxury Condominiums) San Diego, CA	\$ 65MM	Vice President (Balfour Beatty Construction)
11800 Santa Monica (150 Unit Apartment Complex) Los Angeles, CA	\$ 45MM	Vice President (Balfour Beatty Construction)

SENIOR LIVING / CONTINUUM OF CARE FACILITIES

Paradise Valley Estates Fairfield (Napa Valley), CA	\$ 90MM	Senior Vice President (Sundt Construction, Inc.)
Avesta Dublin Senior Living Dublin, CA	\$ 25MM	Senior Vice President (Sundt Construction, Inc.)
Avesta Novato Senior Living Novato, CA	\$ 25MM	Senior Vice President (Sundt Construction, Inc.)
Otay Ranch Senior Living Otay Ranch, CA	\$ 25MM	Senior Vice President (Sundt Construction, Inc.)

HIGHER EDUCATION FACILITIES

CSU - San Bernardino CEL San Bernardino, CA	\$ 45MM	Senior Vice President (Sundt Construction, Inc.)
UCSB – Henley Hall Santa Barbara, CA	\$ 45MM	Senior Vice President (Sundt Construction, Inc.)
CSU – Sacramento State Science Complex Sacramento, CA	\$ 75MM	Senior Vice President (Sundt Construction, Inc.)
Golden West College Student Services (CMMP) Huntington Beach, CA	\$ 4MM	Senior Vice President (Sundt Construction, Inc.)
Golden West College Math & Science (CMMP) Huntington Beach, CA	\$ 5MM	Senior Vice President (Sundt Construction, Inc.)
Golden West College Language Arts (CMMP) Huntington Beach, CA	\$ 4MM	Senior Vice President (Sundt Construction, Inc.)

EDITH M. ESPINOZA

9600 Show Jumper Ct.
Wilton, CA. 95693

(916) 224-8814
espinozaedith30@gmail.com

EXPERIENCED EDUCATOR

I am a dynamic bilingual educator with an outstanding reputation in teaching, a passion for serving students, and specializing in English Language Learners. I am a committed “self-starter” who is an effective communicator, motivating leader, and resourceful problem solver.

CORE STRENGTHS AND CAPABILITIES

- | | |
|-------------------------------------|----------------------------------|
| • Curriculum Development/Adaptation | • Adult Training and Development |
| • Facilitator Skills | • Assessment and Needs Analysis |
| • Effective Communicator | • People and Leadership Manager |

PROFESSIONAL AND LEADERSHIP EXPERIENCE

C.W. Dillard Elementary School, Elk Grove Unified School District, 2006-Present After School Intervention Program, 2014

- Administered and performed the after school programs.
- Developed an instructional plan to meet the needs of English Language Learners
- Guided the learning process toward achievement of curriculum goals and objectives
- Assessed and provided reports based on the performance and progress of the students.

EL Coordinator, 2006-Present

- Coordinate language proficiency testing (e.g. CELDT) for the purpose of identifying students that qualify for English Language Development programs.
- Develop co-curricular activities and social events to enhance learning outside the classroom
- Serve as a liaison between teachers, the school district, and the community.

Parent Involvement, 2006-Present

- Self-directed, researched and developed a plan for implementing “The Latino Literacy Program”
- Successfully implemented activities related to parent involvement that would enhance the school’s climate
- Coordinate trainings for EL Parents to improve student achievement through literacy training and using technology to foster parental involvement
- Maintain regular communications with parents on updated progress of students (LCAP)
- Encourage the process of developing and maintaining quality relationships with children and families, through survey documentation.

Training Close Reading Prof. Development, 2013-2014

- Facilitated ongoing professional development for paraprofessionals in reading that aligned with the school's focus areas.
- Successfully shared new Common Core resources with staff members

Third grade intervention across grade levels, 2012-Present

- Collaborated with other instructors to promote educational resources to help EL students strengthen reading skills
- Designed and modified curriculum for students working at or below reading level
- Facilitated improvements in reading comprehension skills

Long Term Substitute Teacher

C.W. Dillard Elementary School, August 2005-June 2006

Elk Grove Unified School District

- Supervised students, recognizing their worth, affirming their ability, and strive to promote positive relationships
- Promoted academic growth through the use of evidence- based curriculum.

Student Teacher

Spanish Bilingual Kindergarten, January 2004-June 2004

Bowling Green Charter Complex, Sacramento Unified School District

1. Developed and delivered lesson plans utilizing appropriate instructional techniques that enable limited English proficient students to overcome barriers that impede equal participation by these students in the district's instructional programs.
2. Administered tests and language assessments for the purpose of evaluating students' language ability

EDUCATION**Sacramento Office of Education County Leadership Institute**

Administrative Services Credential, 2014

California State University, Sacramento

Masters of Art in Multicultural Education, December 2010

California State University, Sacramento

Bachelor of Arts in Liberal Studies, May 2004

Credentials

California: Multiple Subject Clear Teaching Credential, K-12

REFERENCES

Sandy Weist	C. W. Dillard Elementary School Principal	(916) 687-6121
Cathy Beckner	C.W. Dillard Elementary School Educator	(916) 952-4166
Tracy Dunn	C.W. Dillard Elementary School Educator	(916) 712-2537
William F. Moe, MSW	C.W. Dillard Elementary School Educator	(916) 812-3087

1097 Cavanaugh Way
Sacramento, California 95822

Linda E. Farley, Ed.D.

(303) 726-9254
lefarley@aol.com

Professional Positions

Chief Executive Officer, Girl Scouts Heart of Central California

January 2013 – present

Responsible for regional Girl Scout council serving more than 18,000 girls in 18 northern and central California counties with an annual budget of \$7,400,000. Accountable for providing leadership, strategic direction and vision for the development and achievement of the mission. Advise, recommend and assist the council's Board of Directors in the formulation of policies governing the council. Direct the day-to-day operations through the senior management team. Responsible for stewardship of the council's human, material and fiscal assets.

Crocker Art Museum, Sacramento, CA

Director of Development

January 2009 – December 2012

Directed all aspects of fund development including membership, major gifts, planned giving, corporate sponsorships, foundation grants, and special events. Responsible for more than \$3.3 million in general operating revenue for fiscal year 2013. Worked closely with the Board of Directors to secure gifts and cultivate and steward donors. Key collaborator with the Museum Director on strategic organizational issues. Member of the Senior Management team.

Development Officer

April 2008 – December 2008

Worked with outside counsel and key community volunteers to secure gifts for the \$95 million Capital Campaign. Managed major gifts and donor-level membership programs. Worked collaboratively with Board members to secure gifts and steward donors. Created a formal corporate sponsorship program.

Chief Fund Development Officer, American Red Cross Mile High Chapter

June 2007 – March 2008, Denver, CO

Directed all aspects of fund development and marketing efforts. Created new strategies to increase raised revenue and donor gift levels. Restructured department to achieve greater accountability and better alignment of job functions. Grew capacity of key department managers in order to increase productivity and effectiveness. Raised more than \$1.5 million in revenue, a 17% increase over previous fiscal year.

Chief Operating Officer, Up with People

August 2005 – May 2007, Denver, CO

Directed operations of international leadership program, including fundraising, finance, North America operations, European operations, and communications. Oversaw organizational budget of approximately \$4 million. Facilitated a transition in mission and vision and a shift in culture in order to achieve new business objectives. Secured \$250,000 from alumni (largest amount in the organization's history), that, through matching gifts, netted the organization \$1.25 million. Successfully authored \$1 million grant received from international foundation. Worked closely with the international Board of Directors on critical aspects of the program and operations.

Independent Consultant/Sabbatical

December 2004 – May 2005, Denver, CO

Created and implemented strategic and fund development plans for non-profit executives. Clients included Leader's Challenge and the American Red Cross Mile High Chapter. Spent one month living in Paris exploring personal interests in writing and photography.

The Children's Museum of Denver, Denver, CO**Executive Director**

January 2001 – November 2004

Responsible for all aspects of children's hands-on, interactive museum serving the Rocky Mountain region. Managed approximately \$3 million budget. Redesigned and expanded the entire Museum, creating a more educational and enriching experience. Secured a \$1 million endowment and increased visitors to the Museum while also increasing revenue.

Deputy Director

March 1998 – December 2000

Led organizational restructuring efforts ensuring implementation of Board-established vision and mission.

Senior Instructor, University of Colorado, Denver

1997 –1998, Denver, CO

Consultant, BDM Technologies

1997, Denver, CO

Vice President, Ingenius

1995 –1997, Denver, CO

Director/Principal, ACT Academy

1993 –1995, McKinney, TX

Manager, Minnesota Educational Computing Corporation

1988 –1992, St. Paul, MN

Instructional Specialist, Ingham Intermediate School District

1983 –1988, Lansing, MI

Elementary School Teacher, Mt. Morris School District

1980 –1982, Mt. Morris, MI

Education

University of St. Thomas , St. Paul, MN	1993
Doctorate of Education, Major: Leadership	

Michigan State University , East Lansing, MI	1983
Master of Arts, Major: Curriculum and Instruction	

California State University , Sacramento, CA	1980
State of California Teaching Credential	

Westmont College , Santa Barbara, CA	1979
Bachelor of Arts, Major: Liberal Studies	

Service

-
- Sacramento County Women's Commission Advisory Team Member, 2018 - present
 - Wells Fargo Community Advisory Board, 2018 – present
 - Holy Spirit Parish School, Land Park Garden Tour, Featured Garden, 2016.
 - Girl Scouts Heart of Central California, Keynote Speaker, 100th Anniversary Gala, 2012.
 - Sacramento Rotary, 2009 – 2011.
 - Team CWW (Women's Triathlon Team) Board of Director, 2008.
 - American Red Cross Mile High Chapter, Hurricane Katrina Volunteer, 2005.
 - Association of Children's Museums, Board of Director, 2004.
 - Denver Metro Scientific Cultural Facilities District, Tier II Steering Committee Co-chair, 2003 – 2004.
 - Editorial Board, Journal of Computing in Teacher Education, 1991 – 1999.
 - Girls Count Board of Director, 1996 – 1999.
 - Westmont College Alumni Board, 1996 – 1998.
 - Software Publishers Association Education Section Board, 1996 – 1997.
 - Vice President, Michigan Association for Computer Users in Learning, 1987 – 1988.
 - Board of Director, Michigan Association for Computer Users in Learning, 1986 – 1987.

Other Experiences

- American Leadership Forum, Mountain Valley Chapter, Class XXII, 2019.
- Integrity Solutions Sales, Service and Coaching Training, 2016.
- Crucial Conversations Training, 2014.
- Pathways to Leadership Training, 2007.
- Denver Metro Chamber of Commerce Leadership Denver Graduate, 2005.
- Center for Creative Leadership, Nonprofit Executive Leadership Program, 2001.
- Interaction Associates Leadership Development Training, 2001.
- The Disney Approach to Quality Service, The Disney Institute, 1999.

Publications

Farley, L. Leaders in the midst of change: Toward a better understanding of a complex phenomenon. Doctoral Dissertation. December 1993.

Farley, L. Making sense of change: Strategies for education technologists. *The Computing Teacher*. April 1992.

Farley, L. & J. Sharp. What software should I buy? *Thinking Teachers, Thinking Classrooms*, Newsletter of the ASCD Network on Teaching Thinking. Summer 1990.

Farley, L & Little, T. Fulfilling the promise of computer use in social studies instruction. *The Journal of Staff Development*. Fall 1989.



Brooke Higman

PROJECT EXECUTIVE, THE BOLDT COMPANY

ABOUT BROOKE

Brooke is a well respected construction leader with over 20 years of experience delivering nearly a billion dollars in construction projects throughout Northern California for education, healthcare, civic and commercial clients. As Project Executive, she helps to build business for the company, strengthens client relationships and oversees project teams to assure they have the necessary resources to achieve client expectations and project goals.

Industry Experience:

20+ Years

Education:

B.S., Construction Engineering Management, Oregon State University

Minor in Business Administration, Oregon State University

Industry Affiliations:

Association of General Contractors (AGC)

US Green Building Council (USGBC)
- LEED Accredited Professional

Sacramento Regional Builders Exchange (SRBX)

National Association of Women in Construction (NAWIC)

Lean Construction Institute (LCI)

Fun Facts:

Mom of three
(Blake-24, Belle-21 and Kaden-17)

Learning to golf

One of only two women in the Construction Engineering program at OSU 2000 graduating class

Loves to waterski/wakesurf

Basketball fanatic

The majority of her career has been in the Sacramento area where she has fostered many long-lasting relationships with architects, design engineers and both the general contracting and sub-contracting community. Her approach to every project is to ensure that there is an environment of collaboration and transparency, focusing on delivering a quality product, safely, on time and under budget.

As a member of the the Boldt leadership team, she provides mentorship to younger staff, develops opportunities for team growth and is committed to fostering a corporate culture of collaboration, continuous learning/improvement and fun. Giving back to the community and “paying it forward” are values Brooke takes to heart. She looks for opportunities where she can share her passion for the construction industry and inspire others, especially young women, to consider construction as a career path.

NOTABLE PROJECTS

Education

- Natomas Unified School District, Paso Verde K-8 Campus
- Elk Grove Unified School District, Valley High School Fire Academy
- Los Rios Community College District, Cosumnes River College, Winn Center
- Los Rios Community College District, Sacramento City College, Performing Arts Center

Healthcare

- Kaiser Foundation, Sacramento Medical Center & Morse Avenue Hospital—Various Renovations and Modernizations
- Kaiser Foundation, Parking Structure
- Dignity Healthcare, Folsom Tenant Improvements

Civic/Commercial

- State of California, DGS, Office Building 8 & 9 Elevator Renovation
- Monsanto Laboratory
- 1200 R Street Renovation
- Jackson Rancheria Casino
- Santa Row, 42-acre Mixed-Use Development
- Bogle Vineyard Cold Storage Warehouse
- B Street Theater
- Fort Sutter Hotel

APPENDIX D

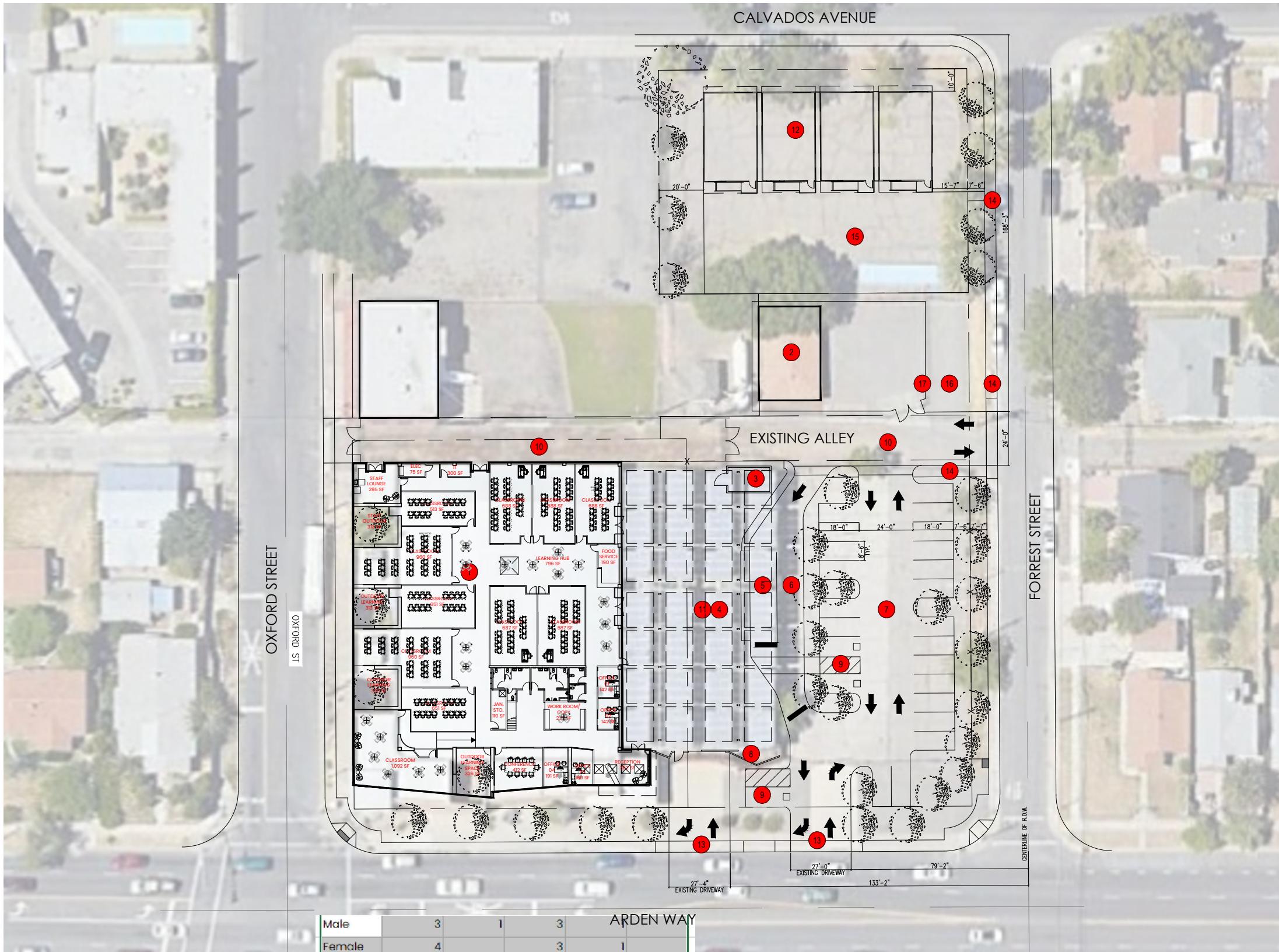
Appendix D

Pursuant to SCOE Administrative Rules and Regulations 2400 (II) (C) (9), the vendors and contractors below have engaged in “developing, operating, and/or evaluating” the charter school. Brief qualifications of the individuals/organizations have been included and additional information is available upon request.

Vendor/Contractor Name	Activity	Qualifications
Young, Minney, & Corr, LLP	Legal support	Charter school counsel since 1992, represent more than 50% of California charter schools
Charter Impact, Inc.	Back Office/Finance	Experienced back-office business provider in operation since 2010 serving more than 75 clients including charter schools and CMOs across California and the USA. More than 80 employees, including multiple CPAs with extensive experience in California education funding
Solutions in Education	Petition/program development	10 years experience in charter authorization, including portfolio of 100+ schools, Ed.D in Educ. Leadership
Larson Communications	Communication/ Marketing/ Public Relations	Provides pro-bono services thanks to Silicon Schools Venture Fund. Larson Communications works collaboratively with Jane, Rob, and Jessica to develop and implement a strategic community outreach and communication plan.
Jane Einhorn	Communication/ Marketing/ Public Relations	Over 30 years of public relations experience representing a range of organizations. CCCA has been featured in nearly 10 articles and news reports thanks to her efforts.
Rob Fong	Communication/ Marketing/ Public Relations	Former Sacramento City Council member and Sacramento City Unified School District board president. He has helped CCCA build strategic community relationships
Jessica Walden	Communication/ Marketing/ Public Relations	Oversees all social media accounts and has worked collaboratively with Larson Communications, Jane Einhorn, and Rob Fong to deliver CCCA's strategic outreach plan
John Pellman	Petition/program development	CTE program specialist, Elk Grove Unified. Manage multimillion dollar grants to improve all aspects of CTE education. Teaching & Administrative Credentials
Charlie Leo	School site acquisition/ development	Cofounder & former Executive Director of Natomas Charter School
Dan Dumke	School site acquisition/ development	Over 40 years of experience directing multimillion dollar construction projects from concept through final completion, including programming / planning, design development, permitting, procurement, construction, commissioning and completion

Ting Sun, Ph.D.	Petition/program development	Cofounder & former Executive Director of Natomas Charter School. State Board of Education member. Former member and chair of the California Commission on Teacher Credentialing
Jonathan Delano	Program development	Founding director of CTEC High School, certified counselor
Edith Espinoza	English Learners	English Learner educator at Elk Grove Unified
Mich Kiwan Gómez, Ed.D.	English Learners	20 years of bilingual education, university professor
Gina Plate	Special Education	Experienced special education expert, Member of the CA Statewide Advisory Commission on Special Education
Charlie Plant	Petition/program development	Founder of The Met Sacramento and principal of four Big Picture Learning schools, educator for ~40 years Harbor Freight Fellows advisor
Jonathan Schwartz	Petition/program development	CTE teacher of the year at Colfax high school where he teaches Mathematics and Pre Engineering. Possess a masters from Harvard and owns his own tree trimming business.
Kim Russo	Petition/program development	High school and college science instructor with over 10 years of experience in education. Robust experience working with at-risk and EL. Prior to teaching Kim, worked as a neuroscientist.
Amanda Goldman	Program development	Former science teacher, principal, and current Associate Director of the Induction programs at Robla School District's New Hope Teacher Alliance.
Capital Rivers Commercial	Property identification and purchase	Ryan Orn has worked directly with the team since 2019 to identify a future home for the charter school. Ryan is a results-driven leader with 20 years of retail, strategic management, and real estate experience.

APPENDIX E



LEGEND

1. Existing Building
 2. Existing Pump Station/Building
 3. Existing trash enclosure
 4. Existing solar canopies
 5. Proposed student drop-off area
 6. Proposed Escape Lane
 7. Proposed Parking area
 8. Existing Corten Steel Gate
 9. ADA parking
 10. Existing alley
 11. Outdoor learning area
 12. Modular/Portable classroom building (4 units @ 960 SF ea.)
 13. Existing Driveway/curb cuts
 14. Pedestrian Access (accessible grades)
 15. Proposed Outdoor Learning Area (repaired asphalt paving)
 16. Existing drive aisle at City water pumping station
(no through access for vehicles)
 17. Existing fence at Pump Station

NOTES

- Perimeter fencing to be determined
 - 24 parking stalls provided

CAPCCA PRO BONO SERVICE

CONCEPTUAL SITE PLAN



STUDIO W
ARCHITECTS
Petition Appendices

501 ARDEN WAY
SACRAMENTO, CA 95815

STUDIO W ARCHITECTS

980 9th St., Suite 2050 Sacramento, CA 95814
916.254.5600 | www.studiow-architects.com



SCALE: 1" = 50'-0"

08/30/2021
286

SCHEMATIC DESIGN | PAGE 02

501 Arden Way Preliminary Schedule

SD-Planning Phase

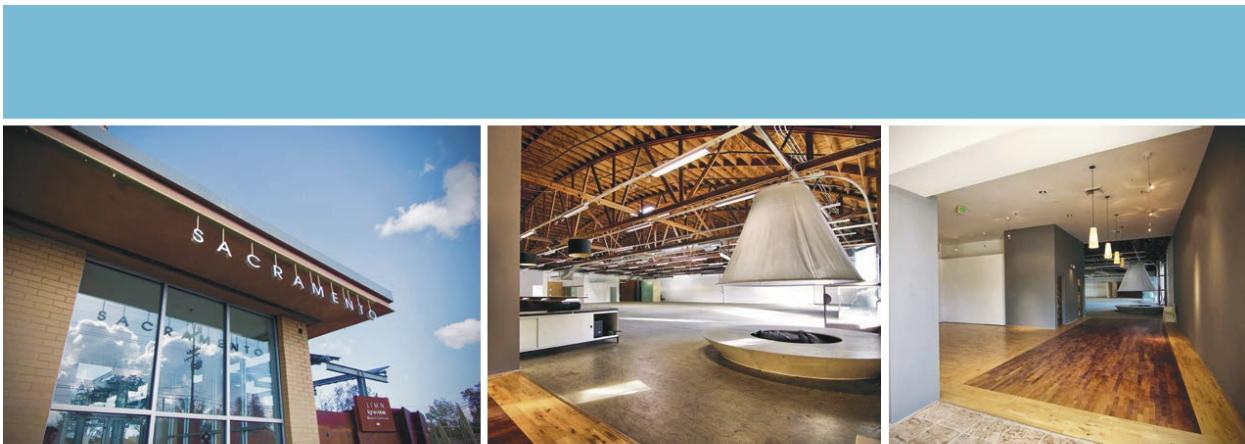
1-21/2022-02-07-2022	-Planning documentation due diligence period
02-07-2022-02-18-2022	-Prepare Entitlement Documents for Planning Application
02-18-2022	-Planning Application due to City (electronic submittal)

CD-phase (building Tenant Improvement plan interiors)

-concurrent and expedited application can be explored with the City

Site changes can be part of Phase 2

02-07-2022 scheduled	-Architectural, MEP, Civil and Landscape site visit
02-08-2022	-Floor Plan backgrounds due to consultants
02-18-2022	-50% set for coordination and review
03-04-2022	-90% set due for QA/QC
03-11-2022 submittal)	-Building Permit Application due to City (electronic submittal)
03-11-2022 to 03-15-2022	-Preliminary bid package to Kevin (add contingencies for plan check not being completed)
06-30-2022-07-15-2022	-Anticipated Permit Approval



• For Sale *or* Lease •

501 Arden Way, Sacramento, CA



FREESTANDING MID-CENTURY MODERN BUILDING

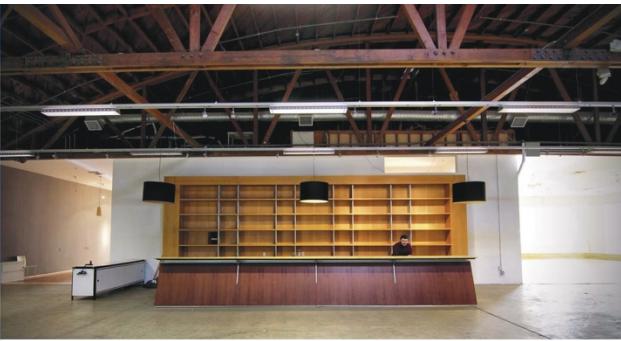
SCOTT BENNETT

Senior Vice President
Lic No. 01351389
Dir +1 916 563 3013
scott.bennett@colliers.com

DAVID HERRERA

Executive Vice President
Lic No. 01484908
Dir +1 916 563 3032
david.herrera@colliers.com





An Architecturally Significant Gem

Built in 1957 as a bottling plant for Royal Crown Cola, this mid-century industrial property was reconfigured into a furniture showroom at the start of the 21st Century. As you'll see in pictures and in person, the interior space benefits from a thoughtful redesign to create a luxurious feel without masking its inherent architectural charm. Exposed brick, wood-trussed roof and other original details integrate tastefully with modern finishes. Sliding glass panels open to three separate Zen-inspired alcoves that connect the outside with the inside of this creative oasis.

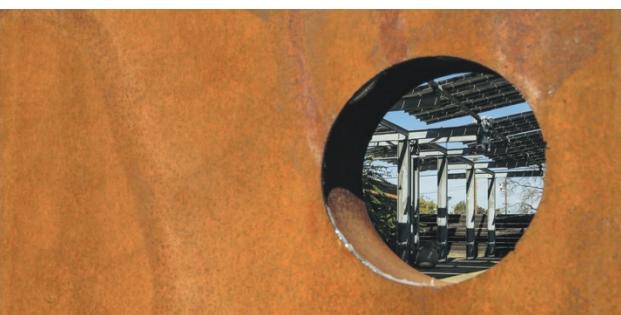
Beyond aesthetics and ample space for collaborative workspaces, the upgrades also cut down on energy costs. Maximizing the use of natural light, a roof treatment that drastically reduces HVAC consumption, and solar panels will help your business function efficiently as well.

Available for Sale | 501 Arden Way | Sacramento | Colliers International

Highlights

FOR SALE <ul style="list-style-type: none"> 501 Arden Way, Sacramento ±18,500 SF Building APN# 275-0141-010 Size: 0.69 AC/±29,969 SF Zoned: C-2-SP - Light Processing 503 Arden Way, Sacramento APN# 275-0141-009 Size: 0.29 AC/±1,719 SF Zoned: C-2-SP - Vacant Commercial 2295 Forrest Street, Sacramento APN# 275-0141-008 Size: 0.29 AC/±12,750 SF Zoned: C-2-SP Vacant Commercial IBE 	PRICE <ul style="list-style-type: none"> > Sale Price = \$3.9 Million-\$2,890,000 > Building Only Sale Price: \$2,650,000 > Lease for \$1.25/SF NNN 	ACCESS <ul style="list-style-type: none"> > Frontage on Arden Way – minutes from I-80 and I-5 Light rail station less than 500 feet away 	PARKING <ul style="list-style-type: none"> > On-site parking lot with 18 covered parking stalls 	BUILDING <ul style="list-style-type: none"> > Single-tenant brick industrial built in 1957, extensive renovations and upgrades 1999-2000 	ENTITLEMENTS <ul style="list-style-type: none"> > Approved plans for an additional ±24,000 SF 3-story mixed use development
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Available for Sale

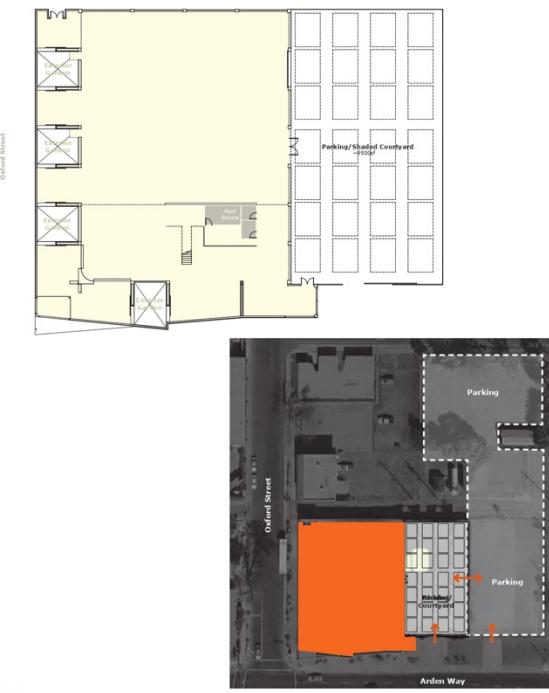


360 Peek Within

> <https://my.matterport.com/show/?m=wTdJQzun2t>



Current Floor Plan



Available for Sale | 501 Arden Way | Sacramento | Colliers International



Available for Sale | 501 Arden Way | Sacramento | Colliers International



Location

Getting to this "Uptown" space is easy for all types of employees

- TRAIN: Less than 500 feet away from the Arden/Del Paso light rail station and only 4 stops outside of the central business district
- CAR: Access to Capital City Freeway (I-80 Business) is 1 mile away and just 3.2 miles to Interstate 5
- AIR: Sacramento International Airport is located just 11 miles away along Interstate 5



Available for Sale | 501 Arden Way | Sacramento | Colliers International



Amenities

Within walking distance, get a taste of what the neighborhood has to offer

- *Mama Kim Eats* and *Chando's Tacos*, two well-known food trucks in Sacramento have put down roots with brick-and-mortar eateries a short walk away
- Charming local cafés and other chains nearby offer plenty of variety
- Enjoy live music with food and drinks at *Calisari's Bar & Grill* and *Son of a Bean Coffee Shop*, or swing your partner around the dance floor at *Stoney's Rockin' Rodeo*
- Admire the creative works of local artists at studios like *Artspace 1616* and *1001 Del Paso Works*

Entitlements

Plans have been approved for a ±24,000 square foot 3-story mixed use project which includes a mezzanine.



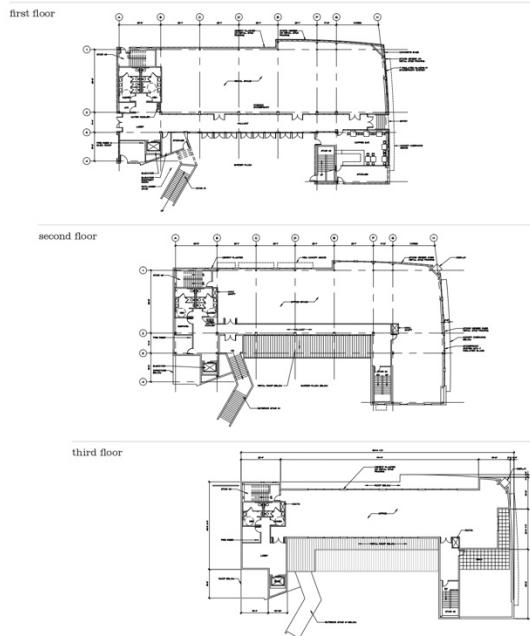
Zoning Uses

There are many uses for C-2 zoning including but not limited to:

- | | |
|---------------------------------|---|
| ➤ Residential | ➤ Food preparation for off-site consumption |
| ➤ Dormitory | ➤ Office |
| ➤ Duplex | ➤ Restaurant |
| ➤ Indoor amusement | ➤ Retail store |
| ➤ Athletic club, fitness studio | ➤ School |
| ➤ Cinema | ➤ Theater |
| ➤ College extension | ➤ Veterinary clinic |
| ➤ Community market | ➤ Auto sales |
| ➤ Library | ➤ Assembly facility (cultural, religious, social) |
| ➤ Museum | ➤ Nightclub |

Available for Sale | 501 Arden Way | Sacramento | Colliers International

Proposed





The intersection of Del Paso Blvd and Arden Way was once a major thoroughfare on the historic Route 40 highway. Flashback to the 1940s – it boasted the capital's first streetlights, earning it the nickname "The Great White Way." Art deco style storefronts, once lit up with neon signs, later turned to silhouettes of the past.

Redevelopment funds from the state and the county started flowing into the Del Paso district in 2007. In 2013, the City of Sacramento completed streetscape improvements to beautify Del Paso Blvd and offer streetside parking to the 21,466 cars passing through daily. Once under appreciated, except to entrepreneurs unwilling to pay midtown prices, Old North Sac is geographically situated in a prime territory for the kind of renaissance we've seen in Midtown Sacramento. The completion of the Golden 1 Center and the development of the railyards have already caused developers to search for space across the American River.



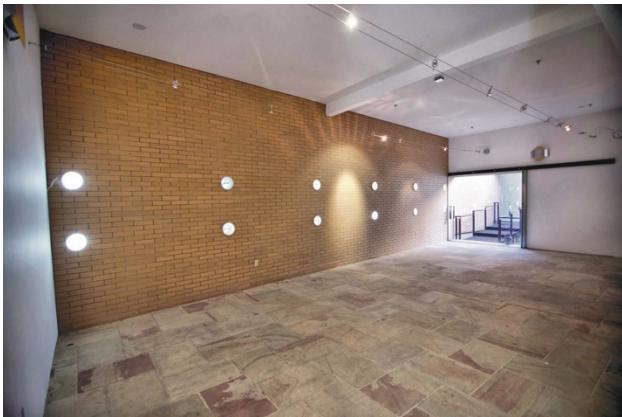
Spark Something New

Is your company or startup ready to leave its mark on Sacramento in a big way? You won't find another opportunity to own landmark space in a neighborhood on the brink of a creative revival. Actually, the cultural and artistic transformation of Old North Sacramento is already well underway, as evidenced by the poetic murals prominent along the old main street.

Surround yourself with other innovative entrepreneurs within a few blocks of this ultimate incubator space, including the Sacramento News & Review, Big Idea Theatre, Son of a Bean Coffee & Art, Luck and Courage Brewing, as well as a new craft brewery (King Cong Brewing) and music venue (The Rink Studio) both opening on Del Paso Blvd in 2017.

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About Sacramento Region

The Sacramento area is a place where exciting opportunities are being created for its 2.3 million residents and growing Sacramento businesses, including the region's rapid emergence as a national leader in several high growth technology fields. It also offers a vibrant business climate, an abundant and educated workforce, access to world-class research and educational institutions, and low costs of living and doing business; the perfect incubator for business development.

Home to the California State Capitol, the Sacramento Region is centrally located 75 miles northeast of San Francisco at the confluence of the American and Sacramento Rivers. This location provides convenient market access through several major highways and freeways, the largest rail hub west of the Mississippi, a deep-water shipping channel, and an easily accessible international airport. Several major cities on the West Coast are within the range of a day trip, and destinations across the globe can be reached through the state-of-the-art Sacramento International Airport. Other reasons that Business continue to choose the region include:

CALIFORNIA'S MARKETPLACE POWER: Californians are the largest consumer of new technologies in the U.S.
CALIFORNIA'S POLICY HQ: Home base for federal and state agencies and departments, as well as executive and legislative arms of state government.

AFFORDABILITY: Most cost effective of California's major metro areas, from business costs to the costs of living.

TALENTED WORKFORCE: From advanced research to major distribution.

PROGRESSIVE UTILITIES: Two major utilities (PG&E and SMUD) ranked in the top 5 in the U.S. with a strong transportation system: air, roadway, rail, and interway.

MOMENTUM OF OTHER COMPANIES: The Sacramento Region continues to be a popular destination for high technology, advanced manufacturing, biotechnology, and food sciences, production, and distribution companies.

SACRAMENTO REGION – MAJOR PRIVATE SECTOR EMPLOYERS

Sutter Health - Kaiser Permanente - Dignity Health - Raley's Inc. - Intel Corp. - Wells Fargo & Co - Hewlett-Packard Co - Cache Creek Casino Resort Casino Resort - Health Net of California, Health Net Federal Services - VSP Global - Union Pacific Railroad Co. Inc. - Thunder Valley Casino Resort - Northstar California - PRIDE Industries - Blue Shield of California - Aerojet Rocketdyne - Marshall Medical Center - Delta Dental.

SACRAMENTO REGION MAJOR TECHNOLOGY COMPANIES:

Intel Corp. - Hewlett-Packard Co. - Apple Inc. - Aerojet Rocketdyne - Oracle Corp. - TSI Semiconductors Corporation - Teledyne Technologies - Agilent Technologies Inc. - Siemens Healthcare Diagnostics - Volcano Corp. - Monsanto Co. - Vegetable Seeds Division - The Jackson Laboratory West - PASCO Scientific - Marrone Bio Innovations Inc. - ConQuip Inc. - Bentec Medical Inc.

POPULATION GROWTH

The Sacramento Region is one of the fastest-growing metropolitan areas in California. The consistent growth of the Sacramento region is attributable to its desirability as a great place to live and work, while offering a much lower cost of living than the San Francisco Bay Area, Los Angeles, and San Diego metropolitan areas. The Sacramento Region includes the 26th largest metropolitan statistical area in the United States, roughly similar to the Cincinnati, Cleveland, San Antonio, and Orlando metropolitan areas.

The Sacramento Region's population was nearly 2.4 million people in 2015. The region has seen impressive growth over the past five years relative to the state and the nation. From 2010 to 2015, the region grew around 6 percent compared to California's and the United States' respective growth rates of about 3 percent and 4 percent.

SACRAMENTO REGION ECONOMY

With a unique and increasingly healthy mix of economic opportunities for companies and job seekers alike, the Sacramento Region has experienced strong population and steady job growth over the last few decades and is expected to outpace the national average by more than double over the next ten years. This growth is credit to the diversification and strength of the region's economic base—with a shift from primarily government employment to private sector

Sacramento Region by the Numbers

Fun Facts



Medium Age



36.9

RANK 10TH

Unemployment Rate



5.6 %

RANK 21ST

Annual US Patents



662

RANK 21ST

Average Weather



Max: 73.6 F
Min: 49 F

Average rainfall: 19.6 inches

Average sunny days: 188

Transportation



> 36.37 Miles of light rail system
> 18 million passengers through Sacramento International Airport

> For 3 years in a row, Sacramento International Airport has been ranked 4th in North America

> ±870,000 short tons of cargo shipped annually

% Population Age 18-34



23.9%

RANK 12TH

Per Capital GDP



\$50,039

RANK 22ND

Median Home Value



\$345,100

RANK 18TH

Public Facilities



> 19 major public & private colleges/universities

400 Cities Climate Index



90

RANK 2ND

Average Commute (Minutes)



26.9

RANK 8TH

American Fitness Index



62.4

RANK 10TH

Source: Sacramento County

*As compared to the top 25 Metropolitan areas across the United States
 Source: Greater Sacramento Economic Council

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• For Sale or Lease •
501 Arden Way, Sacramento, CA

FREESTANDING MID-CENTURY MODERN BUILDING

Available for Sale | 501 Arden Way | Sacramento | Colliers International

554 offices in **66** countries on **6** continents

ANZ: 192

United States: 153

Canada: 34

Latin America: 24

Asia Pacific: 39

EMEA: 112

\$2.5

billion in
annual revenue

2

billion square feet
under management

16,000

professionals
and staff

About Colliers International

Colliers International is a global leader in commercial real estate services, with more than 16,300 professionals operating out of 502 offices in 67 countries. A subsidiary of FirstService Corporation, Colliers International delivers a full range of services to real estate occupiers, owners and investors worldwide, including global corporate solutions, brokerage, property and asset management, hotel investment sales and consulting, valuation, consulting and appraisal services, mortgage banking and insightful research. Colliers International has been recognized and ranked by the International Association of Outsourcing Professionals' Global Outsourcing 100 for 10 consecutive years, more than any other real estate services firm.

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Accelerating success.

APPENDIX F

Building Trades & Construction Career Technical Education
Landscape Analysis
Sacramento County 2022

District	Elk Grove Unified School District	
Attributes	<ul style="list-style-type: none"> • EGUSD Linked Learning programs are referred to as EXPLORE • At least one career academy is offered at every high school • Building Trades and/or Construction pathways are only offered at 2 campuses, one of which is a continuation school • CTE course of study is generally 3 to 4 years 	
Schools & Programs	<u>Sheldon High School</u>	<ul style="list-style-type: none"> • Building Trades & Engineering pathway offers programs for grades 9-12 including specialized courses, advanced technology, guest speakers, internships, service learning, etc. • Partners include Teichert, Granite Construction, CC Meyers, Inc. and others
	<u>William Daylor High School – Continuation school</u>	<ul style="list-style-type: none"> • Building & Trades pathway is a 2-year program focused on careers in the construction industry • Partners include Cosumnes River College, Job Corp, NCCT, Conservation Corps, and others

District	Folsom Cordova Unified School District	
Attributes	<ul style="list-style-type: none"> • District offers 20 CTE pathways across 10 industry sectors • Building Trades & Construction pathway is offered at a single school 	
Schools & Programs	<u>Cordova High School</u>	<ul style="list-style-type: none"> • Offers three year “Residential and Commercial Construction” pathway • <u>Pathway consists of three courses:</u> BITA 1 Residential and Commercial Construction 1, BITA 2 Study of Modern Craftsmanship, and Construction Management • SkillsUSA is the designated Career Technical Student Organization for this pathway

District	Galt Joint Union High School District	
Attributes	<ul style="list-style-type: none"> • District does not offer construction or building trades pathway • Two construction courses are offered under Agriculture pathway 	
Schools & Programs	<u>Galt High School</u>	<ul style="list-style-type: none"> • Agricultural Construction BITA 1 and Agricultural Construction BITA 2 are offered within the Agriculture Academy

		<ul style="list-style-type: none"> Prerequisite required - Students must earn a C- or better in Agricultural Mechanical Skills prior to enrolling in Agricultural Construction 1
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District	River Delta Unified School District	
Attributes	<ul style="list-style-type: none"> CTE programs are offered at Rio Vista High School and Delta High School 	
Schools & Programs	Rio Vista High School	<ul style="list-style-type: none"> Offers pathway in Construction
	Delta High School	<ul style="list-style-type: none"> Due to the school's agriculture focus, Agricultural Construction is the only construction pathway offered

District	Sacramento City Unified School District	
Attributes	<ul style="list-style-type: none"> District offers a broad range of CTE programs in partnership with the Regional Occupational Program (ROP) Pathways in construction/building trades are available at three schools District programming informed by district-level CTE Advisory Board & individual program advisory committees composed of educators, students, parents, labor organizations, and industry representatives 	
Schools & Programs	American Legion High School – <i>Continuation school</i>	<ul style="list-style-type: none"> District websites mentions Building & Construction Trades pathway however website has no relevant information; district's most recent Perkins grant report indicates no award to American Legion High School
	Luther Burbank High School	<ul style="list-style-type: none"> Building Trades Academy is a small learning community intended for students interested in exploring skilled trades, engineering and architecture Considered a specialty program that requires an application; students may apply to no more than two specialty programs. Lotteries are held if the number of applicants exceeds seats
	Rosemont High School	<ul style="list-style-type: none"> Engineering, Construction, & Design Academy is a small learning community combining core academic & CTE courses. Students benefit from integrated academic content and work-based learning experiences Classified as a high school specialty program that requires an application; all students, including students who live within the school's enrollment zone, must apply for enrollment in the program

		<ul style="list-style-type: none"> Courses include Drafting and Design, Engineering, Construction and Design, Construction Technology and Engineering Technology Perkins grant report indicates that students who successfully complete Construction Tech II are eligible to earn college credit at Los Rios Community College District
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District	San Juan Unified School District	
Attributes	<ul style="list-style-type: none"> District provides a robust offering of CTE pathways Pathways in Woodworking and Construction are offered within the Building Trades and Construction industry sector 	
Schools & Programs	Casa Roble High School	<ul style="list-style-type: none"> School offers Woodworking pathway including three courses: Fine Woodworking I and II as well as Wood Specialties
	Del Campo High School	<ul style="list-style-type: none"> School offers Construction Technology pathway for students in grades 10-12 Students are expected to enroll in all three Construction Technology courses Junior students in the Construction Technology pathway have the opportunity to participate in a paid summer internship with local home builders
	San Juan High School	<ul style="list-style-type: none"> Offers Construction Technology pathway which prepares students for work or further education in architecture, construction trades, engineering or construction management San Juan HS is the only school in the district to offer Advanced Construction Technology; resident students have enrollment priority over other district students Summer internships are available to graduates of the Advanced Construction Technology course

District	Center Joint Unified School District
Attributes	<ul style="list-style-type: none"> No CTE-related information is published on the district's website

Schools & Programs	<u>Center High School</u>	<ul style="list-style-type: none"> Residential and Commercial Construction pathway is offered but only two courses are offered: Geometry in Construction and Construction in Geometry courses The courses integrate geometry and construction allowing students to learn math concepts while construction
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District	<u>Natomas Unified School District</u>	
Attributes	<ul style="list-style-type: none"> Two courses aligned with the Building and Construction Trades pathway are offered at Natomas High School The pathway is open to all district students in grades 11-12, regardless of home district 	
Schools & Programs	<u>Natomas High School</u>	<ul style="list-style-type: none"> Natomas offers two courses within the pathway including Construction Technology and Construction Technology 1

District	<u>Twin Rivers Unified School District</u>	
Attributes	<ul style="list-style-type: none"> District offers a variety of CTE pathways including the Construction pathway at two district schools Programs start in 10th grade Graduates may be referred to trade unions in the region and graduates with a B or better in the pathway and a GPA of 2.0 are eligible for a career pathways cord at graduation 	
Schools & Programs	<u>Foothill High School</u>	<ul style="list-style-type: none"> Construction 1 and Construction 2 are offered within the Construction pathway
	<u>Vista Nueva High School – Continuation school</u>	<ul style="list-style-type: none"> Course programming is not provided on the website but student achievements in construction are provided

Evidence of the Essential Elements of a High-Quality College and Career Pathway (as defined by the California Department of Education)		
Essential Elements	District Programs	CCCA
Student Centered Delivery of Services	No – There are no programs designed intentionally to support students within this pathway	Yes

Student Equity	Limited – Most programs are only offered at schools with a history of low performance and/or continuation schools	Yes
Access	No – Some high quality programs require enrollment as a specialized school; most programs are offered at low-performing schools	Yes
Leadership at All Levels	No – Elected school board members and superintendents rarely devote significant resources to career pathway development	Yes
High-Quality, Integrated Curriculum & Instruction	Few – One district school offers integrated construction in geometry course; the other pathway with integrated coursework requires specialized school enrollment	Yes
Skilled Instruction and Educational Leadership, informed by Professional Learning	Limited – There is scant information available about professional development, particularly for CTE teachers	Yes
Career Exploration and Student Supports	Limited – Several programs highlight supports available to students who may be struggling; career exploration is provided through internships at some programs	Yes
Appropriate Use of Data and Continuous Improvement	No – It is not clear how any CTE program incorporates student data into their programs	Yes
Cross-System Alignment	Limited – There are several programs that allow inter- and intra-district enrollment in specialty courses	Yes
Intentional Recruitment and Marketing (Promotion, Outreach, and Communication)	No – There was no evidence of recruitment efforts specifically designed to attract students to the CTE pathway	Yes
Sustained Investments and Funding through Mutual Agreements	No – Some programs mention partnerships and internships but no details regarding any mutual benefits were provided	Yes
Strong Partnerships with Industry	Limited – Only one district website highlighted the industry partners that support the building pathways programs	Yes
CCCA satisfies all of the Essential Elements of a High Quality College and Career Pathway defined by the California Department of Education.		

What Sets CCCA's Program Apart?

	Traditional District Programs	CCCA
Education program focused on construction & building trades	<ul style="list-style-type: none"> No Sacramento County district schools are focused on preparing students for careers in the construction or building trades Most districts have a construction/building trades pathway in at least one district school Often, these pathways consist of a course sequence consisting of 2-3 courses Construction and building trades are usually lumped together with many other CTE pathways and college preparatory options 	<ul style="list-style-type: none"> CCCA's entire educational model has been intentionally designed around construction & building trades Construction & building trades curriculum and provides real-world application across all subject areas
Governance and leadership aligned with program focus	<ul style="list-style-type: none"> CTE programs vary significantly between districts, often cycling in and out of favor as leadership changes. School board trustees and superintendents rarely have capacity to dedicate significant attention and resources to educational programs that are not part of the state testing system 	<ul style="list-style-type: none"> CCCA is governed by 13 community members with subject matter expertise and significant professional experience Governing board members and the school's leadership are 100% committed to the mission and vision of the school
Students engage in construction & building trades coursework throughout their entire high school experience	<ul style="list-style-type: none"> Nearly all existing programs only begin offering construction-focused coursework in grades 10-12 Luther Burbank High School (SCUSD) offers Building Trades Academy for grades 9-12 but enrollment is restricted and students must apply for admission 	<ul style="list-style-type: none"> CCCA students begin relevant coursework in 9th grade, one year ahead of their peers
Students will be eligible to earn college credit.	<ul style="list-style-type: none"> Many schools offer dual enrollment and International Baccalaureate programs for advanced students however there are limited options for students who want to pursue college coursework and career pathway preparation The only CTE program that explicitly provides for college credit (Los Rios) is Luther Burbank High School (SCUSD) for satisfactory completion of Construction Tech II 	<ul style="list-style-type: none"> CCCA's early college model and partnerships with American River College, Los Rios Community College District, and Sacramento State provide students with expanded access to college coursework for little to no cost CCCA students will not have to decide between college coursework or a career pathway as CCCA's structure allows for both options

Students earn relevant industry certifications during high school	<ul style="list-style-type: none"> Most programs mention “industry certification” but do not indicate what certifications students will earn and the applicable criteria 	<ul style="list-style-type: none"> CCCA graduates will obtain CPR certification, hand and power tools safety certification, stairway and ladder safety certification, OSHA 10 Hour Construction Industry Certification, and NCCER Core Curriculum Certification
All Sacramento County students are eligible to participate in the program	<ul style="list-style-type: none"> Construction & building trades programs are not available at every high school in each district Programs are usually only available in 1-3 sites districtwide, commonly in schools that have a history of low academic performance and continuation schools Some districts allow students to attend courses or trainings at different sites through cross-district and out-of-district enrollment opportunities; however, host site students receive preference for enrollment in certain specialized classes 	<ul style="list-style-type: none"> All Sacramento County students are eligible to enroll; The district of residence does not factor into enrollment at CCCA or a specific course
There are no prerequisite courses required in order to engage in the construction and building trades curriculum	<ul style="list-style-type: none"> Prerequisite coursework is usually not required for introductory construction programs. In at least one district, students planning to enroll in Agricultural Construction 1 must earn a satisfactory grade in Introduction to Agricultural Mechanical Skills in order to enroll 	<ul style="list-style-type: none"> Beginning in 9th grade, students will enroll in coursework relevant to the construction and building trades pathway No prerequisites exist for introductory coursework however students must pass safety training
Authentic learning experiences and curriculum with real-world application engages more students in learning	<ul style="list-style-type: none"> Students enrolled in comprehensive high schools may be more engaged and successful in CTE coursework however they may struggle with other coursework given the lack of connection and application to real-world experiences 	<ul style="list-style-type: none"> Students who have not been successful at traditional schools, including students with disabilities and English Learners, are more likely to engage with the curriculum at CCCA due to the authentic learning experiences and practical application
Internships and work experiences in local industries are essential to the learning experience	<ul style="list-style-type: none"> Internships are offered in some programs but there is no requirement to participate Internships may not be offered or available to all students 	<ul style="list-style-type: none"> All students at CCCA will benefit from the hands-on learning offered by internships at industry partners Partners in the construction industry across the county have

	<ul style="list-style-type: none"> • There are no procedures for securing and participating in an internship; internships are handled on an as-needed basis • Only one district defines a list of partners in the construction and building trades industry 	<p>already committed to offering internships</p> <ul style="list-style-type: none"> • The internship program will be formalized and structured efficiently to ensure every student participates
<p>* District CTE program details were obtained by a thorough search of Sacramento County district and school (when available) websites on 2/10/22.</p>		

CCCA Learning Sites

- ★ 501 Arden Way
- A Boys & Girls Club of America
- B Florin Road Location
- C Citrus Heights Location

■ Internship Location within area of shortest drive time
Resource Centers save approximately 126 minutes of driving time per week.
This is equal to a total of 5,040 minutes per year.



CCCA Internship Locations

- | | |
|---|--|
| 1 Iron Workers Local 118 | 14 CA Department of Transportation |
| 2 McCarthy Building Companies, Inc. | 15 Carpenters Local Union 46 |
| 3 The Boldt Company | 16 UA Local 447 - Plumbers & Pipefitters |
| 4 Royal Electric Company | 17 Laborers Union Local 185 |
| 5 Electrical Workers Local 340 | 18 Roebbelon Contracting, Inc. |
| 6 Turner Construction Co. | 19 Kleinfelder Lab |
| 7 Market One Builders | 20 National Electrical Contractors Association |
| 8 American River College | 21 Associated Plumbing & Mechanical (APMC) |
| 9 CSU Sacramento | 22 Sundt Construction |
| 10 Teichert Construction | 23 XL Construction Corporation |
| 11 CalTrans Maintenance Yard | 24 Buehler Engineering, Inc. |
| 12 CA Department of Transportation | 25 SR Diversified, LLC |
| 13 CA Department of Transportation TransLab | 26 Western Steel Council |

Example Scenario Narrative

The budget scenario described and proceeding tables provide a hypothetical demonstration of what would happen if CCCA operated as a site based program authorized in a single district. The hypothetical scenario demonstrates the financial impact on the school if it allowed students to report directly to satellite campuses and internships while authorized through a single district. Additionally, the travel times represent a small portion of the business partners working with CCCA. The learning loss that would occur if CCCA operated out of a single location is staggering. Ultimately, CCCA must partner with employers that provide the capacity for robust internships and who have the capacity to offer young people viable career opportunities after high school. Only through a countywide benefit can CCCA fulfill its proposed educational model.

Driving	501 Arden Way	1117 G Street	Florin Location	Citrus Heights
CalTrans Royal Oaks	.8 miles/ 3 min	3.3 miles/ 8 min	12 miles/ 15 min	13 miles/ 13 min
Carpenters Local 46	5 miles/ 13 min	8.2 miles/ 13 min	18 miles/ 22 min	15 miles/ 17 min
Laborers Local 185	5.3 miles/ 11 min	6.4 miles/ 12 min	16 miles/ 21 min	14 miles/ 17 min
Sundt Construction	4.4 miles/ 9 min	4 miles/ 8 min	14 miles/ 17 min	18 miles/ 21 min
Turner Construction	3.7 miles/ 8 min	3.4 miles/ 8 min	14 miles/ 16 min	18 miles/ 19 min
The Boldt Company	3.6 miles/ 8 min	3.3 miles/ 8 min	14 miles/ 16 min	17 miles/ 19 min
Caltrans West Sacramento	6.8 miles/ 10 min	3.1 miles/ 7 min	11 miles/ 13 min	19 miles/ 19 min
Buehler Engineering	5.8 miles/ 10 min	2 miles/ 6 min	11 miles/ 13 min	18 miles/ 19 min
XL Construction	7.2 miles/ 11 min	1.4 miles/ 7 min	9.7 miles/ 13 min	17 miles/ 19 min
Market One Builders	4 miles/ 12 min	1.3 miles/ 7 min	9.9 miles/ 13 min	17 miles/ 20 min
CalTrans 30th Street	5.3 miles/ 9 min	2.5 miles/ 10 min	8.3 miles/ 10 min	15 miles/ 18 min
CalTrans Lab	7.5 miles/ 12 min	6.8 miles/ 11 min	6.2 miles/ 13 min	18 miles/ 20 min
National Electrical Contractors Association (NECA)	2.4 miles/ 6 min	.5 miles/ 3 min	10 miles/ 18 min	15 miles/ 18 min
Iron Workers, Local 118	6 miles/ 11 min	5.5 miles/ 10 min	16 miles/ 20 min	17 miles/ 18 min
Associated Plumbing and Mechanical Contractors of Sacramento (APMC)	19 miles/ 21 min	18 miles/ 21 min	14 miles/ 19 min	9 miles/ 20 min
Local 340 (IBEW)	13 miles/ 20 min	15 miles/ 19 min	9.5 miles/ 16 min	13 miles/ 23 min
Plumbers & Pipe Fitters	5 miles/ 11 min	4.1 miles/ 14 min	3.6 miles/ 7 min	18 miles/ 26 min
Teichert	7.9 miles/ 15 min	11 miles/ 14 min	6.9 miles/ 12 min	15 miles/ 22 min
Kleinfelder	15 miles/ 17 min	13 miles/ 17 min	10 miles/ 16 min	13 miles/ 20 min
Western Steel Council	17 miles/ 20 min	20 miles/ 25 min	27 miles/ 31 min	5 miles/ 9 min
McCarthy Building Companies	17 miles/ 20 min	20 miles/ 25 min	28 miles/ 30 min	5 miles/ 9 min
SR Diversified, LLC	27 miles/ 31 min	29 miles/ 31 min	26 miles/ 30 min	19 miles/ 25 min
Roebelen Contracting Inc.	27 miles/ 32 min	30 miles/ 31 min	27 miles/ 30 min	19 miles/ 26 min

Resource Centers save approximately 140 minutes of driving time per week. This is a total of 5,460 minutes per year. Students cannot be served as well in a single district thus why CCCA must charter through the Sacramento County Office of Education.

Regional Transit	501 Arden Way	1117 G Street	Florin Location	Citrus Heights
CalTrans Royal Oaks	.8 miles/ 12 min	3.3 miles/ 24 min	12 miles/ 1 hour 23 min	13 miles/ 1 hour 13 min
Iron Workers, Local 118	6 miles/ 44 min	5.5 miles/ 45 min	16 miles/ 2 hour 25 min	17 miles/ 2 hours 9 min
Carpenters Local 46	5 miles/ NA	8.2 miles/ NA	18 miles/ NA	15 miles/ NA
Laborers Local 185	5.3 miles/ 49 min	6.4 miles/ 53 min	16 miles/ 1 hour 40 min	14 miles/ 1 hour 45 min
Sundt Construction	4.4 miles/ 33 min	4 miles/ 34 min	14 miles/ 1 hour 31 min	18 miles/ 1 hour 37 min
Associated Plumbing and Mechanical Contractors of Sacramento (APMC)	19 miles/ 1 hour 17 min	18 miles/ 1 hour 8 min	14 miles/ 1 hour 32 min	9 miles/ 1 hour 20 min
Turner Construction	3.7 miles/ 24 min	3.4 miles/ 22 min	14 miles/ 1 hour 19 min	18 miles/ 1 hour 28 min
The Boldt Company	3.6 miles/ 26 min	3.3 miles/ 22 min	14 miles/ 1 hour 23 min	17 miles/ 1 hour 29 min
Caltrans West Sacramento	6.8 miles/ 46 min	3.1 miles/ 36 min	11 miles/ 1 hour 27 min	19 miles/ 1 hour 39 min
Buehler Engineering	5.8 miles/ 26 min	2 miles/ 17 min	11 miles/ 1 hour 14 min	18 miles/ 1 hour 3 min
XL Construction	7.2 miles/ 26 min	1.4 miles/ 17 min	9.7 miles/ 1 hour 5 min	17 miles/ 1 hour 2 min
Market One Builders	4 miles/ 26 min	1.3 miles/ 16 min	9.9 miles/ 32 min	17 miles/ 1 hour 2 min
CalTrans 30th Street	5.3 miles/ 39 min	2.5 miles/ 29 min	8.3 miles/ 37 min	15 miles/ 1 hour 15 min
National Electrical Contractors Association (NECA)	2.4 miles/ 13 min	.5 miles/ 6 min	10 miles/ 1 hour 26 min	15 miles/ 1 hour 20 min
Local 340 (IBEW)	13 miles/ 1 hour 29 min	15 miles/ 1 hour 18 min	9.5 miles/ 1 hour 44 min	13 miles/ 1 hour 29 min
Teichert	7.9 miles/ NA	11 miles/ NA	6.9 miles/ NA	15 miles/ NA
Kleinfelder	15 miles/ 1 hour 22 min	13 miles/ 1 hour 12 min	10 miles/ 1 hour 34 min	13 miles/ 1 hour 15 min
SR Diversified, LLC	27 miles/ 1 hour 22 min	29 miles/ 1 hour 11 min	26 miles/ 2 hours 7 min	19 miles/ 2 hours 14 min
Roebbelon Contracting Inc.	27 miles/ 1 hour 22 min	30 miles/ 1 hour 11 min	27 miles/ 2 hours 7 min	19 miles/ 2 hours 14 min
CalTrans Lab	7.5 miles/ 48 min	6.8 miles/ 38 min	6.2 miles/ 28 min	18 miles/ 1 hour 21 min
Plumbers & Pipe Fitters	5 miles/ 1 hour 15 min	4.1 miles/ 1 hour 4 min	3.6 miles/ 1 hour 5 min	18 miles/ 1 hour 22 min
Western Steel Council	17 miles/ 1 hour 36 min	20 miles/ 1 hour 46 min	27 miles/ 2 hours 49 min	5 miles/ 43 min
McCarthy Building Companies	17 miles/ 2 hours 6 min	20 miles/ 2 hours 17 min	28 miles/ 2 hours 29 min	5 miles/ 1 hour 7 min

*NA: Are placed at locations which are either inaccessible by RT or routes that require walks greater than 30 minutes

Resource Centers save approximately 200 minutes of travel time per week. This is a total of 7,800 minutes per year. Students cannot be served as well in a single district thus why CCCA must charter through the Sacramento County Office of Education.

Capital College and Career Academy

Multi-Year Forecast

Revised 12/16/2021

	2023-24 Year 1	2024-25 Year 2	2025-26 Year 3	2026-27 Year 4	2027-28 Year 5
Projected Enrollment & ADA by Grade					
9th Grade	80	85	90	100	100
10th Grade	-	80	85	90	100
11th Grade	-	-	80	85	90
12th Grade	-	-	-	80	85
Total Projected Enrollment	80	165	255	355	375
Average Daily Attendance (ADA)					
ADA %		92%	92%	92%	92%
Total	73.60	151.80	234.60	326.60	345.00

Calculation of Instructional Time Requirements and Penalty for Not Meeting Required Time

<https://www.cde.ca.gov/fg/aa/pa/instructionaltimetable.asp>

Example calculation

A	Projected enrollment - full time site based	67%	54	111	171	238	251
B	Projected enrollment - dual enrollment	33%	26	54	84	117	124
C	Percentage of dual enrollment time spent offsite	40%					
D	Required Annual Minutes per student		64,800	64,800	64,800	64,800	64,800
E	Total required minutes for grade span	D x (A+B)	5,184,000	10,692,000	16,524,000	23,004,000	24,300,000
F	Calculated instructional minutes (site based)	(A x D)+(B x D x (1-C))	4,510,080	9,292,320	14,346,720	19,971,360	21,085,920
G	Deficit of required instructional minutes	F-E	(673,920)	(1,399,680)	(2,177,280)	(3,032,640)	(3,214,080)
H	Deficit as % of annual minutes	G/E	-13.00%	-13.09%	-13.18%	-13.18%	-13.23%
I	Budgeted LCFF funding		\$ 884,721	\$ 1,896,006	\$ 2,931,070	\$ 4,082,343	\$ 4,312,656
	Penalty for Not Offering Required Instructional Minutes	H x I	\$ (115,014)	\$ (248,204)	\$ (386,212)	\$ (538,179)	\$ (570,421)
	Potential funding loss as percentage of budgeted expenses		-8.94%	-10.44%	-10.44%	-11.66%	-11.73%

APPENDIX G

LOS RIOS COMMUNITY COLLEGE DISTRICT
2022-2023 ACADEMIC CALENDAR

American River College - Cosumnes River College - Folsom Lake College - Sacramento City College

SUMMER SESSION 2022*

Instruction Begins	June 6	Monday
Independence Day	July 4	Monday
Instruction Ends	August 4	Thursday
Grades Due	August 8	Monday
	35 Days	

FALL SEMESTER 2022*

Instructional Improvement Days	August 18, 19	Thursday, Friday
Instruction Begins	August 20	Saturday
Labor Day Holiday	September 5	Monday
Census Date for Fall Semester Classes	September 6	Tuesday
Veterans Day	November 11	Friday
Last Day to Withdraw from Full Semester Classes	November 15	Tuesday
Thanksgiving Recess	Nov. 24-Nov.27	Thursday-Sunday
Finals	December 9 - 15	Friday - Thursday
End of Semester	December 15	
Grades Due	January 3, 2023	Tuesday
	82 Days	

SPRING SEMESTER 2023*

Instructional Improvement Days	January 12,13	Thursday, Friday
Instruction Begins	January 14	Saturday
Dr. Martin Luther King, Jr. Day	January 16	Monday
Census Date for Spring Semester Classes	January 30	Monday
Lincoln Day	February 17	Friday
Washington Day	February 20	Monday
1 st 8 weeks ends	March 10	Friday
Mid Semester Spring Recess	March 13-19	Monday - Sunday
2 nd 8 weeks Begins	March 20	Monday
Last Day to Withdraw from Full Semester Classes	April 16	Sunday
Finals	May 11-May17	Thursday-Wednesday
End of Semester	May 17	Wednesday
Grades Due	May 24	Wednesday
	82 Days	

*During all terms, classes are offered in additional formats to enhance student opportunity: 1st and 2nd eight week sessions; 1st, 2nd and 3rd five week sessions; as well as weekend only classes. Examples might include four, five, six and eight week sessions and weekend courses, as well as other session lengths.

NOTE: Classes may be scheduled on all days during the Summer term including Friday through Sunday; the count of days, though, is Monday-Thursday only as those are the primary days when instruction is offered. Both the Fall and Spring terms have scheduled instructional days, such as Saturdays, that are not included in the number of days shown above. Those additional days ensure the district is in compliance with the requirements of Title 5 of the California Code of Regulations, sections 58120 and 58142.

Approved by the Board of Trustees - December 16, 2020

APPENDIX H



Capital College & Career Academy

The following is a list of steps taken when a student is struggling academically. The goal is to ensure students are making adequate progress towards college and career goals. Time frame for each checkpoint would be four to six weeks. These key benchmarks directly align with our school wide MTSS process.

Checkpoint 1: Entrance Date _____

- Student has been determined to be struggling academically
- Teacher communicates concern to parents
 - Email
 - Phone call
 - Implement classroom level strategies
 - Discuss resources available to student
- Enroll in academic enrichment

Exit Date: _____

Checkpoint 2: Entrance Date _____

- Student is on the 2.0 list for 2 consecutive grade checks (4 weeks) and not making academic progress
 - Email/ Phone Call from Principal
- SST is held
 - Add in organizational support
 - Require attendance at academic enrichment
 - Discuss resources available to student
 - Bring in community resource partners
 - Advisory check ins
- Student reflection and academic improvement plan

Exit Date: _____

Checkpoint 3: Entrance Date _____

- Student is on the 2.0 list for 2 more consecutive grade checks (4 weeks) and not making academic progress
 - Email/ Phone Call from principal
- SST 2
- Intervention meeting with staff member
 - Revisit previous SST plan
 - Adjustments made as needed
 - If plan is not being followed with fidelity identify potential solution
- Initial Educational Progress Warning letter provided during meeting

Exit Date: _____

Checkpoint 4: Entrance Date _____

- Student placed on academic probation/ SST 3
- Intervention meeting with staff member
 - Evaluate support plans
 - Identify areas of progress and growth
- Referral to SPED/ 504 if data shows potential qualification
- Final Educational Progress Warning letter provided during meeting

Exit Date: _____

APPENDIX I

Apprenticeship Pathway

9th Grade Course Outline

Fall	Spring	College Units Completed
English 9	English 9	
Applied Construction Math 1	Applied Construction Math 1	
Biology	Biology	
PE	PE	
Foreign Language	Foreign Language	
Introductory to Craft Skills	Introductory to Craft Skills	
Block Day		
HCD 310 College Success (3 units)	HCD 499 Experimental Offering in Human/Career Development (3 units)	
Study Skills	Career Exploration	

7

10th Grade Course Outline

Fall	Spring	
English 10	English 10	
Applied Construction Math II	Applied Construction Math II	
Chemistry	Chemistry	
PE	PE	
Foreign Language	Foreign Language	
Construction Technology	Construction Technology	
Block Day		
DESIGN 300	DuE	
Career Exploration	Career Exploration	

6

11th Grade Course Outline

Fall	Spring	
English 11	English 11	
World History	World History	
Applied Construction Math III	Applied Construction Math III	
Physics	Physics	
Elective	Elective	
Elective	Elective	
Block Day		
ARC Pre Apprenticeship Course Part 1	ARC Pre Apprenticeship Course Part 2	
Internship	Internship	

7

12th Grade Course Outline

Fall	Spring	
ERWC	ERWC	
Government	Economics	
Pre Calc	Pre Calc	
US History	US History	
Capstone	Capstone	
Block Day		
DuE	DuE	
Internship	Internship	

6

Total Units Completed in High School

26

Total College Units

26

Notes:
IGETC Area 6, Language Other than English will be met by high school proficiency
INDICATES COMMUNITY COLLEGE COURSES TAKEN AT ARC
INDICATES COMMUNITY COLLEGE COURSES TAKEN ONLINE
INDICATES COMMUNITY COLLEGE COURSES TAKEN VIA ADVANCED EDUCATION OR AS A TRADITIONAL COLLEGE STUDENT ON THE COLLEGE CAMPUS

Draft Pathway -- Design Technology

9th Grade Course Outline		College Units Completed
Fall	Spring	
English 9	English 9	
Applied Construction Math 1	Applied Construction Math 1	
Biology	Biology	
Environmental Health and Safety	Study Hall	
Foreign Language	Foreign Language	
Introductory to Craft Skills	Introductory to Craft Skills	
Block Day		
HCD 310 College Success (3 units)	HCD 499 Experimental Offering in Human/Career Development (3 units)	6
Study Skills	Career Exploration	

10th Grade Course Outline		
Fall	Spring	
English 10	English 10	
Applied Construction Math II	Applied Construction Math II	
Chemistry	Chemistry	
PE	PE	
Foreign Language	Foreign Language	
Construction Technology	Construction Technology	
Block Day		
DESZN 300	DESZN 301	6
Career Exploration	Career Exploration	
Summer		3

11th Grade Course Outline		
Fall	Spring	
English 11	English 11	
HIST 307 (IGETC Area 4)	HIST 310 (IGETC Area 4)	6
Applied Construction Math III	Applied Construction Math III	
Physics	Physics	
Elective	Elective	
Elective	Elective	
Block Day		
DESZN 302	DESZN 328	6
Internship	Internship	
Summer (DESZN 325)		3

12th Grade Course Outline		
Fall	Spring	
ENGWR 300 (IGETC Area 1)	ENGWR 302 (IGETC Area 1)	6
POLS 301 Intro to Gov: US (IGETC Area 4)	ECON 302 Prin of Microecon (IGETC Area 4)	6
STAT 300	ANTH 310	6
Capstone	Capstone	
Study Hall	Study Hall	
Block Day		
DESZN 325	DESZN 498	6
Internship	Internship	
Summer (PHYS 310)		5

Total Units Completed in High School

+1, Fall Semester Course Outline	+1, Spring Semester Course Outline
DESZN 340	DESZN 330
DESZN 350	DESZN 360
DESIGN 310	DESZN 498

Total College Units

74

Notes:
IGETC Area 6, Language Other than English will be met.
INDICATES COMMUNITY COLLEGE COURSES TAKEN AT ARC
INDICATES COMMUNITY COLLEGE COURSES TAKEN ONLINE
INDICATES COMMUNITY COLLEGE COURSES TAKEN VIA ADVANCED EDUCATION OR AS A TRADITIONAL COLLEGE STUDENT ON THE COLLEGE CAMPUS

Base Pathway

9th Grade Course Outline		College Units Completed
Fall	Spring	
English 9	English 9	
Applied Construction Math 1	Applied Construction Math 1	
Biology	Biology	
PE	PE	
Foreign Language	Foreign Language	
Introductory to Craft Skills	Introductory to Craft Skills	
Block Day		
HCD 310 College Success (3 units)	HCD 499 Experimental Offering in Human/Career Development (3 units)	6
Study Skills	Career Exploration	

10th Grade Course Outline	
Fall	Spring
English 10	English 10
Applied Construction Math II	Applied Construction Math II
Chemistry	Chemistry
PE	PE
Foreign Language	Foreign Language
Construction Technology	Construction Technology
Block Day	
DESIGN 300	DuE/ Elective
Career Exploration	Career Exploration

3

11th Grade Course Outline	
Fall	Spring
English 11	English 11
World History	World History
Applied Construction Math III	Applied Construction Math III
Physics	Physics
Elective	Elective
Elective	Elective
Block Day	
DuE/ Elective	DuE/ Elective
Internship	Internship

3

12th Grade Course Outline	
Fall	Spring
ERWC	ERWC
Government	Economics
Pre Calc	Pre Calc
US History	US History
Capstone	Capstone
Elective	Elective
Block Day	
DuE/ Elective	DuE/ Elective
Internship	Internship

9

Total Units Completed in High School

Notes:
IGETC Area 6, Language Other than English will be met
INDICATES COMMUNITY COLLEGE COURSES TAKEN AT ARC
INDICATES COMMUNITY COLLEGE COURSES TAKEN ONLINE
INDICATES COMMUNITY COLLEGE COURSES TAKEN VIA ADVANCED EDUCATION OR AS A TRADITIONAL COLLEGE STUDENT ON THE COLLEGE CAMPUS

Manufacturing Pathway

9th Grade Course Outline

Fall	Spring	College Units Completed
English 9	English 9	
Applied Construction Math 1	Applied Construction Math 1	
Biology	Biology	
PE	PE	
Foreign Language	Foreign Language	
Introductory to Craft Skills	Introductory to Craft Skills	
Block Day		
HCD 310 College Success (3 units)	HCD 499 Experimental Offering in Human/Career Development (3 units)	6
Study Skills	Career Exploration	

10th Grade Course Outline

Fall	Spring	
English 10	English 10	
Applied Construction Math II	Applied Construction Math II	
Chemistry	Chemistry	
PE	PE	
Foreign Language	Foreign Language	
Construction Technology	Construction Technology	
Block Day		
DESZN 300	DuE	6
Career Exploration	Career Exploration	

11th Grade Course Outline

Fall	Spring	
English 11	English 11	
World History	World History	
Applied Construction Math III	Applied Construction Math III	
Physics	Physics	
Elective	Elective	
Elective	Elective	
Block Day		
EDT 310	EDT 315	6
Internship	Internship	

12th Grade Course Outline

Fall	Spring	
ERWC	ERWC	
Government	Economics	
Pre Calc	Pre Calc	
US History	US History	
Capstone	Capstone	
Block Day		
ENGR 312	CNC 272	6
Internship	Internship	

Total Units Completed in High School 24

Total College Units 24

Notes:
IGETC Area 6, Language Other than English will be met by high school proficiency
INDICATES COMMUNITY COLLEGE COURSES TAKEN AT SCC VIA ADVANCED EDUCATION
INDICATES COMMUNITY COLLEGE COURSES TAKEN ONLINE
INDICATES COMMUNITY COLLEGE COURSES TAKEN VIA ADVANCED EDUCATION OR AS A TRADITIONAL COLLEGE STUDENT ON THE COLLEGE CAMPUS

CSUS Pathway

9th Grade Course Outline

Fall	Spring	College Units Completed
English 9	English 9	
Applied Construction Math 1	Applied Construction Math 1	
Biology	Biology	
PE	PE	
Foreign Language	Foreign Language	
Introductory to Craft Skills	Introductory to Craft Skills	
Block Day		
HCD 310 College Success (3 units)	HCD 499 Experimental Offering in Human/Career Development (3 units)	6
Study Skills	Career Exploration	

10th Grade Course Outline

Fall	Spring	
English 10	English 10	
Applied Construction Math II	Applied Construction Math II	
Chemistry	Chemistry	
PE	PE	
Foreign Language	Foreign Language	
Construction Technology	Construction Technology	
Block Day		
DESIGN 300 (IGETC Area 3)		6
Career Exploration	Career Exploration	
Summer (SEE COMMENT)		3

11th Grade Course Outline

Fall	Spring	
English 11	English 11	
HIST 307 (IGETC Area 4)	HIST 310 (IGETC Area 4)	6
Applied Construction Math III	Applied Construction Math III	
Physics	Physics	
Elective	Elective	
Elective	Elective	
Block Day		
CSUS DuE	CSUS DuE	6
Internship	Internship	

12th Grade Course Outline

Fall	Spring	
ENGWR 300 (IGETC Area 1)	ENGWR 302 (IGETC Area 1)	6
POLS 301 Intro to Gov: US (IGETC Area 4)	ECON 302 Prin of Microecon (IGETC Area 4)	6
STAT 300	ANTH 310	6
Capstone	Capstone	
Study Hall	Study Hall	
Block Day		
CSUS DuE	CSUS DuE	6
Internship	Internship	

Total Units Completed in High School

51

Total College Units

51

Notes:
IGETC Area 6, Language Other than English will be met by high school proficiency
INDICATES COMMUNITY COLLEGE COURSES TAKEN AT ARC
INDICATES COMMUNITY COLLEGE COURSES TAKEN ONLINE
INDICATES COMMUNITY COLLEGE COURSES TAKEN VIA ADVANCED EDUCATION OR AS A TRADITIONAL COLLEGE STUDENT ON THE COLLEGE CAMPUS

IGETC Category	Courses			
Area 1: English Communication				
For CSU, choose one course from each area for a total of three courses (three units each for a total of nine units). For UC, choose two courses, one from area 1A and one from area 1B (three units each for a total of six units). Complete area 1C if you are completing an associate degree for transfer (ADT).	ENGWR 300 (IGETC Area 1A)	ENGWR 302 (IGETC Area 1B)	SPEECH 301 Public Speaking (Area 1C)	
Choose one course for a total of three units.	STAT 300 (IGETC Area 2)			
Area 3: Arts and Humanities				
Choose one course from each area, plus an additional course from either area, for a total	MUFHL 308 (IGETC Area 3A)	ANTH 310 Cultural Anthropology (Area 3A)	HUM 300 Classical Humanities (Area3B)	
Area 4: Social and Behavioral Sciences				
Choose three courses from at least two different areas for a total of nine units.	HIST 307 (IGETC Area 4F)	ECON 302 Principles of Microeconomics (Area 4B)	POLS 301 Introduction to Government: United States (Area 4H)	
Area 5: Physical and Biological Sciences				
Choose one course from each area for a minimum of seven to nine units. Courses in area 5C may also be used in areas 5A or 5B where appropriate. Related lecture courses must be completed prior to or concurrently with lab.	PHYS 310 (IGETC Area 5A)	GEOL 300 Physical Geology (area 5B)	GEOL 300 Physical Geology Lab (area 5C)	
Area 6: Language Other Than English				
This is a UC requirement only. Students must demonstrate proficiency equivalent to two years of high school study in a single language. The following courses also fulfill this requirement. Consult a counselor for more information on how to fulfill this requirement.				
US History, Constitution, and American Ideals				
This is a CSU graduation requirement only – it is not required for IGETC certification. Choose one of the following options.	HIST 310 (IGETC Area 4F)			

GE Degree Requirements		Courses		
Area 1: Humanities	One course for a minimum of three units	MUFHL 308 (IGETC 3a)		
Area 2: Language and Rationality	Choose two courses for a minimum of six units. Complete one course (three units minimum) in each area.	ENGWR 300 (IGETC Area 1A)	ENGWR 302 (IGETC Area 1B)	
Area 3: Living Skills	Choose one course from area III(a) and a minimum of two units from area III(b), for a minimum of three units total. This area can also be fulfilled by Military Service Credit (honorable discharge) with a minimum of one year active duty service. Submit a copy of DD214 to Admissions and Records as verification.	HCD 310	HCD 330	FITNS 400/
Area 4: Natural Sciences	One course for a minimum of three units	PHYS 310 (IGETC Area 5A)		
Area 5: Social and Behavioral Science	Choose two courses for a minimum of six units. Complete one course (three units minimum) in each area.	HIST 307 (IGETC Area 4)	HIST 310 (IGETC Area 4)	
Area 6: Ethnic/ Multicultural Studies	Choose a minimum of three units from the following courses.	ANTH 310/ MUFHL 315/ MUFHL 330 (Advanced ED summer)		

Math

Quantitative Mathematics in Industry

Grades:

9,,,

Length:

Full Year

Environment:

Classroom-based

Honors:

None

Subject:

Mathematics (C)

Discipline:

Mathematics I

Institution:

Career Technical Education Charter

Course Overview

Quantitative Mathematics in Industry is the first in an integrated series of math courses at a school where every student is engaged in either an advanced manufacturing or commercial construction pathway. In the context of algebra and functions, the course develops ability to recognize, represent, and solve problems involving relations among quantitative variables. A wide variety of numerically generated graphs, as well as the specific algebraic details of linear and quadratic functions will be studied. Geometrically we develop visual thinking and the ability to construct, reason with, interpret, and apply mathematical models of patterns in visual and physical contexts. Congruence and similarity, as well as right triangle trigonometry will be specifically addressed and utilized. In addition, statistics and probability necessitate the development of data analysis skill. Recognition and measure of variation along with visualization and interpretation of distributions will be the focus. This is all done within the context of the eight standards for mathematical practice and consistent connections with scientific and career technical topics, through the lens of literacy and communication.

Students will utilize investigations found within the Core Plus Instructional materials. They will participate in cross-curricular as well as school-wide projects. These will utilize a variety of technologies and equipment, involve participation in a rich array of small and large group discussions, and require problem-solving with rigorous mathematics set in real-life scenarios.

Patterns of Change

This unit develops students' ability to recognize and describe important patterns that relate quantitative variables via data tables, graphs, words, and symbols. Students will also build capacity in representing relationships and using reasoning and calculating tools to answer questions and solve problems. More specifically, students will...

- begin developing sensitivity to the rich variety of situations in which quantities vary in relation to each other.
- develop ability to represent relations among variables in several ways— using tables of

- numerical data, coordinate graphs, symbolic rules, and verbal descriptions—and to interpret data presented in any one of those forms.
- develop ability to recognize important patterns of change in single variables and related variables.

Assignments

Materials Science- Strength Testing: Mathematics can be used to analyze properties of many things in the world around us. During the unit, relationships between many different pairs of variables have been explored. In this project, you will investigate the strength and rigidity of different building materials.

- You will decide which material and which characteristic (width, length, or thickness) you would like to explore.
- Make a hypothesis about how you think the strength and rigidity of your material will vary among your samples.
- Gather data about the strength and rigidity of the material: Span the material between two hard surfaces. Add weight to the middle until it breaks, measuring the “sag” with each addition. Decide in advance how best to add the weight, take the measurements, and record the data.
- Analyze your data by exploring any relationships present and thinking about what they might imply about the strength of the material.
- Write a brief report that states your hypothesis, describes your testing procedures and analysis, and any conclusions you can make about the material tested. Your report should include a description of the materials, sketches of your experiment, tables and graphs of the data, and any symbolic rules used in analyzing the data. You should also clearly explain the reasoning you used to draw your conclusions and compare your results to the original hypothesis.

Through this assignment, students will have the opportunity to connect multiple mathematical representations of experimental data with their understanding of patterning and their real-world observations. They will learn to analyze and communicate these results in a manner consistent with their use in industry.

Patterns in Data

This unit develops students' ability to summarize, represent, and interpret real-world data on a single count or measurement variable through the use of graphical displays of the distribution, measures of center, and measures of spread. More specifically, students will...

- use various graphical displays of data to reveal important patterns in a data set and interpret those patterns in the context of the data.
- compute measures of center and variability for sets of data and interpret the meaning of those statistics.
- transform distributions by adding a constant or by multiplying by a positive constant and recognize how those transformations affect the shape, center, and spread of distributions.

Assignments

Textbook Readability: people who write or edit books must consider how hard the books are to read. To help analyze the reading level of a book, they use one of several readability formulas. One formula was developed by Gunning in 1952. In this project, you will use Gunning's formula to find the reading level of one of your textbooks (not math) and analyze your results in the realms of statistics and practicality.

You will analyze a book using Gunning's method by selecting three 100-word samples from the book and determining the average (mean) number of words per sentence. From that data you will find the percentage of words that have three or more syllables, add these two numbers together and multiply the sum by 0.4. This number corresponds to the reading (grade) level of the book. Use this calculation to investigate and report (for presentation) on the following.

- Would the formula give a higher or lower reading level if you used median sentence length rather than mean sentence length? Explain why this is the case.
- Why do you think the formula uses the mean number of words per sentence rather than the median?
- Find others who chose the same text, compare the reading level they computed to the one you computed. What accounts for any differences? How might you combine all of your data to produce a better estimate of the readability? How might you report a measure of variability for your results?
- Do you think anything else should be taken into account when determining the reading level of a book? If so, what? If not, why not?
- Ask your English teacher, Spanish teacher, or do some research on your own to find another way to measure readability. How is your new method similar to and different from the one described above? Use this new method to find and compare the readability indices of the text. Try to explain any differences.

Through this assignment, students will investigate data sources in multiple statistical ways, see evidence of variability through comparison with others' calculations, and experience a non-marketing use of statistics.

Trigonometric Methods

This unit develops students' understanding of trigonometric functions and their ability to use trigonometric methods to solve real-world triangulation and indirect measurement problems. More specifically, students will...

- explore the sine, cosine, and tangent functions defined in terms of a point on the terminal side of an angle in standard position in a coordinate plane.
- explore properties of the sine, cosine, and tangent ratios of acute angles in right triangles and use those ratios to solve applied problems.
- use the Law of Sines and the Law of Cosines to determine measures of sides and angles for non-right triangles.
- use the Law of Sines and Cosines to solve a variety of applied problems that involve triangulation.

- describe the conditions under which two, one, or no triangles are determined given the lengths of two sides and the measure of an angle not included between the two sides.

Assignments

Exploring Surveying Careers- Trigonometry provides techniques that can be used to find distances and areas that would be hard or impossible to measure directly. Making these measurements is part of the job of surveyors, cartographers, photogrammetrists, and geomatic engineers. To further explore these career options, we will be conducting online and face-to-face research in the form of an interview with a surveyor, cartographer, photogrammetrist, or geomatic engineer.

Begin by researching information about surveying careers and creating a summary of your findings. Your summary should investigate:

- What do surveyors, cartographers, photogrammetrists, and geomatic engineers do?
- What are their work environments like?
- What special tools do they use?
- What type of education or training is needed?
- Are there licensing requirements in your state? If so, describe them.
- At least one other thing of interest to you about these careers

You might want to begin your research by consulting one or more of the following Web sites:

- Bureau of Labor Statistics Career Investigation site: www.bls.gov/kl2/
- Occupational Outlook Handbook: www.bls.gov/oco/
- Occupational Information network: online.onetcenter.org/
- National Society of Professional Surveyors: www.surveyingcareer.com/

We will then arrange to interview a surveyor, cartographer, photogrammetrist, or geomatic engineer and summarize what you learn through the interview. In your conversation you should investigate:

- What made the person choose the career?
- What training did the person have and how long did it take to get the training?
- What mathematics does the person use while working?
- What other skills and abilities are important?
- How has the job changed over the last twenty years?
- What personal characteristics are important for success?
- What parts of the job are most satisfying?
- What are the biggest challenges of the job?
- At least one other thing of interest to you.

Write a report, make a poster, create a PowerPoint presentation, or make a video that communicates what you have found out about surveying related careers. Be sure that you include answers to all of the above questions and that you also include some additional things of interest to you. Your work should be well organized and presented in an interesting and engaging manner. You also need to include references for your information.

Through this assignment, students will gain an appreciation for the wide variety of careers available that utilize this type of math, science, and physical activity. They will also experience personal contact with professionals in a context and manner that is new to them.

Linear Functions

This unit develops students' ability to recognize and represent linear relationships between variables and to use tables, graphs, and algebraic expressions for linear functions to solve problems in situations that involve constant rate of change or slope. More specifically, students will...

- recognize patterns in tables of sample values, in problem conditions, and in data plots that can be described by linear functions.
- write linear function rules to describe linear or approximately linear patterns in graphs and numerical data.
- use table, graph, and symbolic representations of linear functions to answer questions about the situations they represent. This includes: calculating y for a given x , finding x for a given y , and describing the rate at which y changes as x changes.
- rewrite linear expressions in equivalent forms.

Assignments

Parent Night- If mathematics is to be useful, those who understand it must be able to communicate it to others. Communication occurs in several forms, including oral expression. This project gives you opportunity to practice your oral communication skills with the mathematics we have been studying. With your team, prepare a 10- to 15-minute joint presentation of the main ideas of this unit. The presentation is to be appropriate for the Community Showcase.

- Choose the main ideas you will present. The ideas should be both important and potentially interesting to your audience.
- Outline your presentation, indicate the ideas to be presented and a brief description of how you intend to cover each idea. Get feedback from me and one other teacher before continuing.
- Write a detailed description of your presentation. Include all data, graphs, examples, illustrations, transparencies, or other visual displays that you will use.
- Prepare a time schedule for the presentation that tells which team member is responsible for each part.
- Be prepared to give the presentation both in class and at the Community Showcase.

Through this assignment, students will learn to synthesize information, identify key ideas, and think through and utilize effective communication techniques when explaining technical information.

Quadratic Functions

This unit develops students' ability to recognize and represent quadratic relations between variables using data tables, graphs, and symbolic formulas, to solve problems involving quadratic

functions, and to express quadratic polynomials in equivalent factored and expanded forms. More specifically, students will...

- recognize patterns in tables of sample values, in problem conditions, and in data plots that can be described by quadratic functions.
- write quadratic function rules to describe quadratic or approximately quadratic patterns in graphs and numerical data.
- use table, graph, and symbolic representations of quadratic functions to answer questions about the situations they represent. This includes: calculating y for a given x , finding x for a given y , and describing the rate at which y changes as x changes.
- rewrite quadratic expressions in equivalent forms.

Assignments

Designing Tabletops- Geometric patterns are often used in designing furniture. The areas of different parts of the design can often be represented using quadratic functions. In this project, you will explore two different tabletop designs and then create and analyze a tabletop design of your own. Each provided design can be modified in preapproved ways.

- You need nine square tables that have 3-foot long sides. On the top of each table there will be a geometric design. You need to create three different tabletops for each design restriction delineated below, and each tabletop will use two different types of wood.
 - The first table will use equal amounts of each color.
 - The second will use twice as much of the light color as the dark color.
 - The third will use three times as much of the dark color as the light color.
- You need to determine if each condition can be met by the provided designs and if so, find the dimensions that can be used to satisfy each possible condition for each of the designs.
- Create a two-color tabletop design of your own. Your design should allow for the same type of variation as the provided designs. That is, you should be able to vary one dimension and create designs that are different but still have many features in common. You need to provide dimensions related to your design that will meet the same three requirements as above. If one of the requirements cannot be met, explain why.
- Write a report to the manufacturer who will make the nine tables. The report should include any equations, graphs, or tables of values that you used in your analysis. It should also include a detailed list of the shapes and dimensions needed for each tabletop. Be sure the report is well organized and includes work that supports your conclusions.

Through this project, students will learn to use their knowledge of the quadratic family of functions. They will explore the idea of parametrized control of a function as they alter dimensions and see the effect that has on both the area and the associated function. Communication of design details, as well as analysis of materials and cost will also be a focus.

Patterns in Shape

This unit develops students' ability to visualize and describe two- and three-dimensional shapes, to represent them with drawings, to examine shape properties through both experimentation and careful reasoning, and to use those properties to solve problems. More specifically, students will...

- recognize and classify common two- and three-dimensional shapes.
- visualize and represent two- and three-dimensional shapes.
- analyze and apply properties of polygons and polyhedra.
- use rigid transformations to verify SSS, SAS, and ASA conditions for congruence of triangles and use these conditions in solving problems.
- begin to develop ability to establish properties of shapes by careful reasoning from definitions and given or assumed facts.

Assignments

Archimedean Solids- We have explored properties of three-dimensional solids, in particular: prisms, pyramids, and Platonic solids. Now, we will extend that into analysis of Archimedean solids. The shape of a soccer ball is one example of an Archimedean solid.

- Begin by researching Archimedean solids: find out how many there are and the characteristics that allow you to determine whether or not a three-dimensional shape is an Archimedean solid.
- Create models of three different Archimedean solids.
- Explore your shapes with the goal of answering the following:
 - What are the official names of your three solids?
 - What polygons are used for the faces of your shapes?
 - What types of polygons meet at each vertex? Are they the same for every vertex?
 - How are your solids related to, similar to, or different from other polyhedral explored in this unit?
 - Does Euler's Formula for Polyhedra hold for your shapes? Prove it.
 - Does Descartes' Theorem hold for your shapes? Prove it.
 - Are any of your solids used in the manufacture or construction of consumer products?
- Prepare a paper, a poster, or a video demonstrating what you have learned about Archimedean solids. You should include general information about Archimedean solids as well as information about the specific solids you created.
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Through this assignment, students will learn to extend their understanding to unknown and increasingly complex scenarios, utilize modeling skills developed in their Engineering Design course, and explore areas in industry and science where advanced math gets utilized.

Textbooks

Title	Authors	Publisher	Edition	Website	Is Primary
Core-Plus Mathematics, Course 1	C.R. Hirsch, J.T. Fey, E.W. Hart, H.L. Schoen, A.E. Watkins, et. al.	McGraw-Hill Education	2015	cpmponline.org	Yes
Core-Plus Mathematics, Course 2	C.R. Hirsch, J.T. Fey, E.W. Hart, H.L. Schoen, A.E. Watkins, et. al.	McGraw-Hill Education	2015	cpmponline.org	No

Websites

Title	Authors	Organization	Website
CPMP Tools	--	McGraw-Hill Education	http://www.cmponline.org/cpmp-tools/
Desmos	--	Desmos, Inc.	https://www.desmos.com/

Applied Math Modeling

Grades: 10,11,12

Length: Full Year

Environment: Classroom-based

Honors: None

Subject: Mathematics (C)

Discipline: Algebra I

Institution: Natomas Charter School

Course Overview

This college-preparatory course supports key Math I standards and introduces key Math II standards. Designed for students who seek a better grasp of math concepts before enrolling in Math II, this course makes explicit connections between the Standards for Mathematical Practice and the Content Standards through performance tasks and project based learning. Students will experience these standards through a science lens by experimenting with science content that applies to Algebra skills. The goal of the course is to solidify key Algebra 1 concepts through a variety of cross curricular learning opportunities.

Students will continue to develop an understanding of the Common Core Standards for Integrated Mathematics I while also gaining exposure to the Common Core Standards for Integrated Mathematics II. The main strands that will be addressed and that are critical to both levels of math include: Functions, Geometry, Number and Quantity, Statistics, Algebra and Quadratics. Emphasis will be placed on approaching curriculum in new ways such students have more access to the content. Through the use of technology, science applications, and hands-on projects there will be increased opportunities for explorations and application of content.

Understanding Functions

Unit 1: Understanding Functions

Description: Unit 1 is titled Understanding Functions and consists of: Functions, Models and Patterns. During this unit, students will learn how analyze graphing relationships as well as understand relations and functions. They will learn to model and graph functions, identify and graph sequences, construct and model arithmetic sequences. In addition, students will evaluate various aspects of graphs such as slope, rate of change, domain and range. Students learn to make sense of problems by defining what slope and y-intercept represent in the context to the problem.

Key Assignment: At the end of the unit, students complete a performance task dealing with the

challenges a doctor would face when predicting a person's height at different ages based on a child's height at birth. They will address whether the y-intercept makes sense to the problem and discuss the strategies that can help determine the slope and domain of data. Students will produce a poster that includes tables, graphs, and equations. They will present their findings once complete.

Assignments

Students will participate in a lab where they must determine the amount of time a coffee filter takes to drop to the ground based on this height. Students will measure the height and time of each drop and use their data to graph and write the equation to represent this data. In a lab write up, students will report their data, create an accurate graph, interpret the graph and data in words, interpret the data in the form of a linear equation. Students will be expected to pay special attention to interpreting the meaning of the slope, y-intercept and one other point on the line. Students will interpret the meaning of the domain and range of their function in terms of the physical situation they are experimenting with.

Unit 2: Transformation, Congruence, and Similarity

Unit 2: Transformation and Congruence

Description: Unit 2 is titled Transformations and Congruence and consists of: tools of geometry, transformation, symmetry, congruent figures and similar figures. Students will learn how to perform transformations and also to analyze translations, reflections and rotations. They will also sequence transformations and describe congruency. There will be special emphasis on reviewing the key algebra skills that are demonstrated through transformations, including: graphs of linear functions, solving linear equations, solving proportions and identifying inverse functions.

Key Assignment: During this unit, students will work on coding through Code.org. Coding allows students to create transformation sequences to create video games and symmetrical graphic designs. At the end of this unit, students will create a graphical design given specific parameters relating to reflections, symmetry, and rotations. In addition to completing their designs, students will submit the codes they used and illustrate the usefulness and purpose of transformations in a coding platform, students also write a brief essay describing their use of transformations in the game design.

Assignments

In order to demonstrate their understanding of similarity and proportional reasoning, students will perform the "Statue of Liberty Task". Students are given a ruler and the information that the statue of liberty's nose is 4 feet, 6 inches long. They must use that information, their own bodies, and their knowledge of similarity in order to determine the lengths of her arm, leg, foot and eye.

Quantities and Modeling

Unit 3: Quantities and Modeling

Description: Unit 3 is comprised of statistical modeling of linear, exponential and quadratic functions. Students will learn to identify the differences in the patterns, graphs, and equations of linear, exponential and quadratic functions. Students will learn to use the regression function on a graphing calculator in order to fit a line or curve to a data set, after they have chosen the appropriate form of the model.

Key Assignments: Students will perform the skittles task, during which they will begin with one skittle, roll it out onto the desk, then add another skittle each time an "s" is facing up. As students record the total number of skittles on the desk after each roll, they will discover that the skittles population is doubling each time. Once they graph the data they will see that it represents an exponential pattern. They will then use a graphing calculator to perform a regression that gives the exponential equation that best fits the data. Students will present the data, graph and regression equation by filling out a lab report.

Assignments

At the beginning of the unit students will each plant a bean in a little pot. each day that they attend class, they will measure the height of the plant and record it in a table with the number of days since the seed was planted. After each week students will look at thier data and guess what type of regression thier data might be showing. At first, the data will appear linear or exponential because of the speed that the plant is sprouting up. Soon the plan will reach it's maximum height and begin to droop down, which will begin to look more like a quadratic relationship. Once the plants have died, students will create a cumulative graph that demonstrates what equation best modeled the data after each week. Students will create the models with a calculator and write a half page write up discribing thier findings and which model fits the data best over all.

Quadratics and Models

Unit 4: Quadratics and Models

Description: The quadratics unit introduces students to graphing quadratics, identifying solutions and intercepts. Students will learn to graph a quadratic function in vertex form, understand how to interpret the vertex and the zeroes in context of a physics application problem. Students will use the area model in order to factor quadratics and apply the zero product property to solve equations.

Key Assignment: Students explore the relationship between the path traveled by projectiles and quadratics functions. Students will work in groups to conduct an experiment that involves launching/bouncing a tennis ball an unknown distance and determining the quadratic function that describes the path of their ball knowing how long it took. During this assignment students will keep a journal allowing them to reflect on observations such as describing the nature of the path, the peak, and what aspects of velocity remain unchanged etc.

Assignments

Students will demonstrate their knowledge about the graphs of parabolas by doing a "Parabola Selfie Project". This requires students to find a parabola in the real world and take a selfie with it. With some guidance, they will then copy the picture into the desmos grapher so that the vertex and zeros are easily readable on the coordinate plane. Once the picture is in the coordinate plane, students will identify the key features of the graph (zeros, y-intercepts, vertex, axis of symmetry, etc.). Ultimately students will identify the equation of the parabola and graph it, in desmos, over their picture.

Textbooks

Title	Authors	Publisher	Edition	Website	Is Primary
CPM Core Connections 1 & 2	Various	CPM	2020	--	No
Illustrative Mathematics Algebra 1	Various	Illustrative Mathematics	2019	https://curriculum.illustrativemathematics.org/HS/teachers/1/index.html	No

Websites

Title	Authors	Organization	Website
Mathspace	--	Mathspace	Mathspace.co
Desmos Classroom	--	Desmos.com	Desmos.com

Integrated Math 2: Construction Trades

Grades: 10,11,12

Length: Full Year

Environment: Classroom-based

Honors: None

Subject: Mathematics (C)

Discipline: Mathematics II

Institution: Merced Union High School District

Course Overview

Integrated Math 2 - Construction Trades will mirror the traditional Math 2 curriculum and content. It is meant to be along with construction/trades courses, especially advanced courses, to give a greater understanding of the math behind the physical products of the trades courses. As such, the course will emphasize the topics and critical thinking that can be directly related to projects and topics in trades courses.

Advanced Measurement

The first unit will address knowledge of measurement tools, units, precision, accuracy. Students will be required to measure, and convert into practical measurements, real life objects around class and campus. Students will adhere to accuracy and precision, in large units and extremely small.

Assignments

“Measuring the Room”: students will be given a series of measuring tools (measuring tape, rulers, etc.) to measure items in and parts of the room. Students will then collaborate to compare the precision and accuracy of their measurements given the different implements. Particular attention will be paid to the utility of the different devices, and relative ease of use. *Additional support and analysis for concurrent construction/trades coursework and projects*

Polynomial Functions and Applications

Students will solve, graph, and analyze functions. Specific emphasis will be on analyzing the relationship of domain and range, and how they relate to real-world concepts such as time and distance. Students will examine methods of combining polynomials expressions, using unknowns to apply critical thinking in measurement and distance. Students will analyze how special products of polynomials could relate to common polygons such as squares and rectangles.

Assignments

“Minor Alterations”: Students will investigate the results of alterations to polynomial functions in graphs and in practical results. Students will adjust a , h , and k in the formula $f(x) = a(x - h)^2 + k$ to observe the changes in the graphs on the same coordinate plane on Desmos. They will then interpret the graphs to examine the changes in the maximum value of the perimeter and the area. *Additional support and analysis for concurrent construction/trades coursework and projects.*

Quadratic Functions

Students will understand the changes in graphs with specific alterations to quadratic functions, and real-life applications of such. Students will examine the different methods of solving quadratic equations, and the uses and meanings of their solutions. Of particular import will be using methods to find the sides of polygons such as squares and rectangles given the area, and applications in their concurrent courses and projects.

Assignments

“Planter Boxes”: Students will have a project quiz in which they are to find the estimated cost of producing planter boxes whose dimensions are given as polynomials. They will need to use their skills of combining polynomials and solving polynomial expressions to find the actual dimensions. Once they do so, they will find the cost of materials to produce said boxes and analyze best options. *Additional support and analysis for concurrent construction/trades coursework and projects.*

Triangles and Geometric Proof

Students will prove triangles similar and congruent, with emphasis on applications to construction trades, such as scale factor from blueprints to actual design. Students will analyze the applications of criteria for quadrilaterals, emphasizing the critical thinking aspects of proofs. Students will use CPCTC to find missing values, especially in right triangles to lead into the next unit.

Assignments

“School-print”: Students will examine scale factor in similar polygons, and apply it to scale drawings. Students will construct blueprints of the gym, library, or other available structure, collaborating to measure the requisite parts (floorplan, bleachers, shelves, etc.) and then discussing an appropriate scale factor for the drawings. If available for use, CAD or other software will be used to finish the blueprint drawings. *Additional support and analysis for concurrent construction/trades coursework and projects.*

Right Triangle Trigonometry

Students will examine the basic trigonometry ratios, especially in special right triangles. Students will use the 1st quadrant of the unit circle and apply to basic trigonometric identities. Special

emphasis in this unit to be placed on angle of depression and elevation, and how they relate to constructions that need to be to code, such as ramps.

Assignments

“Real World Trig”: Students will create and solve their own trig problem. They will take pictures, using themselves for scale, including two angles of elevation and two angles of depression. They will create a poster, drawing out the situations depicted and showing the work in solving the problems. Scores will be based on creativity, accuracy, and presentation of their work. *Additional support and analysis for concurrent construction/trades coursework and projects.*

Circles and Volume

Students will analyze circles and specific elements of circles such as inscribed angles, radii, and chords. Specific emphasis will be placed on accuracy and precision of measurements or solutions and how it applies to real life situations. Students will apply information about circles to volume of basic three dimensional figures. Students will also apply scale factor and analyze the resulting changes. All will be applied to construction trades, and applied especially to concurrent courses and projects.

Assignments

“Grocery Margin of Error”: Students will examine the volume of a variety of grocery products, mainly liquids, and compare mathematical volume to actual volume. They will also look at the concept of acceptable range in measuring multiple volumes of the same product and calculating the variation that they find. Scores will be based on accuracy of measurement and calculations, as well as explanations of possible reasons for variation. *Additional support and analysis for concurrent construction/trades coursework and projects.*

Textbooks

Title	Authors	Publisher	Edition	Website	Is Primary
Integrated Math 2	Houghton Mifflin Harcourt	Houghton Mifflin Harcourt	2015	my.hrw.org	Yes

Integrated Math 3 STEM

Grades: 9,10,11,12

Length: Full Year

Environment: Classroom-based

Honors: None

Subject: Mathematics (C)

Discipline: Algebra II / Trigonometry

Institution: Prospect High School

Course Overview

For the high school Mathematics 3 STEM course, instructional time will focus on seven critical areas: (1) develop the concepts of circles and conics; (2) extend knowledge of trigonometric ratios to understand key characteristics of trigonometric functions, including graphing trigonometric functions and comparing to other functions, as well as analytic trigonometry; (3) learn about and compare key characteristics of exponential functions with those of linear and quadratic functions; (4) learn about arithmetic with rational and polynomial expressions as well as a deep look at the complex number system; (5) extend work with statistics, including random processes; (6) interpreting, building and modeling functions, including exploring patterns and making connections between a variety of different functions; (7) learn the algebraic and geometric applications of vectors. This course differs from Mathematics 3 in that it includes additional mathematical topics found in the plus (+) standards in the Common Core State Standards for Mathematics.

Unit 1: Circles and Conics

This unit begins with a look at the question “what if a polygon has an infinite number of sides?” as a way to develop the area and circumference of a circle. Students will also learn about the relationships between angles and segments within a circle as well as discuss similarity in circles. Then, students apply those formulas and relationships to develop methods for finding areas of sectors and arc lengths in the context of real life situations. In the second half of the unit, students will revisit cones and cross sections as an introduction to conic sections. Students then investigate the derivation of the equation of a circle, parabola, ellipses and hyperbolas.

A sample activity includes the formative assessment lesson Calculating Arcs and Areas of Sectors of Circles. Students work individually on a formative assessment task in which students use arc length, area and radii to compare circles. Then, small groups work on a collaborative task matching cards according to arc length, area, or perimeter of the sectors. Students summarize the general results of changing the radius and/or sector angle through class discussions. Finally,

students review their solution to the initial task and use what they have learned to revise their solutions

Unit 2: Trigonometric Functions

This unit begins with an experiment that will generate a new curve for the students called a cyclic function. Students will explore the relationship between right-triangle trigonometry and this new curve. Students will be introduced to a new representation for the cyclic function, the unit circle. Students will also explore radians as an alternative to degrees to describe angles. In the second half of the unit, students will transform cyclic functions and find a general equation for them. Students will write equations for the curves as well as descriptions of the characteristics of trigonometric functions. Lastly, students will investigate the solutions to trigonometric equations as well as learn about secant, cosecant, and cotangent and their corresponding functions. Students will be able to solve a variety of trigonometric equations and make statements about graphs, based on the unit circle.

A sample activity includes a formative assessment lesson called Representing Trigonometric Functions. The students start by attempting a formative assessment task individually about modeling a periodic function in the context of a Ferris wheel. During the lesson, students engage in collaborative groups to do a card sort where they will match trigonometric graphs, equations, and descriptions, as well as justify and explain their decisions. In a whole-class discussion, students explain and extend their solutions and methods, and then work alone of a task similar to the initial task.

Unit 3: Vectors

This unit focuses on the algebraic and geometric analysis of vectors. Students will be able to define vectors in terms of magnitude and directions, as well as combine vectors through addition and subtraction and transform vectors through scalar multiplication. Students will use vectors to solve problems involving velocity and other quantities that can be represented by vectors.

A sample activity includes an opening task to vectors called Earthquakes. Students read an article about earthquakes and then discuss their knowledge of earthquakes, emphasizing the shifting ground that occurs and relating it to mathematical shifts. Students then work collaboratively to analyze a diagram of shifts (vectors) to explain how that diagram can represent earthquake shifts. This activity then leads into the notion of a vector, where notations are given to students to describe vectors. Students then reflect on which points on the diagram where shifting during the earthquake and what objects can be translated by a vector.

Unit 4: Statistics (Random Processes)

This unit focuses on basic techniques of performing opinion surveys along with their limitations and pitfalls. Students learn why randomness is a cornerstone of statistical studies. Students will

also create a histogram with percentages (a relative frequency histogram) and interpret the meaning of the information presented in this model. Students will also learn a new way to describe the shape of distribution through standard deviation, and use it model distributions with the use of technology. In the second half of this unit, students will use computer simulations to model complex probabilities and simulate sample-to-sample variability. This will help students place a margin of error on predictions about certain characteristics of populations and will guide statistical decisions.

A sample activity includes a task called Visors for Runners. The task is based on a company that makes visors as gifts for women running in charity marathons. The company needs a method for deciding the number and size of visors to print and have a table of random data. Students will calculate standard deviation, make a histogram of distributions using technology, and answer questions about conclusions from the data.

Unit 5: Exponential Functions

This unit provides an opportunity for students to learn more about the family of exponential functions through graphing and algebra. Students will build more advanced algebra skills, such as writing the equation of an exponential function that passes exactly through any pair of given points. In addition, students will apply exponential functions to model situations and fit data. In the second half of the unit, students will investigate new functions that “undo” each other, leading to inverse relationships. Students will also investigate the more formal relationships between functions and their inverses, including compositions of functions. In addition, students connect the algebraic properties of inverse functions to their graphical representations and relationships to parent graphs. Lastly, students will find inverses for exponential functions (logarithmic functions) and will investigate this family of functions through transformations.

A sample activity includes a task called A Saturating Exponential. The students are given a graph (time v temperature) of a can of cold soda left in a warm room on a summer day. Students are also given a function that models the graph, but all key values are variables. Students will use the graph to estimate the values of the key components of the equation, and use those values to find an approximate room temperature and initial soda temperature.

Unit 6: Functions Capstone

This is an overarching unit that reviews and extends previous learnings of functions, including polynomial functions. The unit will help students (1) develop their verbal articulation of relationships between variables, including interpreting functions in terms of the contexts which they arise; (2) translate between multiple functions and sketch graphs of relationships between variables; (3) reflect on domains of functions and in particular whether they should be discrete or continuous; (4) model situations and data sets with a variety of functions; (5) build knowledge of polynomial functions and its graphical behaviors; (6) learn and apply summation notation and

geometric series.

A sample activity includes a formative assessment lesson called Representing Functions of Everyday Situations. Before the lesson, students work alone on a formative assessment task designed to reveal their current understanding. In the lesson, students work in small groups on a collaborative task, matching situations, sketch graphs, and algebraic functions. They refine the graphs and interpret the formulas to answer questions. Students then discuss as a whole-class what has been learned and the strategies used. In a follow-up lesson, students review their responses to the original task and the questions posed. Finally, they use what they have learned to complete

Unit 7: Rational and Polynomial Expressions

The focus of this unit is rewriting expressions in order to have more useful equivalent forms. Students will deepen their understanding of what it means for two expressions or equations to be equivalent. Another focus of this unit is learning how to combine algebraic fractions (rational expressions) and expressions with exponents. By using special properties and the meaning of exponents, students will rewrite long expressions into simpler forms, leading into multiplying, dividing, adding, and subtracting rational expressions. In the second half of the unit, students further explore polynomial functions. . Students investigate the equation/graph connection for polynomials, search for factors (leading to finding x-intercepts), and learn how to use division to find additional factors. During investigations of polynomial functions, students explore intersections that they may or may not see on a graph, further student's study of imaginary and complex numbers. Lastly, students will apply their knowledge of polynomials to model situations and graph functions.

A sample activity includes a formative assessment lesson called Representing Polynomials Graphically. Before the lesson, students attempt a formative assessment task individually to reveal their current understanding. During the lesson, students work collaboratively in pairs to match functions to their graphs and create new examples. Throughout their work students justify and explain their decisions to peers. After a whole-class discussion, students improve their solutions to the initial task and complete a second, similar task.

Textbooks

Title	Authors	Publisher	Edition	Website	Is Primary
Algebra 2	Larson, Boswell, Kanold, Stiff	McDougal Littell	2007	http://www.classzone.com	Yes
Precalculus with Trigonometry	Paul A Foerster	Key Curriculum Press	2003	None	Yes

Websites

Title	Authors	Organization	Website
Illustrative Mathematics	--	Illustrative Mathematics	http://www.illustrativemathematics.org
Mathematics Assessment Project	--	Mathematics Assessment Project	http://map.mathshell.org
Inside Mathematics	--	Silicon Valley Mathematics Initiative	http://www.insidemathematics.org/problems-of-the-month

Title	Authors	Organization	Website
Engage NY	--	New York State Education Department	https://www.engageny.org/

College Prep Pre-Calculus

Grades: 10,11,12

Length: Full Year

Environment: Classroom-based

Honors: None

Subject: Mathematics (C)

Discipline: Advanced Mathematics

Institution: Liberty Charter High School

Course Overview

This course is structured around investigations and problem solving. Students will explore concepts and develop mathematical relationships through observation, application, and both formal and informal proof. Lessons are designed to facilitate teamwork and encourage students to pose conjectures, justify solutions and defend their thinking. In addition to covering all of the key concepts found in traditional trigonometry, pre-calculus, or math analysis courses, it emphasizes several big ideas that form a foundation for calculus and other college mathematics curricula.

Chapter 1: Packing Your Suitcase, Tools for Your Journey

This chapter provides students with background pieces that will be used later in the course. Most of the ideas are extensions of concepts students have already learned in Integrated II and Integrated III.

In this chapter, students will:

- Learn how to transform functions.
- Learn how to enter and use programs on your calculator.
- Learn how to solve and find the area of non-right triangles.
- Learn how to measure angles in radians instead of degrees.

Tasks:

- Students will learn how to use their calculators to Shift non-parent graphs. Students will be shown how to find the correct Y-VARS menus and other functions on their calculators. Students will look at shifting graphs, reflections, and stretching. Using the resource pages, students perform transformations on functions that are not explicitly given. This activity will

be conducted in teams so students can compare results as they work. The first page deals with one-step transformations and the second with two-step transformations. Students will explain how order of operations is relevant to transformations

- Students will program the Quadratic Formula. Students see a reason for programming since they do not like doing the Quadratic Formula by hand. This program will not work for complex roots. There is an optional problem where students can modify their program so that it will state when the quadratic has complex roots. Once students have finished the Quadratic Formula program, they will work through another program that will draw Sierpinski's Triangle. The reason for this program is for students to see some conditional statements (using "if then" statements) and to see many of the other menus and operations that students will use in future programming.

Chapter 2: Finding Area Under a Curve

The main focus of Chapter 2 is finding the area under a curve. This concept is one of the major themes of calculus. The goal is to understand what the area under a curve represents and how to approximate it using rectangles and trapezoids. In addition, students will see how to graph and use functions that are constructed from more than one parent graph.

In this chapter, students will:

- Learn how functions can be constructed using more than one equation.
- Find sums of sequences.
- Find area under a curve using rectangles and trapezoids.
- Understand what area under a curve represents in real world applications.

Task:

- Students will work with piecewise functions by graphing, finding equations, and applying transformations. They will program their calculators for find the sum of an expression. This program will create the foundation of an area program that will be introduced later in the chapter.
- Students will apply the LRAM and RRAM methods to real world applications problems. As well as finding area of definite integrals using geometric shapes.

Chapter 3: Exponentials and Logarithms

Section one of this chapter focuses on transformations of graphs. Students have already learned how to stretch a graph vertically. In this section students will learn how to stretch it horizontally. Students will also see that sometimes two different transformations give the same result. More concretely, students will apply what they already know about exponential functions to real-world situations. Section two reviews the definition of an inverse function, shows students how to find its graph, and reminds them that the log (logarithm) function is the inverse exponential. Section three will review, use, and prove the three log laws, each of which corresponds to a law of exponents. Students will practice solving equations and simplifying expressions that involve logs and

exponents.

In this chapter students will:

- Learn how to shift and stretch graphs, both horizontally and vertically.
- Explore some equivalent transformations.
- Apply exponential functions to model real-world situations.
- Define a log function and explore its graph properties.

Tasks:

- Students will algebraically prove that every horizontal shift of an exponential function is equivalent to a vertical stretch.
- Students extend the previously learned method of finding the inverse by applying the "switch and solve" method to problems involving factoring, and focus on the need to restrict the range of the inverse in order to make it a function. They will explore reversing a table of powers of 5 to define logs base 5, then extend the definition to positive bases no equal to 1.

Chapter 4: Circular Functions

In this chapter students will explore the sine and cosine functions, and see how their graphs are useful in many applications. Students will develop trig functions through the use of the unit circle.

In this chapter, students will:

- Find the values of coordinates of key points on the unit circle and see how they can be used to find the values of sine and cosine for any angle.
- Generate parent graphs for sine and cosine and use them to sketch various transformations.
- Define other trigonometric functions in terms of sine and cosine.
- Model situations using periodic functions.

Tasks:

- Students will consider the parent graphs of sine and cosine and complete the following questions and tasks.
 1. How do the amplitude, period, and shape of the graphs compare?
 2. What can you do to the graph of $\cos x$ to get the graph of $\sin x$?
 3. Write $y=\sin x$ as a transformed cosine graph.
 4. Write $y=\cos x$ as a transformed sine graph.
 5. Use your observation in parts (c) and (d) to write identities relating sine and cosine.
- According to the biorhythms theory, there are three different cycles (physical, emotional, and intellectual) that can be modeled by sinusoidal equations. Assume all the cycles start off at zero and follow a positive trend. The physical cycle has a period of 23 days, the emotional cycle has a period of 28 days, and the intellectual cycle has a period of 33 days. Using this information and assuming that the amplitude of each function is 100, find equations that will model the physical, emotional, and intellectual cycles. Students will answer the following

questions.

1. What will x represent in your equation?
2. What will y represent?
3. What will the domain of your functions be?
4. What will the range be?

Chapter 5: Introduction to limits

In this chapter students will begin by looking at rational functions, which have both horizontal and vertical asymptotes. We will then look at limits as x approaches a particular value.

In this chapter, students will:

- Investigate rational functions and learn how to rewrite such functions in more useful forms.
- Solve problems involving direct and inverse variation.
- Explore how functions behave as x approaches a particular value or goes to infinity.
- Learn about one-sided limits and limits of piecewise functions.
- Define continuity.

Tasks:

- Students will sketch the graph of a function $f(x)$. They will consider the reciprocal graph of $f(x)$, noted as $g(x)$. Using only their sketches and without using your calculator, they will predict what the graph of $g(x)$ will look like. Then answer the following questions about $g(x)$.

1. This function has two vertical asymptotes. Write their equations and add them to your sketch.
2. Will the function have a horizontal asymptote? If so, write its equation.
3. For what values of x will be positive?
4. For what values of x will be negative?
5. Graph using your calculator and check your answers.

- Students will be given the three conditions in order for a function to be continuous. They will then consider the three conditions of continuity at a point sketch the following functions.

1. A function that is discontinuous at $x=a$, satisfying condition one, but not condition two.
2. A function that is discontinuous at $x=a$, satisfying condition two, but not condition one.
3. A function that is discontinuous at $x=a$, satisfying both conditions one and two, but not condition three.

Chapter 6: Extending Periodic Functions

The main focus of chapter six is working with trig equations. Students will be solving trig equations to find when models achieve a desired value. Students will see how the Law of Sines can be used to solve a triangle with more than one solution. You will also develop other trigonometric tools for simplifying expressions using formulas involving sums of angles.

In this chapter, students will:

- Solve trigonometric equations.
- Solve the SSA case of a triangle.
- Model and solve more complex periodic applications.
- Simplify expressions involving more than one angle.

Tasks:

- Students will read the following information. Jenny has a spring with a weight attached that she believes she can model using a sine or cosine function. She started a stopwatch and recorded the first high and low points of the weight. The first high point of 46 cm above the floor was reached when the stopwatch read 0.4 sec. The next low point of 26 cm above the floor occurred when the stopwatch read 2.2 sec. Students will now answer the following questions.
 1. Assume the graph is stretched and shifted sinusoidal wave as shown. Copy the sketch and label the coordinates of the two known points on the graph.
 2. Use the 5-point method to find the period, amplitude, horizontal shift, and vertical shift needed to transform the graph of into this one.
 3. Write an equation expressing the height above the floor (cm) in terms of the time t on your stopwatch.

Chapter 7: Algebra for College Mathematics

This chapter will discuss accepted terminology for describing graphs of functions, both from formal and intuitive perspectives. Students will learn several problem-solving techniques including techniques for: simplifying expressions, purposeful substitution, polynomial division, and completing the square. Students will also be introduced to Pascal's Triangle and see how it can be used as a problem solving tool. Students will see finite arithmetic and geometric series and apply them to real world problems. Lastly students will explore binomial probability.

In this chapter, students will learn how to:

- Describe functions.
- Set up, simplify, and solve complex problems.
- Expand binomials with Pascal's Triangle.
- Sum finite arithmetic and geometric series.

Tasks:

- In their own words, students will describe what it means for a function to be decreasing. Express mathematically what it means for a function to be decreasing. And write a formal definition of a decreasing function on the interval $[a,b]$.
- Students will sketch the graph of a function that is increasing on the interval from negative infinity to negative two and from two to positive infinity, decreasing from negative two to positive two, concave down from negative infinity to zero and concave up from zero to positive infinity.

Chapter 8: More on Limits

Students will learn how to use algebraic techniques to find limits of a variety of functions. Students will see how Archimedes used this idea to find a close approximation for π . They will also investigate limits of sequences and discover a very important number, used extensively in mathematics of some interesting sequences that have surprising results.

In this chapter, students will:

- Use dominant terms to find limits at infinity.
- Find limits of rational functions.
- Apply exponential functions to real world problems.
- Apply the squeeze theorem to find a close approximation of π .
- Find sums of infinite geometric series.
- Investigate the harmonic series and the Fibonacci sequence.

Tasks:

- Students will use dominant terms and algebraic techniques to evaluate limits at infinity and at specific points. Students will order a list of functions from least dominant to greatest as x approaches infinity.
- Students will determine whether a zero appearing in the denominator creates an asymptote or hole at the particular x value use mathematical methods.

Chapter 9: Rates of Change

Students investigate rates of change as they occur in the real world. Then you will use what you have learned about limits to define “instantaneous rates of change. This leads to a crucial relationship between a position function and its related velocity function: a relationship that is fundamental to the study of calculus.

In this chapter, students will:

- Find average rates of change for many different types of functions.
- Look at average rates of change, then take limits of these average rates of change to find instantaneous rates of change.
- Find ways of relating distance and velocity graphs and distance and velocity functions.
- Define the derivative and apply the definition to find the instantaneous rate of change of a function.

Tasks:

- Students will conduct an experiment by finding the heart rate using their pulse. They will count how many beats occur in a 15 second time frame and then answer the following questions.
 Convert your results to beats per minute.
 What assumption did you make in order to calculate your heart rate?
 What activities would make your heart rate change?
- Students will sketch a velocity and position graph for each of the following scenarios:

Walk for 5 seconds. Stop for 5 seconds Repeat this pattern for a total of 30 seconds.
 Walk for 10 seconds. Stop for 15 seconds. Run for 5 seconds.
 Stop for 10 seconds. Walk quickly for 10 seconds. Walk slowly for 10 seconds.
 Walk slowly for 30 seconds.

Chapter 10: Vectors and Parametric Equations

Students learn how to use vectors to describe motion and use vector operations to solve real world problems. Explore how a graph can be described by letting x and y be functions dependent on the variable t , called parametric equations. Students will use the equations to describe and solve problems involving motion and velocity.

In this chapter, students will:

- Define vectors in standard and component form.
- Use vectors to solve common physics problems.
- Find the angle between vectors using the dot product.
- Define the motion of a point using two dependent variables.
- Use parametric equations to solve real world problems.

Tasks:

- A plane that is flying at 675 mph on a course with bearing 75 degrees is helped along by a fierce 140 mph wind blowing towards the northeast at a bearing of 32 degrees. Students will answer the following questions.

What is the resultant speed of the plane?

What is the heading for its resultant direction?

Why is this problem not as hard as it might have looked at first?

If you fly for 2 hours, what would your heading be, and how far would you be from your starting point?

- Kevin is skateboarding when he hits a ramp to make a jump. The ramp has an angle of 30 degrees and Kevin hits the ramp at a rate of 36 feet per second. Find the horizontal and vertical motion without the effects of gravity.

Suppose Kevin was skateboarding in space and is not affected by gravity, how far will Kevin go up after one second? How far will he have risen after t seconds?

How far will Kevin travel in the horizontal direction after t seconds? (This will give you the horizontal component of the parametric equation.)

Since Kevin cannot skateboard in space, we will now add the influence of gravity.

Gravity will cause an object to fall at a rate of $-16t^2$ feet per second.

Adding the influence of gravity, how far will Kevin go up after one second?

Suppose the ramp has a height of 3 feet, what is the vertical component of Kevin's motion?

How long will Kevin remain in the air?

How far will Kevin travel horizontally?

Use your calculator to graph the parametric equation and confirm your answers. Be sure to adjust your window so that the curve will be displayed. By pressing the 'trace' and entering the time from part (e), you can verify your results.

Chapter 11: Polar Equations and Complex Numbers

Students will learn how to plot points and graph functions with polar coordinates which use a distance and an angle. Students will look at complex numbers in a form that allows more complex calculations.

In this chapter, students will:

- Learn to plot points using polar coordinates.
- Create interesting graphs using polar equations.
- Work with complex numbers.
- Graph complex numbers.
- Use complex numbers to find roots of functions.
- Find powers and roots of complex numbers.

Tasks:

- Students, using polar graph paper students will convert cartesian coordinates to polar coordinates and then graph them on the polar graph paper.
- Given a polynomial function $f(x)$ students will explain why a given x value is a root of the function. Demonstrate how to factor roots out of polynomial functions. And how to utilize the quadratic function to find roots of degree two polynomials.

Chapter 12: Linear Transformations

Students complete matrix operations and solve systems using matrices. Students see how matrices can be used to organize and simplify data. Students use linear transformations involving matrices. Investigate compositions of matrices and find when transformations maintain geometric forms.

In this chapter, students will:

- Solve systems of equations using matrices on a calculator.
- Examine theorems relating scalars and matrices.
- Define linear transformations and relate them to matrices.
- Compose two linear transformations.

Tasks:

- The Knoxville Nobles, the newest addition to the summer professional basketball league, are offering a number of special packages to attract new fans.
 - Package A includes 4 tickets, a T-shirt, and \$10 in snack credits.
 - Package B includes 6 tickets, a T-shirt, and \$15 in snack credits.
 - Package C includes 12 tickets, 2 T-shirts, \$20 in snack credits, and a team poster.
- In the first hour of the promotion, the Nobles sold 10 Package A's, 5 Package B's, and 8 Package C's. Students will answer the following questions.
 - How many tickets were sold in all of the packages?
 - How many T-shirts were sold?

Set up the information about the packages in a 3x4 matrix M where each row represents one type of package and each column represents something to receive. Notice that the row vector $s = \langle 10, 5, 8 \rangle$ can represent the first hour's sales. What does represent?

In the second hour, the Nobles sold 5 more Package A's, 7 more Package B's, and 10 more Package C's. What row vector r represents the total sales during the second hour?

Chapter 13: Conic Sections

Students work with conic sections and learn how to read and work with a college level mathematics text. Students use formal definitions and proofs to generate circles, ellipses, hyperbolas, and parabolas. Work with the general second-degree equation to determine the type of graphical form of a conic. Find and use the eccentricity of a conic.

In this chapter, students will:

- Define and investigate properties of conic sections.
- Solve problems involving conic sections.
- Define and use eccentricity.
- Learn how to read and work with a college type text.

Tasks:

- Given a polynomial expression of a circle students will find the center and radius of the circle by using completing the square.
- Given an unidentified polynomial expression students will use completing the square to determine if the expression is a hyperbola or an ellipse. They will then identify the major and minor axis', center, and calculate the foci.

Textbooks

Title	Authors	Publisher	Edition	Website	Is Primary
Pre-Calculus with Trigonometry	Salle, Kysh, Kasimatis, Hoey	CPM	4th	--	Yes

Science

Biological Connections to Energy & Environment

Grades: 9,10,,

Length: Full Year

Environment: Classroom-based

Honors: None

Subject: Science (D)

Discipline: Biology / Life Sciences

Institution: Oakland Unified School District

Course Overview

This course is a hands-on, biological exploration of cellular biology and the variety of chemical reactions that occur in specialized areas of organisms' cells. Specific attention is paid to energy acquisition and use in living organisms, complex ecosystems and the changing environment. This includes a fundamental look at cell type, function and structure. Students compare energy sources for plants and animal cells with renewable and non-renewable energy use by humans. Specific aspects to CTE include an understanding of energy types, energy calculations, and how energy is derived from a variety of natural and man-made sources. Students explore how environmental change effects cell function and structure based the presence of pollutants in the environment. Students investigate protein synthesis and function as well as the composition and use of DNA and RNA. Students build on their knowledge of cellular functions to investigate environmental factors that can alter cell reproduction (mitosis & meiosis), genetic change (genotypes and phenotypes) and evolution. Students calculate energy production of macromolecules as a means to understanding various forms of energy. Students then relate this investigation of "how things work" to the internal environment of the human body and its ability to maintain homeostasis despite change in the outside environment. They do this by understanding the types and functions of organ systems such as the acquisition of oxygen and nutrients and the removal of toxic waste products. They also investigate how neurons transmit information and how the nervous system mediates communication between the different body parts and the body's interactions with the environment. Finally, students investigate ecology and biomass balance based on competing effects of human activities, population fluctuations, nutrient cycling, food chains and food webs. Students investigate the viability of biomass and biofuel as an energy source as well as other major sources of power. Students continue to use the CTE content to understand the impact of environmental laws and regulation that affect the energy industry and its role in maintaining sustainability of our natural world. Throughout the course, students identify and describe careers, certifications and post-secondary education and training requirements to pursue a variety of environmental and energy-related fields.

1: Introduction: Biological Systems and Environmental Change

Unit I Overview: Introduction: Biological Systems and Environmental Change

Essential Question: How do biological systems respond to environmental change?

This unit is the introduction of the course and describes the interactions cells and their environment. It creates the foundation for threads carried throughout the course, including laboratory safety, scientific method and design, investigation and experimentation, group work, and presentation. Research, use of technology and instrumentation operation is discussed as a means to answer thoughtful questions about the cause and effect relationship between cell functions and environmental change.

Biology Content covered:

- The cell as the basic unit of life and types of cells
- Cell membrane regulation and interaction with surroundings
- The components of ecosystems, including average temperature and precipitation, abiotic and biotic, food chains and webs, trophic relationships
- Human impacts of a changing ecosystem
- The techniques required to perform a controlled scientific experiment that provides an analysis of the results and meaningful conclusions. (Investigation and Experiment) ? The sources of experimental error. (Investigation and Experimentation)
- Environmental Toxins and the Reaction of the Ecosystem

ASSIGNMENT: Environmental Toxins and the Reaction of the Ecosystem

Students create a multimedia project either thorough a powerpoint presentation (no more than 10 slides) or video clip (no more than 5 minutes) accessing the KQED Quest site and the other appropriate webhosting formats. Students select a topic related to the impact on an environmental toxin (specifically relating situations involving non-renewable pollutants for example the BP oil spill Summer of 2010) and the reaction of the ecosystem to the situation. Students will make a multimedia presentation to the class using this information including a description of the situation, reaction of the community, government agencies and biological impact.

2: Energy Flow in the Environment

Unit II: Energy Flow in the Environment

Essential Question: How is the flow of energy important to the interrelationships that exist between living and nonliving components of an ecosystem?

This unit encompasses the fundamental concepts of ecology. The purpose of this unit is to build on the key lessons introduced in Unit 1? the scientific process, and the interrelationships connecting many fields of science, and how they relate to our global environment. Beginning with ecosystems, students learn the criteria that define the world's biomes and examine the diversity of organisms that inhabit them. Students gain an understanding of the connections between living and nonliving components, the interdependence of all species, and the value of a healthy,

functioning planet. Lastly, students investigate multiple case studies and areas of concern which have resulted from human activity, and the threats that they pose on the sustainability of our biosphere. Biology Content covered:

- The value of biodiversity as it relates to a sustainable biosphere
- The effects of human activity on the environment
- Specifically, the demands that our civilization places on our natural resources and how those demands affect the health of ecosystems

ASSIGNMENT: Changes in Biodiversity

Students are arranged in groups of 3/4. Each group is given a before/after photo of a habitat. (The before photo shows the native land and the after photo shows the influence of human activities on that habitat.) Students prepare/deliver a 35 minute presentation (every group member must present) that discusses the type of habitat lost and/or changed and how that has impacted/might have impacted the biodiversity of that area. As an extension to this assignment: students can predict what must be done to restore the impacted area.

3: Energy Mechanisms

Unit III: Basic Energy Mechanisms

Essential Question: How does energy flow and efficiency in an ecosystem compare with energy mechanics?

This unit provides students with an inquiry-based approach to applying their knowledge of energy found in ecosystems. Students begin with an understanding of cellular functions such as protein synthesis, DNA and RNA. Students build on their knowledge of cellular functions to investigate environmental factors that can alter cell reproduction (mitosis & meiosis), genetic change (genotypes and phenotypes) and evolution. Students investigate the language of energy and identify the various forms of energy such as mechanical, chemical, electric and radiant. Students calculate energy production of macromolecules as a means to understanding various forms of energy. Students also understand the basic principles of electricity and electrical power required of safe and economical energy conversion processes and energy transmission systems.

Biology Content covered:

- Protein synthesis, DNA, RNA
- Cell reproduction (mitosis & meiosis),
- Genetic change (genotypes and phenotypes)
- Evolution
- Energy in macromolecules (proteins, lipids and carbohydrates)

CTE Content covered:

- The various forms of energy
- Methods of energy procurement, transmission, distribution and storage
- Basic principles of electricity and electrical power

ASSIGNMENT: Basic Energy Mechanisms Homeostasis:

Students go outside with jump ropes and stop watches. Students take pulse, breaths per minute and perspiration levels before and after jumping rope for 2 minutes. They repeat this 3 times with extended time each time. Students prepare a 12 page lab report that explains what they did and why and how their body maintained homeostasis. In their lab reports, students evaluate connection of biological systems to energy balance (in=out). Homeostasis is taught using the regular text as is an understanding of the part energy plays in maintaining that balance. As an extension to this assignment, students can pick a picture of an extreme environment and discuss what kind of adaptations or adjustments their body would have to make to maintain homeostasis. Units and Conversions (volts, watts, BTUs) In this assignment, students use appliance output data and conversion tables to understand how energy units relate to one another.

This assignment focuses on math and dimensional analysis to help students understand how to calculate and convert energy units used in the professional workplace. Once students have a working knowledge of energy units they play the role of energy auditors. Using a KillAWatt meter, they collect the volt output and kilowatt hour measurements of at least 10 electronic/plugin devices at home. With this data they also determine the average amount of time the device is on and create a data table.

4: Renewable Energy

Unit IV: Renewable Energy

Essential Question: What forms of renewable energy are available, how do they affect our environment, and are they sufficient to fulfill our energy demands?

This unit encompasses the breadth of technology and applications of renewable energy. The unit begins by identifying nonrenewable energy currently used to power generators that convert mechanical to electrical energy. Renewable energy is explored through an inquiry approach where students examine how the various forms of renewable energy can accomplish the same goals of nonrenewable resources. The unit specifically includes a critical look at the use of current and emerging technologies including, but not limited to, biofuels. With each technology, students will investigate their productivity, manufacturing cost, and environmental impact. Lastly, students investigate the feasibility of obtaining our energy from the sun, the ultimate source of the vast majority of all life and energy on our planet.

Biology Content covered:

- Photosynthesis and energy production in plants and algae
- The Energy of Biomass in an Ecosystem

CTE Content covered

- Solar energy, wind energy, and emerging technologies in global energy production.
- The ecological costs and benefits associated with various types of energy resources.
- The technical careers associated with energy generation, transmission, distribution, and analysis.

ASSIGNMENT: Earth's Heat

Students investigate the creation and distribution of this resource, introducing the concept of a geothermal reservoir. It begins with an overview of Earth's structure, and the heat within. Students identify and describe heat as an important component of the structure and behavior of planet Earth, create a scaled model of the planet, and map its heat both by depth and on Earth's surface.

Students will construct an accurately scaled visual model of the earth, which visualizes and summarizes basic behavior of Earth's heat, including convection currents, geothermal reservoirs, and surface patterns and use metric units in a scientific illustration and in conversion problems

5: Physiology and Environmental Change

Unit V Overview: Physiology and Environmental Change

Essential Questions: How does the body maintain stability despite changes in the environment?

This unit explores the human body and its functions. Students relate how cells take in nutrients and remove wastes with how ecosystems maintain stability with biotic and abiotic components of the environment. Students explore nervous system function and the role neurons play in transmitting electrochemical impulses. They relate the function of neurons to the function of electrical circuits.

Biology Content covered:

- Physiology of the human body
- Excretory system as a means of removing environmental toxins
- The nervous system of the human body and its relationship to electrical circuits

ASSIGNMENT: Genetically Modified Foods Report

Students relate their understanding of genetics and edible plant components to research on line and/or magazine articles that discuss the use of technology to modify food crops. Articles must focus on genetic engineering techniques. Students prepare a 23 page report detailing the purpose of creating the genetically modified foods, the benefits and dangers of the technology as well as the alternative(s) if the technology was not developed.

6: Policy and Ethics of Renewable Energy

Unit VI: Policy and Ethics of Renewable Energy

Essential Question: How does society attain sustainability through the use of green technology, lifestyles and the creation of green jobs?

This unit offers students an opportunity to examine environmental policy and environmental ethics with respect to energy. Students study professional, ethical, and legal behavior that is consistent with applicable laws, regulations and organizational norms. The students have the

opportunity to learn about agencies who have shown initiative in protecting the environment. Through the process of learning about environmental ethics, students have the opportunity to learn about human behaviors to use, protect, and improve the natural world in which we live. Students explore the role of personal integrity and ethical behavior in the workplace, including environmental awareness and responsibilities.

Biology Content covered:

- The environmental policies that have been created in the state of California with regards to renewable energy sources
- Research skills and report writing, with a focus on renewable energy
- Environmental values and the ongoing debate around economic, environmental and social values
- The growth in global population and the continuous demand for resources in developed and developing countries
- Global attitudes and action plans toward the reduction of global greenhouse gases
- The impact of global conflict and the distribution of resources
- Energy and resources use and the path to sustainable development, locally and globally

ASSIGNMENT: Decision making based on values assignment

Students are assigned one renewable resource to evaluate. In a power point presentation (no more than 10 slides,) students address the following features of that energy resource:

- Aesthetic What is beautiful or pleasing
- Economic Gain or loss of money or jobs
- Environmental Protection of natural resources
- Educational Accumulation and use of knowledge
- Ethical/Moral What is right or wrong
- Health Maintenance of human health and prevention of sickness or disability
- Recreational Providing for human leisure activities
- Scientific Knowledge gained by scientific research
- Social/Cultural Maintaining human communities and respecting their values and traditions

Textbooks

Title	Authors	Publisher	Edition	Website	Is Primary
The Environment and You	Norm Christensen	Pearson	2015	https://www.pearsonhighered.com/product/Christensen-Environment-and-You-Plus-Mastering-Environmental-Science-with-e-Text-Access-Card-Package/9780805340051.html	Yes

CASA Engineering: Solving Local and Global Building Challenges

Healdsburg High School (051160)

asic Course Information

Title:	CASA Engineering: Solving Local and Global Building Challenges
Transcript abbreviations:	CASA Engineering / 6645 , CASA Engin(P)a / 6646 , CASA Engin(P)b / 6647
Length of course:	Full Year
Subject area:	Science (D) / Interdisciplinary Sciences
UC honors designation?	No
Prerequisites:	Algebra 1 / Integrated Math 1 (Required) CASA Construction 1 (Required) CASA Construction 2 (Recommended)
Co-requisites:	None
Integrated (Academics / CTE)?	Yes
Grade levels:	11th, 12th
Course learning environment:	Classroom Based

ourse Description

Course overview:

CASA Engineering is a capstone course to Healdsburg High School's three year Construction and Sustainability Academy. Through this course students will explore a variety of Chemistry concepts in order to understand how such knowledge can be used to engineer tools, products, or systems for using energy to meet human needs. Some examples include water purification, energy storage options, and energy needs for communities.

Students will engage in interdisciplinary learning of Science, Technology, Engineering, Art, and Math through a hands-on Project Based Approach. Students will receive advanced level exploratory instruction and guidance on topics including proper use of machinery tools, foundation in applied physics, basic concepts behind drive train systems, pneumatics, and actuators, designing and creating models using a vinyl cutter, 3D printers and CNC machine, analyzing design tools and simulations on created Computer-Aided Design (CAD), implementation of Introduction and Advanced STEAM concepts through real world applications of classroom concepts. Acquiring of knowledge will be demonstrated through a series of projects starting with research and initial design and culminating with the completion of a build project that is focused on solving real-world problems.

Course content:

Unit 1 - Water and Its Importance

Unit 1 is the longest unit of the course as there are several aspects that will be recurring themes throughout the course.

Students will learn what makes water such a unique and vital compound. Students will begin by researching recent water crisis that have arisen in the United States such as the lead content issue in Flint, Michigan. Students will also begin to form answers to the questions: What is pure water, what is water contamination, how can water be purified, and what are the costs associated with various forms of water purification systems.

Students will explore various types of water purification devices from simple filters to distillation mechanisms. During this time students will cover the concepts of classification and properties of matter, solutions, and pH that allow the various types of purification devices to function successfully. In addition, students will examine the EPA Clean Water Act and, local city, county, and State laws that govern the acceptable levels of various forms of pollutants found in drinking water.

At the end of this unit, students will begin to research the various types of water purification systems that are currently employed in Sonoma County and more specifically Healdsburg to deliver drinking water to the local populace. Students will go on a tour on a local water / waste treatment plant during this time to examine the engineering and chemical procedures involved in large scale water purification operation.

Students will be introduced to 3D-CAM/CAD at this time. Students are expected to create a digital 3D model of their water purification gravity fed device to be included in their lab report for their product.

BIOGEOCHEMICAL CYCLES

Biochemical Cycles, , Hydrologic Cycle. Water Repositories. Pathways H O Flow, Precipitation. Watersheds and Runoff. Water Budget. Mass Balance & System Boundaries.

WATER QUALITY IMPACTS

The Water Crisis Water Quality Parameters Modeling Impacts of Water Pollutants. Water Treatment Technologies and Sustainable Systems

Assignments

Essay: "Everything flows and nothing stands still" based on the chemical and physical properties explain this quote by Plato and describe the interrelationship with society.

Activity: Research your countries water quality, access to clean water, and water treatment.

Include discussion on use of Water treatment technologies: drinking water vs. potable water, waste water treatment/gray water

Field Study: Waste water Treatment Plant. Recycling waste water plant in our City. Students learn the process, the job of the site engineer, state requirements for water release, efficiency of water treatment before release and the potential return for Gray water use.

Water Log - As students cover the basic chemical principles involved in water purification, each student will be tasked with keeping a log of their water uses during a 3 day period. The goal of this assignment is to attempt to make students aware of the ubiquity of water in our everyday lives as well as the sheer amount of water that is consumed by the average person living in California.

NGSS Standards: HS-PS1-1; HS-ESS2-5; HS-ETS1-1; HS-ETS1-2

Water Filter - Using materials found at a local hardware store / grocery store students will design, create, and fabricate a evaluate a prototype for a gravity driven water purification system to clean water of observable materials. The water collected from the purification devices will then be subjected to spectrophotometry to assist the students in arranging the devices in terms of most to least effective. In addition to effectiveness, the devices will also be judged based upon the material cost, ease of construction, and ease of transportation.

NGSS Standards: HS-PS1-1; HS-ESS2-5; HS-ESS3-1; HS-ETS1-1; HS-ETS1-2

Unit 2 - Energy Needs of the Community

This unit will begin with the background on energy and energy sources. Students will also study the process of distillation in depth as a means for purifying water with dissolved contaminates such as lead, which will lead into an exploration of the recent water crisis events of Flint, Michigan and the river contamination events in North Carolina and West Virginia.

Students will explore various fuel sources to power a distillation process such as hot plate, Bunsen burner, and various form of food products in a lab environment. Students will then compare the various amounts of energy required to distill a contaminated sample of water and the amount of energy supplied from various sources.

Students will then spend extra time examining the condenser and the importance it plays in the condensation technique as well as various forms of condenser and be tasked with creating a 3D-CAD/CAM design for a condenser that we will be fabricating in class.

IMPACTS ON AIR QUALITY

Health Effects o f Air Pollutants (Ozone action days, CO, Pb, NO , VOC, O , Particulate matter (PM), SO , hazardous air pollutants (HAPS), CFC's) Estimating Emissions of Air Pollutants (EPA vs. CA. standards, air quality index) Dispersion of Air Pollutants Global Impacts of air Pollutants (Montreal Protocol, IPCC – International Panel on Climate Change)

THE CARBON CYCLE AND ENERGY BALANCES

Petition Appendices

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Climate Science History. Carbon Sources and Emissions (Nature of natural resources, renewable vs. non-renewable, management. Ecosystem services & natural capital. The Carbon Cycle Carbon Flow Pathways and Repositories Global Energy Balance Surface Temperature Model Greenhouse Gases and Effects Climate Change Projections and Impacts Carbon Dioxide Mitigation, Capture and Sequestration

MODELS FOR ENGINEERING SUSTAINABLE DESIGN

The Nature of Natural Resources Footprint Indicators of Sustainability Mass Balance and the Footprint Concept Waste management and Material Life Cycles Ecological Design Sustainable and Green Engineering

ENERGY CONSERVATION and DEVELOPMENT

Energy & Society (derived demand, energy services, energy ladder. Energy & economic indicators, energy use per capita) Energy & the Environment degradation, nuclear fuel cycle, climate impacts Direct & Embodied Energy (Energy return on investment (EROI), Opportunities for Energy Sustainability (renewable & alternative fuels: solar, wind turbine, water, tidal systems, geothermal, hydro power, biomass, biodiesel, H fuel cells, with Pollution prevention and Control. Appropriate Technology, scale, and Distributed Energy (meaning small-scale energy systems that do not require fossil fuels. Use of energy distribution of small amounts of energy from intermittent renewable sources for substitution of centralized energy systems). Energy Policy The Water-Energy Nexus is the need for water to generate electricit

Assignments

Simulations & Modeling Simulations & Modeling:

Estimating Emissions of air pollutants, factors, dispersion rates based on AQI (air quality Index) Greenhouse gases and effects Climate change projections and impacts, earth systems vs. human systems Analyze Global Energy Balance Research Research: Investigate the status of biochemical cycles and consequences, water quality, air quality, and carbon pathway, greenhouse gas data, CCS for your country and record data in journal

Internet Activity: Calculate Footprint Indicators of Sustainability Footprint Indicators of Sustainability: footprint indicators (Carbon, Ecological, Nitrogen, Water), Waste management and material Life cycles. Use Engineering Models Engineering Models based on waste and material management: life cycle, cradle-to-cradle and design for environment (DIE)

Activity: Use the US EPA individual carbon footprint calculator (www.epa.gov/climatechange/ghgemissions/ind-calculator.html) (<http://www.epa.gov/climatechange/ghgemissions/ind-calculator.html>) to calculate carbon footprint and answer the questions on handout.

Activity: Research global clean energy solution in use and/or proposed solutions; evaluate potential possibilities for your country. Journal.

<http://borgenproject.org/innovative-solutions-to-poverty-and-hunger/> (<http://borgenproject.org/innovativesolutions-to-poverty-and-hunger/>)

<http://www.kickstart.org/products/> (<http://www.kickstart.org/products/>)

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Activity: Conduct a personal energy audit. Calculate potential energy conservation changes you can implement.

Open-Ended Design Problem Open-Ended Design Problem: Design a solar PV system w/battery storage lasting five days for a rural village in the Andes Mountains of Bolivia or for your country depending on if your country is a developing or developed country. Journal entry.

Distillation Technique and Principle Lab- As students learn the basic principles of distillation as a purification technique and the various uses distillation has in the industrial world students will then set up several different types of small scale laboratory stills in class to separate various mixtures based upon their boiling points. In addition students will boil off the filtrate from the filters they created in unit one to examine the materials left behind. Students will create a heating curve (temperature vs. time) to be included in their lab report as well as their course notebook. Students will also create particle diagrams on poster boards to represent what is taking place at the various stages of the distillation process and to describe the intramolecular forces present. In analyzing the heating curves student will also discuss the steps to condense gases back into liquids and the differences between temperature and energy.

NGSS Standards: HS-PS1-1; HS-PS1-3; HS-PS1-7; HS-PS3-1; HS-ESS2-5; HS-ETS1-1; HS-ETS1-2, HS-ETS1-3

Calorimetry Lab - Students will explore the differences in energy supplied by various types of foods to examine Calorie content. Students will use a variety of food items as a fuel source for determining which food item per gram supplies the most energy to a sample of water and discuss how different foods hold a different calorie content.

NGSS Standards: HS-PS1-4; HS-PS3-1; HS-PS3-3; HS-PS3-4; HS-PS1-7

Field Trip - Students will travel to the ocean to collect various amounts of sea water from 3 different beach locations to then create our own sea salt and compare the various crystal patterns and arrangements as well as flavor patterns. The students will then attempt to classify the crystal patterns found and describe the intramolecular forces that account for the various crystal patterns formed by salts as they crystallize.

NGSS Standards: HS-PS1-1; HS-PS1-2; HS-PS1-3; HS-PS1-5; HS-PS1-6; HS-PS1-7

Unit 3 - Providing Food for the Community

This unit will begin with an examination of how energy is generated and stored for human use and growth. Students will study the basic types of chemical reactions and how energy is released or absorbed through chemical change and exothermic or endothermic reactions. Students will examine redox reactions that are used to power items such as their cell phones and be tasked with creating a battery of their own. Students will then shift their focus to how humans get the energy they need through food and revisit the Calorimetry lab from the previous unit. Students will also study the biochemical molecules that are important for life and energy transfer and storage.

Assignments

Chemical Reaction Lab - Students will conduct a lab investigation in which there will be two examples of each type of reaction for them to conduct (single replacement, double replacement, combustion, redox, synthesis, decomposition). Once complete, the students will create particle diagrams to demonstrate what is taking place at the atomic and molecular level of each reaction in addition to providing a short lab write up giving an explanation of the process used to bring about each type of reaction.

NGSS Standards: HS-PS1-1; HS-PS1-2; HS-PS1-7;

Chemical Reaction Scavenger Hunt - Students will document a day of their life and look for the various types of chemical reactions (single replacement, double replacement, combustion, redox, synthesis, decomposition) and create a poster detailing where each reaction took place, the reactants, and products.

NGSS Standards: HS-PS1-1; HS-PS1-2; HS-PS1-7; HS-ESS1-1;

Nuclear Reaction Discovery Project - Students will be broken into 6 groups and given one of the types of Nuclear reactors: pressure water reactor (PWR), boiling water reactor (BWR), pressurized heavy water reactor (PHWR), gas cooled reactor (AGR & Magnox), light water graphite reactor (RBMK & EGP), and fast neutron reactor (FBR). After greeting their specific reactor each group will be tasked with preparing a short business pitch as to why myself, the physics teacher, principal, and local business member should choose their company and their reactor type for our new power plant solution.

NGSS Standards: HS-PS1-8; HS-ESS1-5; HS-ESS1-6; HS-ETS1-1; HS-ETS1-2; HS-ETS1-3; HS-ETS1-4

Unit 4 - Renewable Energy, Storage and It's Applications

This unit will focus on renewable energy source such as wind, solar, tidal, geothermal, methane recovery, biomass and bio diesel. Students will explore each of the 7 categories in depth to gain a better understanding of the capabilities and limitations of each type of renewable energy source. Students will then examine their energy consumption with regards to their personal life as well as making investigations for energy needs of infrastructure items such as hospitals, emergency services, water, sewer, road maintenance etc.

SUSTAINABILITY and THE BUILT ENVIRONMENT

Land Use and Land Cover Change. Land Use Planning and Its Role in Sustainable Development Environmentally Sensitive Design Green Building Energy Use and Buildings

CHALLENGES and OPPORTUNITIES for SUSTAINABILITY in PRACTICE

Diffusion and Adoption of Innovations Economics of Sustainability Role of Government Social Justice and Sustainability in Wealthy Countries

Assignments

Case Study: Design Values for Sustainable Communities

Activity: Discuss the concepts of low-impact development, smart growth, green building, conservation design, & erosion control. Discuss how the following can be applied to the above concepts to benefit environmental systems.

1. Green building rating systems
2. Describe and utilize the concept of building envelope to determine
3. Compare patterns and trends in land development
4. Define and utilize the concept of building envelope to determine allowable development lot size
5. Use conservation design principles to analyze the differences in housing density patterns for traditional yield and conservation-based development

Petition Appendices

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6. Summarize rating systems that are applicable to buildings and residential developments and describe how the rating systems promote the principles of sustainability.

7. Explain energy conservation strategies in green building and link these to building energy codes and building energy rating systems (LEED, BREEAM, Living Building Challenge)

Project: Applying concepts above to your engineering prototype project

Evaluation of Renewable Energy Sources Presentation - Students will be broken into 7 groups, one for each of the above categories and be responsible for creating a short presentation to the class giving in depth analysis, pro / con examination, and cost / benefit analysis of each type of renewable to their class. Students, teachers and community members will be involved in the assessments of the presentations.

NGSS Standards: HS-PS1-3; HS-PS1-6; HS-PS1-7; HS-PS3-1; HS-PS3-3; HS-PS3-4; HS-PS4-5; HS-LS2-5; HS-ESS2-4; HS-ESS2-5; HS-ESS2-6; HS-ESS2-7; HS-ESS3-1; HS-ESS3-2; HS-ESS3-5; HS-ESS3-6; HS-ETS1-1, HS-ETS1-2, HS-ETS1-3; HS-ETS1-4

Renewable Energy Source or Storage Project - Students will come up with a list of 5-10 possible ways to generate or store energy. Students will then decide on 3-4 projects to build and choose a leader for each team. Students will then proceed to build a small scale renewable energy generator or an energy storage device that they will then present at a community event centered around the CASA program.

NGSS Standards: HS-PS1-3; HS-PS1-6; HS-PS1-7; HS-PS3-1; HS-PS3-3; HS-PS3-4; HS-PS4-5; HS-LS2-5; HS-ESS2-4; HS-ESS2-5; HS-ESS2-6; HS-ESS2-7; HS-ESS3-1; HS-ESS3-2; HS-ESS3-5; HS-ESS3-6; HS-ETS1-1, HS-ETS1-2, HS-ETS1-3; HS-ETS1-4

Course Materials

Textbooks

Title	Author	Publisher	Edition	Website	Primary
Chemistry in the Community	American Chemical Society	W.H. Freeman	6th Edition 2011	[empty]	Yes
Engineering Your Future	Gomez, Oaks, and Leone	Great Lakes Press	2015, 8th Edition	[empty]	Yes

Websites

Title	Author(s)/Editor(s)/Compiler(s)	Affiliated Institution or Organization	URL
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Affiliated Institution or Organization

Title	Author(s)/Editor(s)/Compiler(s)	Affiliated Institution or Organization	URL
Types of Nuclear Reactors	[empty]	Institute for Energy and Environmental Research	http://ieer.org/resource/classroom/types-of-nuclear-reactors/
Nuclear Reactor Location	[empty]	U.S. Nuclear Regulatory Commission	https://www.nrc.gov/info-finder/reactors/
Types of Renewable Energy	[empty]	Physics.org	https://phys.org/news/2015-06-renewable-energy.html
PA Clean Water Guidelines	[empty]	EPA	https://www.epa.gov/dwstandardsregulation
PhET	[empty]	University of Colorado	https://phet.colorado.edu/

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Engineering Geometry with Physics - Math

Grades:	9,10,,
Length:	Full Year
Environment:	Classroom-based
Honors:	None
Subject:	Mathematics (C)
Discipline:	Geometry
Institution:	Oakland Unified School District

Course Overview

Engineering Geometry with Physics is designed as an introductory college and career preparatory course in Physics and Geometry with continuous integration of Engineering CTE industry sector pathways (such as Engineering Design or Architectural and Structural Engineering). Please note: *Engineering Geometry with Physics-Science must be added with Engineering Geometry with Physics-Math* so that students earn math ("c") and science ("d") admissions credit. The course is comprised of a series of units that are guided by project-based learning strategies to ensure adequate ramping and integration of content knowledge and requisite skills in the three focus areas of Geometry, Engineering, and Physics. These units include: catapults, bridges, solar energy, wind energy and turbines, Archimedes screw, telescopes, energy efficient houses, musical instruments, and race cars. In order to gain an understanding that all new engineering discoveries have relied on the innovations of the past, each unit begins with a historical perspective and progress to the point where students in their design brief challenges are asked to make new innovations while keeping the spirit of the original innovation or technology.

The expected outcomes of Engineering Geometry with Physics are:

A mastery of Geometry standards satisfying a UC "c" mathematics requirement.

An understanding of core Physics concepts.

A project based learning environment that satisfies a UC "d" lab requirement.

Experience applying an iterative design process.

A detailed listing of literacy skills is listed below.

Literacy Ramp

Partial list of science, math, language, and literary competencies:

Charts

Analysis of data

Construction, design, and limitations of various charts

Match data with appropriate chart

Graphs

Extrapolation

Scaling

Drawings and Photographs.

Isometric and Orthogonal representations

3D sketching

2D to 3D constructions

Use context and visual cues to gain more information.

Flow charts

Read and create flowcharts for various processes

Be fluent in flow charting symbols

Maps, contour maps

Be fluent in scale

Analyze and interpret topographic and other symbolic representations of actual location.

Diagrams

Interpret and construct appropriate diagrams for a given task

Label and caption drawings to add to understanding of displayed information.

Tables

Construct and manipulate tables to adequately organize and display data.

Analyze the contents of the table as it applies to the current project.

Geometric proofs as applied to engineering projects.

Understand and apply correct theorems to justify design choices.

Apply the logic used in geometric proofs to reason through a design problem.

Symbolic notation

Become fluent in different symbolic representations in science, and math.

Utilize correct symbols in articulating ideas in drawings and explanations.

Reading words with more

Learn to read with a scientific mind

Understand and interpret graphs and other representations of data and information in a scientific context.

Use of standard geometric tools (i.e. compass, protractor, rulers)

NOTE: In each of the following units, students will be supplied a design brief that indicates all required aspects and desired functionality of the project. This design brief must include any and all measurement constraints, materials, and functions needed to complete the final product

Unit 1: Introduction to Engineering Geometry & Physics

Essential Question: How can the study of a catapult launch future invention?

Supporting Questions:

What is engineering design?

How is a catapult created to launch an object a desired distance?

What critical aspects of a catapult have been reapplied to modern technology?

Unit 1 Overview:

This unit is designed as an introduction and survey to the course. The unit grounds students in the scientific process as it relates to engineering and design through the cross disciplinary building of a working catapult. This catapult must be able to launch an object a desired distance set by the

teacher. Students are introduced to social/ cooperative learning models that are used throughout the course so special emphasis is put on establishing group norms and how to effectively brainstorm. Students explore key scientific literacy strategies including for example the vocabulary in geometry needed to understand proofs, congruency and congruency theorems. During the exploration, students will learn the necessary interpretive processes to translate quantitative or technical information into a variety of media forms and perform analyses intrinsic to the nature of the engineering process. Basic engineering presentation skills will be emphasized.

Although students use math and physics concepts to design the catapult, this will not be a highlighted part of the project. This project focuses on the engineering process that is used throughout the course with an emphasis on mechanical engineering. However, using the properties of similarity, students will also learn how to create a scale drawing with standard geometric tools like rulers, compasses, protractors.

Assignments

There are many online resources to give the teacher ideas on how to build a catapult, such as, <http://hubpages.com/hub/How-to-Build-a-Catapult---An-Illustrated-Guide>.

Students build ONE catapult, meeting the criteria outlined in the rules, designed to answer one of the following variables:

1. Distance - farthest distance thrown of a single projectile
2. Accuracy – nearest distance projectile impacts to two ground level targets
3. Strength – greatest mass of projectiles delivered to a vertical target

As part of the design process, students complete the following tasks to complete the catapult construction:

- Conduct short as well as more sustained research projects on the history of constructive design projects as background for their own.
- Create and submit a written proposal which included a scale drawing, a cost spreadsheet, and justification as to why the design works. Redesign and resubmit after analysis.
- Build the project with design constraints in an iterative fashion, making new drawings for any changes implemented.

Using engineering presentation models, the student will present their product including both an oral and a written component with attention to what worked, what did not, and any changes that should be implemented in a redesign with justification (evaluation of design). The student needs to highlight modern interpretations of the catapult and be able to discuss the similarities between the historic catapult and modern versions.

Unit 2: Building Bridges

Essential Question: How can a bridge close the gap to the future?

Supporting Questions:

How can you use geometry to design an efficient bridge?

How can you build a bridge with maximum load using as few materials as possible?

How does the geometric arrangement of the members of the bridge affect the distribution of forces?

How does the third law of motion apply to the non-moving components of a bridge?

Unit 2 Overview:

This unit entails the incorporation of geometry, engineering and physics to design and build a bridge with the highest efficiency. The students design, calculate, and construct a bridge using a set amount of materials for each student/group. This project focuses on the engineering process that is used throughout the course with an emphasis on mechanical, civil, and manufacturing engineering pathways.

For geometry, this unit focuses on congruent and similar polygons, particularly triangles. The students are able to apply geometric strategies to solve design problems by tying together the relationships of sides and angles in congruent triangles as well as parallel lines to help find congruent parts in triangles and parallelograms and prove parallelograms are congruent. Truss bridges in particular require parallel construction to ensure loads are evenly distributed, to avoid structural failure. Continuing with an introduction of trigonometry and similar triangles, the students use the Pythagorean theorem to see the special relationship of 30-60-90 degree triangles and 45-45-90 degree triangles, again to understand how to maintain structural strength and stability. These special relationships also tie together the meaning of similarity as the equality of all corresponding pairs of angles and the proportionality of all corresponding pairs of sides. The students visualize relationships between two-dimensional and 3D objects, and are able to implement these relationships into a 2D and 3D model or bridge blueprint. They are exposed to coordinate geometry and are able to prove simple geometric theorems algebraically when their design is graphed. They also are introduced to radius and arc length of a circle towards the end of the unit to illustrate the various methods used to calculate support beams and cables in suspension and arch bridges.

This unit explores the concepts of forces and Newton's laws of motion as they relate to static structures such as bridges and buildings. Within bridges, the supporting members and the forces exerted on them are governed primarily by Newton's Second and Third Law of motion. In calculating and analyzing these forces, students need to be able to identify action/reaction pairs at not only supporting structures in the bridge but also in the joints holding the bridge together. Structural members in bridges are often not aligned to purely vertical and horizontal axes, requiring students to resolve these vectors so they can be utilized in completing calculations and analyses of the forces acting within the bridge structure.

This unit also allows students to learn how civil engineers impact our daily lives, identify different areas of specialization, understand the benefits of a career in civil engineering, and identify the necessary skills to develop in high school.

Assignments

Assignment 1: After lecturing on action-reaction forces and congruent angles, have students brainstorm at least 3 truss designs for a bridge and identify on their drawings the forces and angles. Students then construct small scale models of their trusses and test them for strength failure points.

Assignment 2: In groups, have students research at least 3 famous structures and create a presentation on how these structures function, identifying forces and angles.

Assignment 3: After discussing bridge terminology and introducing the manila folder bridge project, have students write up a proposal for their bridge design.

- Bridge terminology (trusses, top core, bottom core, rods (hollow/solid), and solids) and effectiveness of materials for various designs/types.
- Bridge project: Design and build an A-Truss/ King post bridge structure out of manila folders that sustains at least 5 kg at mid span and has an overall span of 30 cm. The bridge that has highest strength to weight ratio will be considered the best.
- Written proposal: Describing initial design of a truss bridge including a scale drawing, calculations of the amount and weight of the material used, and justification as to why the design will work.

Assignment 4: Truss calculations (stress/strain) to show effects of different variables. Students determine tensile and compressive forces within a truss system. Students the static determinacy, $2j = m + r$, to determine the stability of the truss system or bridge.

Assignment 5: Working drawings: Full-size sketch of bridge on grid-paper showing angles in each triangle and use of deductive reasoning and theorems to prove that top and bottom chords are parallel.

Assignment 6: Build/construct the bridge using your drawing and assembly plans.

Assignment 7: Oral presentation: Students describe the approach they took to designing their bridge, using geometry and physics vocabulary to justify their design.

Assignment 8: Test your bridge for maximum load and record your results. Calculate its strength to

weight ratio.

Assignment 9: Written report: Students reflect on their design, what their initial thoughts were, what physics and geometry they used, what contributed to its collapse, and how they would change it if they were to build it again

Unit 3: Solar Energy

Essential Question: Why is solar energy so "hot"?

Supporting Questions:

How can we use the sun for energy?

How can we harvest the sun's energy?

How can we capture the sun's energy?

Unit 3 Overview:

This unit allows students to explore solar energy through researching the history of solar energy, the current applications of solar energy and the possibilities for solar energy in the future. Students create a solar water heater as their final product. Students explore how energy from the sun is converted into electrical and thermal energy. As the energy from the sun is transported via electromagnetic radiation, the electromagnetic waves encounter a solar cell; the conversion of this energy to electrical energy requires understanding of energy, work, and the law of conservation of energy. This electrical energy is then transported away from the generation unit using electrical circuits, requiring the understanding of Ohm's Law. Students also explore the world of thermodynamics and how the basic laws of thermodynamics can be used to harness the power of the sun. Concepts of heat flow through conduction, convection, and radiation will be explored as they apply to convection currents created with the solar collector and how fluids behave in such systems.

The concepts of coordinate geometry will be reinforced along with coordinates to prove simple geometric theorems algebraically. The students explore the surface area and shapes made by a cross-section of a three-dimensional object (such as a cylinder, a cube, or a prism). Understanding these shapes allow students to look at and measure a cross section of a solar collector to determine how to effectively harness the sun's energy on a determined target. They learn to apply the concepts of perimeter and area to find the volume of solids. They also apply concepts of density based on area and volume in modeling situations. Parallel lines, corresponding angles, and the theorems governing them will be explored as students diagram how light rays are reflected by a variety of shaped mirrors. Students testing and diagramming these mirrors will determine the most appropriate shapes for these mirrors based on the application of these theorems and geometric diagrams. These principles will be revisited in much more depth in Unit 6, Telescopes.

This project focuses on the engineering process that is used throughout the course with an emphasis on mechanical, electrical, and environmental engineering. This unit will cover the relationship between concepts such as: safety, system design, electrical and mechanical design, and subsystem design. Students review technical drawings such as blueprints. Students analyze and learn about incorporating the following systems into building a house: lighting, climate control, mechanical systems, electrical, and plumbing. Students develop a site analysis that considers passive energy techniques, sustainability, landscaping and construction.

Assignments

Assignment 1: Students bring in an object from home to use as a solar water heating device (volume and initial water temperature will be controlled). Students measure water temperatures at predetermined intervals, and graph the results. Students draw conclusions about the most effective variables in solar water heater design (discussion points: surface area, volume, color, transparency, surface reflectance, shape, etc.).

Assignment 2: Students research the past, present, and future of solar energy and present their findings to the class. Teacher may decide to make this an individual written report with a brief summary in front of the class or a group oral presentation. Teacher may also decide to assign one third of the class the history of solar energy, one third its present applications, and one third future technologies of solar energy.

Assignment 3: Describing initial design of a solar water heater including a scale drawing, a cost spreadsheet, and use geometric proofs and coordinates in justification as to why the design will work. Instruct students on how to construct perpendicular lines, midpoints, and angle bisectors.

Assignment 4: Students build and test their initial design and measure water temperature over time. Students graph their results and discuss them with the class.

Assignment 5: Students describe what they learned from comparing their water heater to those of their classmates.

Assignment 6: Students redesign their solar water heater and sketch a scaled drawing with lengths and angles labeled.

Assignment 7: Students build and test their new solar water heater and graph the results.

Assignment 8: Students present a description of their design, using physics and geometry vocabulary to describe its advantages. Students also show their results to the class.

Assignment 9: Students produce a written evaluation describing the process they went through in designing their solar water heater, the physics and geometry used, and how they would change it if they were to redesign.

Unit 4: Windmills (Turbine Challenge)

Essential Question: The power of wind: A force for good or evil?

Supporting Questions:

What experiences have the students had with the power of wind?

How much energy does a wind farm turbine generate?

What does this mean in practical terms?

How efficient is the turbine?

How could this be improved?

Unit 4 Overview:

During this unit, students utilize the iterative design process and collaborative teaming to construct a wind turbine that generates enough electricity to power a small light bulb or other electronic device.

The students analyze the relations between interior angles and the remote exterior angle, vertical angle relationships, and the relationship of the angles formed when a transversal passes through two parallel lines. They learn that the measurements of a triangle sum up to 180 degrees, base angles of isosceles triangles are congruent. They prove geometric theorems using congruency; identify that the segment joining midpoints of two sides of a triangle is parallel to the third side and half the length; and the medians of a triangle meet at a point. Application of the Pythagorean theorem aids in solving trigonometric ratios. When exploring circles in the units, the students become familiar with key terminology of parts of a circle. The students identify and describe relationships among interior and exterior angles, chords, secants, and tangents to a circle. They also find arc lengths and areas of sectors of circles in order to properly construct wind turbines large enough to produce adequate power while still maintaining the required size constraints.

From the physics standpoint, this unit focuses on transforming energy from the wind into electrical energy through the processes of rotational mechanical energy. Electrical and gravitational potential energy as they relate to conservation of energy is stressed. This process requires the understanding that it is a force that causes rotation by the process of torque. Torque is dependent on the radius of rotation and the magnitude of the force acting. Understanding that centripetal force is a constant that points towards the center of a circle eases the calculation of centripetal acceleration ($a=v^2/r$). The rotation of the windmill causes a magnet to spin and induces an electrical current that can be transported away from the generation source using circuits to the location of need. To further understand this concept of direction of magnetic field affecting circuits, students will apply knowledge by constructing simple electrical circuits using magnetic materials.

Assignments

Assignment 1: Students research the topic of turbines to discover the historical and modern applications. This research is presented to the class. After the presentation, the class is introduced to the design challenge of building a turbine of their own.

Assignment 2: Students construct simple series and parallel circuits using light bulbs, resistors, motors, and batteries. Students discover the relationship between voltage, resistance, and current through the use of a multimeter and derive the relationships in Ohm's Law. They also explore the relationships between electric motors and electric generators. Their findings from this assignment are presented to the class.

Assignment 3: Students rely on their research and the discoveries about electricity to come up with an initial design for their wind turbine. They experiment with different blade designs (surface area, shape, etc.) and materials and test them by simple means of lifting and winding capabilities. They explore the concepts of rotational dynamics and torque and how these concepts relate to the design challenge.

Assignment 4: Students come together in small teams to evaluate their designs using a decision matrix that allows them to rank aspects of their designs in order to choose the design that best suits the challenge. Once the students select their design, they formalize a plan to build their design. This plan must include scale drawings showing the explicit geometry formulas or proofs, as applied to buildings, and materials. This design is presented to the class.

Assignment 5: Student teams test their built windmills and collect data on electricity generated. They connect their windmill to a simple circuit containing a light bulb to verify that their design produces enough power to produce light. Student teams evaluate their windmill and brainstorm improvements, both structurally and mathematically, and how those improvements affect the performance of their windmill. The results of their testing is presented to the class.

Assignment 6: The student teams analyze their collected data and extrapolate their findings to a full scale version of their windmill. They scale up all materials, costs, and power generation, using the appropriate geometry to make the conversions. Students then compare their extrapolations to actual windmill or turbine costs and power output.

Unit 5: Archimedes Screw

Essential Question: How can we put a twist on liquids?

Supporting Questions:

What is a screw pump and how are they efficient?

How does gravity play a crucial role in the function of a screw pump?

How does a screw pump reduce the amount of force needed to lift liquids?

What is sacrificed when using a screw pump?

Unit 5 Overview:

Through incorporating the history and theory of screw pumps, students design and construct a working screw pump model. Students work in teams to build, test and evaluate their designs.

Writing a technical report supports their designs with research on the historical context, present applications and future possibilities of the screw pump. Students present this information in a public forum.

In this unit students explore the relationships of force, energy, and gravity. As the screw applies a force to the liquid, work is done to transform rotational mechanical energy into gravitational potential energy by lifting the liquid to a higher elevation. This process requires work because the law of universal gravitation dictates that two objects with mass are attractive to each other requiring energy to move them further apart.

Coordinate geometry plays a key role in the standards covered. The students use coordinates to prove simple geometric theorems algebraically. The students visualize relationships between two-dimensional and three-dimensional objects, and implement these relationships into a 2D and 3D model as they take 2D blueprints and drawings and translate them into a working 3D model. Students also implement this skill set in the initial stages as they take a 3D idea in concept and begin sketching it in the drawings and design phase. The relationship between coordinate geometry and 2D/3D modeling will be used when exploring the construction of the Archimedes pump as it pertains to tube size, angles, and pump rate.

Assignments

Unit 5 is in large part a practical application of geometric principles and concepts learned to date with an emphasis on transforming 2D representations into 3D models and 3D ideas into explicit 2D representations as this applies to producing technical drawings.

Assignment 1: Students research the Archimedes Screw to learn how this mechanism works as well as how it is still being used today. Students present their findings to the class either through oral presentation, web page creation, or poster.

Assignment 2: Students are given their design brief describing the Screw Pump project. In the design brief, there is a description of how much water or other liquid must be raised to a given height in a set period of time. Student teams brainstorm how they could create an Archimedes screw and what materials they could use that fulfill the design brief. They then produce schematics and instructions on how to build their pump and submit those for approval by the teacher.

Assignment 3: Students are asked to rethink how the screw pump could be used in a manner that

is not currently in common acceptance. They then redesign their pump in order to function in their proposed manner. Students submit their proposal with updated drawings, materials, and build instructions for approval.

Assignment 4: Students construct and test their redesigned screw pump and evaluate its performance based on anticipated functionality. They construct a written report encompassing the historical, modern, and proposed functionality as well as a discussion of the performance of their prototype.

Assignment 5: Students present the content of the written report orally including the applications of geometry and physics to the project.

Unit 6: Telescopes

Essential Question: How does viewing other worlds change the way we see?

Supporting Questions:

How do waves interact with mirrors and lenses?

How can we tell if the image we are seeing is real?

Why do we need to combine different types of lenses to produce a working telescopes?

Do all telescopes function the same way?

How do telescopes utilize lines, rays, chords, arcs, and secants?

Unit 6 Overview:

Students study aspects of optics, lenses, mirrors, and geometry to engineer a telescope that allows them to view objects at a reasonable distance from the observer. This project focuses on the engineering process that is used throughout the course with an emphasis on mechanical engineering. Students also practice public speaking and through the use of digital social media present their ideas and findings from the project.

Students explore the phenomena of electromagnetic energy, its waveform, anatomy and function. Understanding telescope design and its interactions with visible and invisible waves, students understand how waves are concentrated to allow a more detailed analysis of the information they carry through the universe. This concentration process is achieved through the use of mirrors and lenses using the concepts of reflection and refraction. Students may explore how weather may or may not affect data acquisition.

Using a variety of tools and methods, the students continue to make formal geometric constructions of congruent segments/angles, bisecting segments/angles, parallel lines, perpendicular bisectors, and various polygons inscribed in a circle or triangle to fully understand the construction of and object clarity of telescopes. When exploring spherical lenses and mirrors,

the concepts of circles in the unit continue as students become familiar with key terminology for parts of a circle, identify and describe relationships among interior and exterior angles, chords, secants, and tangents as they apply to the determination of focal points in lenses and mirrors. They also find arc lengths and areas of sectors of circles.

Assignments

Assignment 1: Students complete research on the history of the telescope and its progression to modern times. They present this research in the medium of their choice.

Assignment 2: Students follow the “Funland” Activity #78 in the accompanying Lab manual for Hewitt by Paul Robinson. This lab explores the relationships of concave and convex spherical mirrors and how they produce images that are virtual, real, enlarged, or reduced based on the geometry of the mirror and the relationship of distance between the object and the focal length of the mirror. This exploration reinforces the math and angles of lenses as an introduction to building their telescope. Other helpful labs that extend this exploration of mirrors and lenses are: The Camera Obscura #79, in which students learn how a basic camera obscura functions and how small volumes of air can act as a spherical lens; and Bifocals #82, in which the differing appearances of images produced are directly related to the differing geometries of the sections of the a bifocal lens.

Assignment 3: Students follow a standard optics bench lab in which they have to determine the focal length of spherical lenses and mirrors as well as predict and test whether the image produced by these mirrors and lenses will be real or virtual, inverted or right side up, and whether the image will be enlarged or reduced depending on the placement of the original object.

Assignment 4: Practice Problems exploring light rays and their interactions with spherical mirrors and lenses. These problems aid in students’ ability to predict how an image is refracted or reflected in mirrors and lenses to produce images in optical instruments.

Assignment 5: Practice problems exploring construction of circular sections and angles as related to the laws of reflection and refraction of light.

Assignment 6: Students are given the design brief describing the criteria they must follow to construct a telescope of their own. They must brainstorm and develop a proposal which includes detailed drawings and materials lists. This must be submitted for approval.

Assignment 7: Student teams build and test their telescope. They evaluate its performance against the criteria described in the design brief. Students present the telescope and design process through a multimedia presentation. This presentation must include the design and building process and discuss the results of their project as a presentation to the class. This discussion also includes how the core academic concepts from the unit apply to their telescope and results of the project.

Assignment 8: Students write a comparison contrast with data between the various group products.

Unit 7: Roller Coasters

Essential Question: How does a thrill ride keep us on track?

Supporting Questions:

How do roller coasters utilize different types of energy?

What is required to transform energy?

How does the use of similar triangles stabilize a roller coaster?

Why do roller coaster designers need to understand arcs and secants?

Unit 7 Overview:

In this unit within teams, the students design and engineer a roller coaster that integrates concepts from geometry and physics. The students showcase their knowledge in problem solving as a team. They come to a consensus on the materials used to fabricate a prototype and then conduct test simulations to determine whether their initial design specifications are met.

By exploring the workings of a roller coaster, students discover the interplay between kinetic and gravitational potential energy. They discover that both potential and kinetic energy can be transformed into one another and how friction and other forces are integrated into this process. Students also uncover the connection between kinetic energy and momentum, as well as how to calculate these quantities based on an object's physical properties such as mass and velocity. Newton's 2nd Law provides the basis for students to understand kinematic equations in one dimension, using acceleration to calculate time and velocity. Conceptually, students will unpack Newton's 3rd Law by looking at the interaction between the train and the track and the riders and their seats.

The students tie the relationships of sides and angles in congruent triangles as well as parallel lines to help find congruent parts in parallelograms and prove parallelograms are congruent. The definition of parallelogram is addressed more and the students are able to see that other polygons fall in the parallelogram category, such as rectangles and squares. From there students explore the properties of a right triangle and explore the relation of the side measurements to the complementary angles, leading into similar triangles and trigonometry. The students then are able to distinguish the relationship between the sine and cosine of complementary angles. These special relationships also tie together the meaning of similarity as the equality of all corresponding pairs of angles and the proportionality of all corresponding pairs of sides. Coordinate geometry also plays a key role in the determination of slope and layout of the roller coaster track. The students use coordinates to prove simple geometric theorems algebraically and how the use of certain shapes can add stability and flexibility to the roller coaster structure.

Students develop a heightened and mature emphasis to understand the various forces that bear on and within structures, including axial force, shear, torsion, and moment. Students conduct evaluations of available building materials (e.g., steel and wood) considering their properties and effects on building form recognizing strengths and limitations. From this evaluation, a preliminary building plan is developed by using the appropriate materials. The stress-strain relationship of building structures and the laws of conservation of energy and momentum provide a way to predict and describe the movement of objects.

Assignments

Assignment 1: Students research the history of roller coaster and how they are designed and constructed today. They also need to research the modern technologies employed in current roller coasters.

Assignment 2: Students are given a challenge to determine the maximum potential and kinetic energy using factors of mass and height of a varying slope. The students document their and data and findings in a lab report. At this point they can begin a preliminary design sketch of their proposed roller coaster.

Assignment 3: With the basis of kinetic and potential energy and slopes, the students discover different measurements of radii and arc lengths of a circle to help calculate potential or kinetic energy at each peak of the coaster to lead into centripetal force. The students investigate which materials to use and document a Bill of Materials.

Assignment 4: Students are introduced to velocity and acceleration. The students research in groups what the maximum gravitational force that is allowed for a human. From that, we tie that information together with assignment 3 and see if the calculations made meet the safety specifications of a roller coaster. The students then take their preliminary design and begin building prototypes which they then begin to test and evaluate effectiveness and safety. They are required to document all their findings and design changes in a lab journal.

Assignment 5: Students compare their current design to one other peer and discuss successes and possible shortfalls and illustrating how they overcame these shortfalls using specific geometry, physics and engineering concepts. All conversations are prompted and documented for review by the teacher.

Assignment 6: Students begin to write their business proposal: Why should I invest in your roller coaster? This proposal should include a discussion of how the use of geometry and physics has been incorporated into the design and safety aspects of the coaster.

Assignment 7: Students finalize their design specifications and documentation and put together an oral and written presentation with a finalized design drawing (PowerPoint optional). The final

testing stages should be completed.

Unit 8: The Energy Efficient House

Essential Question: How can the sun make our house "cool"?

Supporting Questions:

What is the best way to design an energy efficient house?

How does insulation work?

Why is it important to orient your house in specific directions according to where you live?

Why is it important to allow the sun into your house in order to keep it cool?

Why is it important to be able to calculate the surface area and volume of a room or house?

How are ratios used to design an energy efficient house?

Unit 8 Overview:

Students learn current and future methodologies to minimize the use of electricity in residential dwellings through the use of thermodynamic principles. This involves correctly placing the house on a lot to maximize electrical efficiency. Students investigate which building materials allow them to maximize electrical efficiency. Students learn residential mechanical systems which include climate control, and electrical circuits. Students explore usage of strategic landscaping to maximize electrical efficiency. Students are preparing to design an energy efficient home or "green home" in this class. As part of their research students study green building practices and techniques as well as energy efficient designs like passive solar solutions for integration into their design. Students also learn types of renewable alternative energy sources such as solar energy and wind power. Using the Internet and a variety of sources and materials, students create a presentation with appropriate props explaining the design choices for their house based on their research, class lectures, and presentations. Students present the information in class as a sales pitch to a prospective buyer.

When testing insulating materials, students explain that quantities of energy tend to flow until they become distributed uniformly, and students brainstorm ways to slow down this process. Insulation functions to limit this flow of energy between interior and exterior environments of rooms, houses, and other structures. Students investigate the heat conductivity of various materials and develop explanations for the causes of high and low heat capacity by researching the molecular structures of materials and the ease in which thermal energy is transferred through these structures. Students discuss thermal energy as a function of temperature during these activities.

In this unit, the definition of a parallelogram is addressed in more depth and the students are able to see that other polygons fall into the parallelogram category, such as rectangles and squares, and from there explore the properties of a right triangle and the relation of the side measurements to the complementary angles. The concepts of volume and surface area become vital as students consider how energy and air flow are addressed in various configurations and orientations of rooms. They also learn to use coordinates to compute perimeters of polygons and areas of

triangles and rectangles via the distance formula or midpoint formula as they sketch blueprints or technical drawings in the construction of the model. In some instances the students are able to use geometric shapes and their properties to describe objects in an application. Once the students are familiar with polygons and circles, they explore the shapes made by a cross-section of a three-dimensional object. They learn to apply the perimeter and area towards finding the volume of solids and determine how changes in dimensions affect the perimeter, area, and volume of common geometric figures and solids as they apply these to designing a house or other habitable structure. They are able to apply concepts of density based on area and volume in modeling situations, such as air flow and convection.

Students need to use modeling or CADD software to aid in the design of their energy efficient house as well as in the presentation and discussion of their final product. This final presentation can be accomplished by creating a website or PowerPoint showcasing the energy-efficient features of the house along with a discussion of why these features function to reduce the energy consumption of the house.

Assignments

Assignment 1: Given a topographical map and climate study, students determine the best orientation and placement of a house. As students are coming into the classroom and picking up handouts, the video is playing on the screen. The video "Graphisoft EcoDesigner: Informed Decisions" (available on YouTube) shows the students the use of "Building Orientation" in design and the use of software applications in achieving presentation format. Also include software applications. At this point, do CADD demonstrations on how to create the particular drawing the students create as their assignment. This allows the students to use prior knowledge in designing and applying the applications to the project.

Assignment 2: Students are given a sand box with an uneven terrain. Students are asked to make a flat plane or pad for a house to sit on. Students calculate the amount of earth (sand) redistributed in cubic inches. This assignment reinforces the ideas of volume of parallelograms and surface area in that excavated sections of terrain often mimic basic parallelograms in shape. Students needing to create a specific size pad for the house will have to know how to calculate the surface area of that pad and its relationship to the specific side of the parallelogram to be excavated from the terrain.

Assignment 3: Students learn about R-value, specific heat, convection and conduction as it relates to insulating a home. Students test various building materials by measuring and recording the temperature on both sides of the materials when one side is exposed to a heat source for approximately 15 minutes. They then report on whether they would categorize each material as an insulator or conductor.

Assignment 4: This assignment builds upon the previous assignment. How can we efficiently keep the temperature of a room stable? Students investigate heat transfer between an outside

environment and an insulated indoors environment with the goal of minimizing loss of heat using insulating materials.

Students then use a mock economy to purchase insulation and insulate a "paper box" house. The houses then are placed over a light bulb for a class period and the temperatures are measured inside and out. Students use a spreadsheet to determine the cost of the insulation to preserve a degree of temperature.

Assignment 5: Students research and report their findings about passive solar design and how the purposeful flow of heat can help a space maintain comfortable temperatures year round.

Assignment 6: Students begin "Project Layout" based upon the attached handout. Students work in groups and develop a multi-use software knowledge base when developing the project.

Students use CADD modeling software, Microsoft Word, Microsoft Excel and Microsoft PowerPoint in developing the project. Students also be required to build a scaled model of the building and site they design. This allows them to look at the construction of their design and visualize its form and function of the building design. Students are allowed to use their creativity and architectural style using shape and color and how it all relates to orientation and "Green Construction." Students must take the 2D drawings from the blueprints and construct a 3D model, again reinforcing the relationship between 2D and 3D.

Assignment 7: Students complete their presentations in a classroom presentation setting. They are graded on their presentation skills as well as the content of the presentation. They are required to show pictures of their model during construction and the process of building a model from their design. They are required to indicate the style of their building and what makes it a "Green Building" and the effect it has on their lives in the future. They are also required to indicate the process of drawing the project in a CADD modeling program.

Unit 9: Building an Instrument

Essential Question: How will the future sound?

Supporting Questions:

How do the geometric properties affect the sound output of an instrument?

How does frequency and amplitude play a role in the production of sound?

How do harmonics play a role in the sound production of an instrument?

Unit 9 Overview:

As students investigate the designs of various musical instruments, they discover the fact that sound travels at different speeds through different mediums. Students utilize this fact to engineer instruments to produce various frequencies depending on the density and molecular structure of

the material they choose. Throughout this unit, students research how sound is a longitudinal wave and transfers energy to our ear drum. This provides a deeper understanding of wave functions learned in Unit 6. Students discover how a string vibrating as a standing wave can produce a longitudinal wave in the air and that the frequency and speed of that wave is dependent on the medium it is traveling through.

When analyzing circles, the students derive the equation of a circle of given center and radius using the Pythagorean Theorem and complete the square to find the center and radius of a circle given by an equation. In some instances the students are able to use geometric shapes and their properties to describe objects in an application. They also learn to use coordinates to compute perimeters of polygons and areas of triangles and rectangles via the distance formula or midpoint formula. These concepts and relationships are employed in understanding how an instrument is tuned and the determination of the shape and size of its resonator.

Assignments

Description of unit project: In this project students explore the workings of current instruments and utilize those concepts to design and build a new musical instrument.

Assignment 1: Students complete practice problems dealing with frequency, period, amplitude, wave speed, wavelength, air columns, strings, and membranes.

Assignment 2: Students research the major families of instruments to learn what makes each family unique and how instruments within each family produce and modulate sound waves.

Assignment 3: Students complete the wave interference worksheet, which is designed as scaffolding to explore wave anatomy and the interactions between waves. Option is to use “Catch a Wave” activity, which explains how the longitudinal and transverse waves work, from support lab book by Robinson.

Assignment 4: Students complete the Individual instrument planning research to help define the function, construction, and type of instrument he or she is building. They must also include detailed drawings and a materials/cost analysis.

Assignment 5: Students complete the vibrations in air columns worksheet which is designed as scaffolding to explore how vibrations are formed and waves are propagated in closed and open tube columns.

Assignment 6: Students complete the vibrations in strings and membranes worksheet which is designed as scaffolding to explore how vibrations are formed and waves are propagated in strings

and worksheets.

Assignment 7: Students begin constructing their instruments. They need to make careful calculations in the dimensions of their instruments in order to produce correct frequencies that correspond to notes on a standard musical scale.

Assignment 8: Students make a final presentation of their instruments and a discussion of how their instrument functions. Students discuss how their instrument generates vibrations and waves and how those vibrations are modified to produce different tones and frequencies.

Unit 10: Vehicle Efficiency

Essential Question: How do you move in circles to move forward?

Supporting Questions:

What makes a quality race car?

How can stored energy create rotation?

How do properties of a circle relate to forward motion of a car?

Unit 10 Overview:

In this unit, ideas in geometry, physics and engineering are explored through the design and construction of a model race car powered by a single mousetrap. This unit emphasizes two topical areas of physics: energy and rotation. Through the build and design aspects of the project students explore the connections between stored energy and mechanical energy and how they can be used to induce a rotation in the wheels to propel the car forward in a linear fashion. The geometry of the wheels and axle system has a direct effect on the performance of the car in terms of speed, accuracy of travel, and distance traveled.

Students refine their ability to apply the process of logical thought through application of geometric proofs and theorems. Students prove the slope criteria for parallel and perpendicular lines and use them to solve geometric problems. Transformations are also addressed in ways for the students to analyze the effects of rotation, reflection, and translation and also develop definitions for these transformations in terms of angles, circles, perpendicular lines, parallel lines, and line segments, and describe the rotations and reflections that carry onto itself in application to the design of various components of the car and its overall design. The students have an opportunity to also draw transformed figures with one transformation or a sequence of transformations to create congruent or similar figures. Proving congruency and similarity is implemented into all of the units we have developed.

The Physics of the car involve storing energy in the spring of the mousetrap and using that stored energy to move a lever arm. This motion causes a torque in the axle of the wheel via a string that is attached to the lever arm and wound around the axle assembly. As the torque is applied, it

causes the wheel and axle to rotate, propelling the car forward.

This project focuses on the engineering process that are used throughout the course with an emphasis on mechanical, automotive, electrical, and manufacturing engineering. Students experiment with aspects of the racecar to explore vehicle performance tasks— speed, power, accuracy, and how these performance tasks are affected by different aspects of the car.

This project is expected to be the last unit and therefore a culmination of the content and skills the students have learned throughout the course. Therefore the unit parallels a real world engineering project with marketing and business models, product specifications, complete documentation including manufacturing specifications, design reviews, product testing, advertising, and sale of the product, most likely on the web. The teacher can choose which aspects to include in detail for the project. The project results in a technical paper, a multi-purpose vehicle and a presentation.

Assignments

Assignment 1: The students are given a challenge to design and build a vehicle using an instructor-supplied mousetrap that travels a maximum straight-line distance. Students have complete design freedom, with the exception of having to use the supplied mousetrap for propulsion, and purchased hobby store-type kits being prohibited. Students initially brainstorm and sketch ideas individually, then get into teams for an enhanced brainstorming design process. Team size depends on instructor preference and class size.

Assignment 2: Student teams brainstorm ideas for the design, construction, and function of their race car. They complete and submit detailed drawings, materials lists and costs, and assembly instructions for approval prior to building. They must take into account the physics and geometry concepts learned throughout the year in making their proposals.

Assignment 3: Student teams consolidate their ideas into a practical and efficient design. Mechanical drawings are produced, including bill of materials, orthographic, pictorial and assembly drawings with all required dimensions. Students begin procurement of materials at this point, with instructor approval required for all component parts. Students should be prepared to answer any engineering design questions presented by the instructor regarding their vehicle design.

Assignment 4: Student teams now enter into the manufacturing and construction phase of this unit. Students use adhesion, cohesion and/or mechanical fastening methods to produce their design. This stage requires extensive laboratory time and the manufacturing processes used depend on available resources and equipment. All construction and assembly procedures should be done in class under instructor supervision with a strict adherence to all safety protocols.

Assignment 5: Student teams begin testing their vehicles and evaluating the results. Data is accumulated, recorded and examined. The instructor uses these test results to focus

conversations on physics, geometry and engineering concept reinforcement. Re-design requires the iterative engineering design process to begin again and complete the cycle as many times as necessary. Extensive laboratory time is required for manufacturing and construction processes to continue.

Assignment 6: Students evaluate peer vehicles for constructive feedback using an instructor-designed rubric. The instructor can use this opportunity for stimulating class discussion in any area(s) that need additional input. The instructor also uses this time to reinforce the requirements of the technical report, oral presentation and final vehicle competition rules.

Assignment 7: Student teams assign individual duties for the final written technical report. Details on aspects of technical reporting have been covered throughout the course in most units and each team member must have a specified role in the project. Team members begin planning the oral presentation during this assignment. A breakdown of the technical writing process can be found in Appendix B.

Assignment 8: Race day! The instructor has the opportunity to build into the grading rubric many other aspects in addition to maximum displacement, such as aesthetics, creativity, materials, engineering, problem solving, teamwork, etc. All results should be carefully recorded, synthesized, evaluated and presented in the technical report and oral presentation.

Assignment 9: All members of the team play a role in the presentation of findings to the class. The instructor should have previously developed a rubric of specific aspects that should be covered (this rubric having been used in prior units) with the students being fully aware of the expectations required for a quality presentation, but should most definitely include a thorough discussion of the physics and geometry concepts utilized in the construction, testing, and redesign of their car.

Textbooks

Title	Authors	Publisher	Edition	Website	Is Primary
Conceptual Physics	Hewitt, Paul	Pearson Education, Inc.	2006	--	Yes
District Adopted Geometry Text	any	any	any	--	Yes
Principles of Engineering	Handley, B.A., Marshall, D.M. & Coon, C.	Cengage Learning	2012	--	No
Laboratory Manual, to accompany Prentice Hall's Conceptual Physics	Paul Robinson	Prentice Hall	2002	--	No
Pre-Engineering	Harms, H.R. & Jonosz J.D.	McGraw Hill	2012	--	No
Architectural Drafting and Design	Jeffries, A. & Madsen, D.	Delmar	6th	--	No
Green Building: Principles and Practices in Residential Construction	Kruger, A. & Seville, C.	Delmar	1st	--	No
State adopted customizable electronic texts for science, engineering and math	n/a	Key Curriculum Press	n/a	CK-12.org	No

English

English 9

Grades:

9,,,

Length:

Full Year

Environment:

Classroom-based

Honors:

None

Subject:

English (B)

Discipline:

English

Institution:

Oxnard Union High School District

Course Overview

This course which adheres to the California Common Core English standards intends to equip students for life outside the classroom, building college, career, and citizenship readiness. Focused on text complexity, the course covers narrative, plays, dramas, poetry, informational texts, including articles, websites, and videos, and other supplemental reading. Students will gain literacy skills by challenging their critical thinking, reasoning, and evidence collection skills. Students write essays that focus on thematic structure, sentence variety, and voice. Emphasis will be placed on precise sentences, vocabulary, and conventional grammar and its uses. English 9 serves as the foundation for all subsequent courses in high school that involve reading, analyzing and writing, providing students with the tools and strategies needed to develop effective communication skills. In any given year students will take between four and seven of these units.

Overview

This is a one week lesson designed to familiarize students with the components and requirements of the iLit program. Students will focus on reading, vocabulary, collaboration and writing routines using a short text with which to practice critical thinking, analytical writing, and collaborative tasks. Students will work individually and in small groups to cover big ideas in reading, writing, speaking, and listening.

Key Assignment - Critical Reading Question: Students will be asked to develop a one paragraph response about the reading which includes evidence from the text. Students will complete the assignment on their computers and publish by sending the paragraph to the teacher. Students will learn to cite textual evidence and produce writing that demonstrates their analysis of the text.

Media and Technology

Using expository and narrative texts students focus on how media and technology are integrated into modern life. Videos, opinion cartoons, and other digital media are also utilized in this unit. Issues of digital privacy and citizenship are addressed as students work collaboratively to answer

essential questions using textual and media evidence to support their claims. Students will engage with the text and media both in classroom conversations and in writing argumentative and narrative paragraphs as well as an explanatory essay.

Key Assignment – Explanatory Essay: students will develop an explanatory essay about the significance of a historical event through the writing process. Students will begin with pre-writing which includes brainstorming and an outline and then move to writing their rough draft including embedded textual evidence. Students will work collaborative to edit and revise their essay before completing a final draft for submission. Students will present essay in oral presentation to class.

Elements of Drama

This unit focuses broadly on drama and more specifically on Shakespeare. Students will participate in collaborative discussions, writing projects, and performances to analyze and evaluate Shakespearean language and literary elements. The play will serve as a way to study figurative language, theme, imagery, inference, nuance of language, author's choice, and use of dramatic elements.

Key Assignment – Shakespearean Scene: students will re-write and perform a scene from the play in an alternate time-period using precise language, dialogue, and action. Students will provide stage directions and setting to reflect time and character. Students will analyze figurative language, character motivation, and plot in order to design the scene for a different time period while maintaining Shakespeare's story.

Imagination and Innovation

A variety of readings, both literary and expository, in addition to media around the topic of the environment are the vehicle to introduce rhetoric and argumentative writing. Students will evaluate expository writing and media for rhetorical appeals and strategies. They will analyze literary text for the use of foreshadowing, characterization, and choice of narrator for author's purpose and theme, as a means of persuasion. In addition, there is a focus on academic vocabulary and Latin roots in this unit.

Key Assignment – Argumentative Essay: students will develop a claim about the environment based on the readings and media from this unit. Students will include use of rhetorical appeals and counterargument in a multi-paragraph essay. Students will use evidence found in the readings and media as well as their own experience in order to support their claim and address the counterargument.

Research Skills

Using previous work on rhetoric and rhetorical strategies, students will analyze advertisement from a variety of media. They will learn how to evaluate sources for reliability, credibility, and validity. In this unit, students will continue to hone their speaking and listening skills through class collaboration, discussion, and presentation. Through writing and speaking, students will synthesize ideas and information using carefully crafted research questions.

Key Assignment – Multimedia Presentation: students will create a five-minute presentation on societal pressure to consume through advertisement. Students will develop research focus and evaluate sources of credible and reliable information. Include a visual (poster or video), a notes page, and oral presentation of research.

Connections

This unit is about connections between fiction and non-fiction, as well as the connections readers make with text and/or media. Students will discuss how personal experience and previous knowledge interact with new information to create unique experiences for the reader/viewer. Through collaboration, critical reading, and writing, students will synthesize information from genres to find connections in how authors develop character. Students will also focus on grammar and the elements of grammar as they are used in different genres.

Key Assignment – Characterization in Nonfiction Poster: students will analyze and evaluate a number of non-fiction texts to discover how the author developed character. They will prepare a chart to identify the strategies authors use to develop character in non-fiction articles.

Elements of Poetry

The focus of this unit is poetry and its characteristics. Student will interact with poems from a myriad of authors through different media. Students will analyze authors' use of poetic devices and their impact on the poem in detail and overall. Through close reading, analytical writing and academic discussion, students will identify theme, tone, and authors' choices.

Key Assignment – Original Poem: students will write an original poem of twenty or more lines with a clear theme and tone. Students will include examples of alliteration, repetition, rhyme, symbolism, and figurative language. Students will present the poem to the class orally and turn in a written copy.

Textbooks

Title	Authors	Publisher	Edition	Website	Is Primary
iLit	Elfrieda H. Hiebert, Sharroky Hollie, Jim Cummins, Roger, Bonair-Agard, Kelly Gallagher, Sharon Vaughn, William G. Brozo	Pearson	2nd/2017 --		Yes

a-g English 10 (CA Standards)

Grades:	10.,
Length:	Full Year
Environment:	Classroom-based
Honors:	None
Subject:	English (B)
Discipline:	English
Institution:	Connecting Waters Network

Course Overview

a-g English 10 (CA Standards) is a California Common Core Standards-based course. It is designed to guide students through the process of developing academic literacy, literary analysis, vocabulary development, critical thinking skills, and interpretation of functional workplace documents. Students will read from wide variety of world literature including short story, non-fiction, drama, poetry, and novels, and will analyze recurrent patterns and themes in historically or culturally significant works. Students will complete a variety of writing assignments that will continue to develop and enhance their skills in composing narrative, expository, persuasive, and descriptive essays. Students will refine their writing skills by focusing on the mechanics of language and vocabulary development. This course provides students with the opportunity to develop the language skills that will prepare them for real-world situations and promote college and career readiness.

Collection 1: Ourselves and Others

1. Collection Description: This collection explores how we interact with other people-- family, enemies, neighbors, strangers, and those with whom we disagree.

Anchor Texts: "What, of This Goldfish, Would You Wish?" by Etgar Keret, Court Opinion by William J. Brennan from *Texas v. Johnson Majority Opinion*, "American Flag Stands for Tolerance", Editorial by Ronald J. Allen

Novel: The Crucible by Arthur Miller

Demonstration:

Selection:	The student will be able to...
"What, of This Goldfish, Would You Wish?"	analyze the impact of cultural background on point of view <i>Speaking Activity: Discussion</i>
Court Opinion	Analyze a Supreme Court opinion, cite evidence used to make inferences and editorial, and compare to text by analyzing the impact of word choice
"American Flag Stands for Tolerance"	<i>Writing Activity: Comparison</i> <i>Writing Activity: Analysis</i>
"My So-Called Enemy"	Analyze how director unfolds a series of ideas to advance a purpose and a point of view <i>Speaking Activity: Argument</i>
"The Lottery"	Analyze a writer's choices in terms of pacing, word choice, tone, and mood <i>Writing Activity: Letter</i>
"Without Title"	Support inferences about theme <i>Speaking Activity: Oral Narrative</i>

2. Assignment:

Performance Task ~ Writing Activity: Comparison

The Supreme Court determines whether official actions follow the Constitution. In *Texas v. Johnson*, the Courts ruling centered on the First Amendment. Compare ideas in the decision and the amendment:

First Amendment ~ Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press; or the right of the people peaceably to assemble, and to petition the Government for redress of

grievances.

- Identify concepts that are discussed in both documents. How does each document address them?
- In a paragraph, compare the two documents. Support your points with examples from both texts.

Students will be paired to identify and take notes about the concepts discussed in both documents and how those concepts are developed. Students will work individually on a one paragraph comparison of the two documents, supporting ideas with examples from their notes.

Students will learn to...

- Cite textual evidence
- Determine a central idea and analyze its development
- Analyze how an author's ideas are developed by particular sentences or paragraphs
- Delineate and evaluate the argument and specific claims in a text; identify false statements.

Collection 2: The Natural World

1. Collection Description: The collection explores how we are intertwined with nature: We affect it as much as it affects us.

Anchor Texts: "Called Out", by Barbara Kingsolver, "My Life as a Bat" by Margaret Atwood

Novel: Sense and Sensibility by Jane Austen

Demonstration:

Selection: The student will be able to...

Determine a central idea in an essay and figurative, connotative, and technical meanings of words and phrases

"Called Out" *Speaking Activity: Analysis*

Identify the theme of a poem through writing an objective summary that states the key events and ideas in the poem

"When I Heard the Learn'd Astronomer" *Writing Activity: Comparison*

from <i>Hope for Animals and Their World</i>	Analyze an author's claim and purpose <i>Writing Activity: Analysis</i>
"My Life as a Bat"	Analyze a writer's choices in terms of structure, figurative meaning, and tone <i>Speaking Activity: Research</i>
"Carry"	Support inferences about theme <i>Speaking Activity: Discussion</i>

2. Assignment:

Performance Task ~ Writing Activity: Research Report

- Choose three of the texts you have read, including the anchor text "Called Out", that illustrate ways in which humans interact with the natural world. Identify one aspect of the interaction between humans and nature represented in the three chosen texts, and conduct additional research about it. Write a report that develops your central finding about our relationship with nature.

Plan ~ Analyze the Texts:

- Reread "Called Out", and identify how Barbara Kingslover illustrates an interaction between humans and nature. Make notes about specific details and evidence from the text. Then, review your other two chosen texts and note any relevant details about interactions between humans and nature. Be sure to identify only *one* aspect of our relationship with nature that appears in all three texts. This will be the central idea in your research report.

Plan ~ Research:

- Once you have established your central idea and have sufficient evidence from the three texts, you will gather additional evidence to support this idea from other print or online resources.

Locate information on your topic by searching in books, and magazines, or on the Internet. If you are using the Internet, be sure to use reliable sources such as well-known publications or government sites. Avoid personal websites or blogs, which may advocate a particular point of view.

Make note of any important details or quotations on index cards. Include reference information on your card. You will need this later when you cite the text.

Plan ~ Get Organized:

Organize your details and evidence in an outline.

- Decide what organizational pattern you will use for your report. Will you support your central idea by presenting the evidence text by text? Or, will you provide reasons that support your thesis followed by specific references to your chosen texts and additional research?
- Decide which textual and research evidence most effectively supports and enhances the key points expressed in your central idea.
- Use your organizational pattern to sort your textual evidence and research information into a logical order.
- Select an interesting quotation or detail to introduce your research report.
- Jot down some ideas for your concluding section.

Produce ~ Draft Your Report

Write a draft of your report, following your outline.

- Introduce the topic of your central idea. You can begin your report with a broad statement and narrow the scope of your topic as you develop your report.
- Present your details, facts, quotations, and examples from the texts in logically ordered paragraphs. Include appropriate citations for any facts or quotations.
- Use headings to indicate a transition to a new section.
- Write a concluding section that summarizes your research findings. End your report with a universal closing statement about the relationship between humans and nature based on the information presented in your report.
- Create a reference page or Works Cited list. You will need to include each author's last and first name; the title of the book, magazine, or website; year of the publication; the publisher; and other details. Refer to the MLA Citation Guide for additional assistance.

Revise ~ Improve Your Draft

Revise your draft to make sure it is clear, coherent, and engaging. Ask yourself these questions as you revise:

- Have I introduced my central idea clearly? Does my introduction engage the reader?
- Have I presented relevant evidence from the texts and outside resources to support the discrete points of my central idea?
- Is my report logically organized? Are facts and quotations relevant to the central idea? Do I need to incorporate additional transitions?
- Have I maintained a formal style, avoiding slang and nonstandard English?
- Does my conclusion follow logically from the body and provide a satisfying ending?

Present Your Report ~ When your final draft is completed, take turns sharing your reports and a small group. Take notes while your classmates are presenting, and be prepared to ask and respond to questions.

Students will learn to...

- Cite textual evidence
- Determine a central idea in an essay and figurative, connotative, and technical meanings of words and phrases

Collection 3: Responses to Change

1. Collection Description: This collection explores how change is inevitable; how we respond to it reveals who we are.

Anchor Texts: Novella translated by David Wyllie from *The Metamorphosis*, Graphic Novel from *The Metamorphosis*, Documentary Film from *Rivers and Tides*

Demonstration:

Selection: The student will be able to...

Cite text evidence to support inferences

Novella from *The Metamorphosis* *Speaking Activity: Discussion*

Analyze representations in different mediums

Speaking Activity: Comparison

Graphic Novel from *The Metamorphosis*

Use cause-and-effect relationships to make connections between ideas and events

Writing Activity: Analysis

"Magic Island"

Analyze language and make inferences about the theme of a poem

Writing Activity: Argument

Documentary Film ~ from *Rivers and Tides*

Analyze the development of ideas in a documentary

Media Activity: Reflection

2. Assignment:

Performance Task ~ Speaking Activity: Discussion

from *The Metamorphosis* ~ What can you infer about the kind of person Gregor is based on how he responds to the change he has undergone?

- Make notes about the progression of Gregor's thoughts and actions in the selection. Synthesize your findings to make inferences about Gregor's character, and jot down at least two adjectives that describe his personality.
- Use your notes to respond to this question in a group discussion: Does being changed into a "horrible vermin" really change Gregor? Why or why not? Write a summary of your group's answer.

Students will learn to...

- Cite textual evidence to support inferences
- Analyze representations in different mediums

Collection 4: How We See Things

1. Collection Description: This collection explores our view of the world and how it depends not only on our five senses but also on technology and surprising insights.

Anchor Texts: "We grow accustomed to the Dark" and "Before I got my eye put out", by Emily Dickinson, "Coming to Our Senses" Science Essay by Neil de Grasse Tyson

Novel: *Of Mice and Men* by John Steinbeck

Demonstration:

Selection: The student will be able to...

"We grow accustomed to the Dark" Identify and compare poetic structure across to poems as well as paraphrase and summarize ideas

"Before I got my eye put out" *Writing Activity: Essay*

Analyze the development of ideas in nonfiction

"Coming to Our Senses"

Speaking Activity: Discussion

<p>"The Math Instinct"</p> <p>"The Night Face Up"</p>	<p>Determine meaning and analyze ideas</p> <p><i>Writing Activity: Research</i></p> <p>Cite textual evidence and analyze how an author uses parallel plot, tone, pace, and foreshadowing to create tension</p> <p><i>Writing Activity: Analysis</i></p>
<p>"Musee des Beaux Arts"</p>	<p>Analyze representations in different mediums</p> <p><i>Speaking Activity: Comparison</i></p>

2. Assignment:

Performance Task ~ Writing Activity: Analytical Essay

The speaker in a poem is not usually the author. A speaker can be a persona, or character, who reveals his or her thoughts and feelings. Poems can often have a meaning beyond their literal meaning. Both of these poems are metaphorical -- that is, they are not only about the literal loss of sight or physically stumbling in the darkness. Explored the metaphor of sight in Dickinson's poems by writing an analytical essay.

- Identify what the speaker loses in "Before I got my I put out" and explain the speakers reaction to that loss. Would the speaker in "We grow accustomed to the Dark" react differently to the same loss?
- In your essay, explain your interpretation of the attitude of each speaker toward sight.
- Cite evidence from each poem to support your ideas, and use the conventions of standard English.

Students will learn to...

- Cite textual evidence
- Determine the meaning of words and phrases
- Write informative essays to examine complex ideas

Collection 5: Absolute Power

1. Collection Description: This collection examines human ambition; its' timelessness and its' fruits are fleeting.

Anchor Text: *The Tragedy of Macbeth*, Drama by William Shakespeare

Novel: *Julius Cesar* by William Shakespeare

Demonstration:

Selection:

The student will be able to...

"Why Read Shakespeare?"

Analyze the use of rhetoric in an argument

Speaking Activity: Argument

The Tragedy of Macbeth

Analyze interactions between characters and theme

Writing Activity: Analysis

Speaking Activity: Discussion

Writing Activity: Analysis

Speaking Activity: Debate

Writing Activity: Argument

from *Macbeth on the Estate*

Analyze representations of a scene

Speaking Activity: Argument

from *Holinshed's Chronicles*

Analyze historical text

Speaking Activity: Discussion

"The Macbeth Murder Mystery"

Analyze how an author draws on Shakespeare

Writing Activity: Narrative

"5:00 P.M., Tuesday, August 23, 2005"

Make and support inferences about word choice

Speaking Activity: Poetry Reading

2. Assignment:

Performance Task ~ Writing Activity: Analysis

How does dramatic irony intensify the impact of Act III?

- Create a three-column chart with these headings: Lines; What characters do or say; What the audience knows.
- With a partner, identify the two strongest instances of dramatic irony in Act III, and complete the chart with details from those instances.
- Using details from your chart, discuss in a paragraph or two the impact of dramatic irony on the audiences understanding of Macbeth's character.
- Exchange papers with your partner. Partners will read each other's papers to be sure they include details from the chart. Partners will then make suggestions for revisions and grammar, usage, and clarity.
- Make any necessary revisions from suggestions provided by your partner.

Students will learn to...

- Analyze an author's choices concerning structure
- Write informative essays to examine complex ideas

Collection 6: Hard-Won Liberty

1. Collection Description: This collection travels around the world to explore how people win their freedom from oppression.

Anchor Text: *Letter from Birmingham Jail*, Argument by Martin Luther King Jr.

Novel: *Julius Cesar* by William Shakespeare

Demonstration:

Selection: The student will be able to...

Analyze argument in a seminal document

Letter from Birmingham Jail *Writing Activity: Comparison*

Analyze evidence and ideas in a functional document

Revolution

Speaking Activity: Research

Letter to Viceroy, Lord Irwin

Analyze an argument and rhetoric and compare accounts in different mediums

Writing Activity: Analysis

from Gandhi: *The Rise to Fame*

Analyze an argument and rhetoric and compare accounts in different mediums

Speaking Activity: Debate

The Briefcase

Analyze interactions between character and theme in a short story

Writing Activity: Personal Letter

Cloudy Day

Analyze how a poem's shift in tone contributes to its theme

Speaking Activity: Discussion

2. Assignment:

Performance Task ~ Speaking Activity: Debate

Which communicates Gandhi's ideas more effectively, the letter or the film? Decide by participating in a debate.

- Form teams of two to three students each, with half defending the letter as more effective and half defending the film clip. Each team should gather evidence from both the letter and the film to support its position.
- Prepare a chart with the following headings: Key Idea, How to Best Communicate Idea, Why This Communication is Effective, How Other Medium is Less Effective.
- Follow the rules for debating: **A formal debate is not a shouting match--rather, a well-run debate is an excellent forum for participants to express their viewpoints, build on others ideas, and have a thoughtful, well-reasoned exchange of ideas. The moderator will begin by stating the topic or issue and introducing the participants. Participants should follow the moderators instructions concerning whose turn it is to speak and how much time each speaker has.**
- Afterward, write a brief evaluation which side presented a more compelling case. How effectively did the team present reasons and evidence, including evidence from text, to support their position?

Students will learn to...

- Cite textual evidence
- Participate in collaborative discussions with diverse partners.

Textbooks

Title	Authors	Publisher	Edition	Website	Is Primary
Collections Grade 10	Kylene Beers, Martha Hougen, Carol Jago, William L. McBride, Erik Palmer, Lydia Stack	Houghton Mifflin Harcourt	2015	--	Yes

Literary Texts

Title	Authors	Publisher	Edition	Website	Read in Entirety
Julius Caesar	William Shakespeare	Simon & Schuster	2003/Reissue	--	Yes
Sense and Sensibility	Jane Austen	Barnes and Noble	2004/Reissue	--	Yes
The Crucible	Arthur Miller	Penguin Publishing Group	2003	--	Yes
Of Mice and Men	John Steinbeck	Penguin Publishing Group	20156	--	Yes

a-g English 11 (CA Standards)

Grades: 11,

Length: Full Year

Environment: Classroom-based

Honors: None

Subject: English (B)

Discipline: English

Institution: Connecting Waters Charter School

Course Overview

a-g English 11 (CA Standards) is a full-year California Common Core Standards-based course which introduces the student to various genres and periods of American Literature. The course is designed to improve students' abilities in becoming skilled readers of prose in a variety of periods, genres, disciplines, and rhetorical contexts with an emphasis on students' interpretive skill in reading challenging literature. Students have a number of opportunities and projects to advance their writing and stylistic development in composing for a variety of purposes, audiences, and contexts. Students write on a variety of subjects and in a range of discourse modes, including expository and argumentative writing, applying and integrating appropriate rhetorical strategies. Overall, this course will enable students to read, comprehend, and interpret complex texts in American Literature with understanding and to effectively communicate with advanced audiences and readers through writing.

Collection 1 ~ Coming to America

Exploration and Settlement

In this collection, students will explore how America has always been a land shaped by immigrants.

Novel Study: The Scarlet Letter ~ Nathaniel Hawthorne

Analyzing the Text/Critical Vocabulary/Vocabulary Strategy/Post-test Completed for Each Text

Anchor Text

Historical Account ~ *from Of Plymouth Plantation* ~ William Bradford

Historical Writing ~ Coming of Age in the Dawnland *from 1491* by Charles C. Mann

Drama ~ Introduction to *The Tempest* by William Shakespeare

Compare Text and Media

Media Versions of The Tempest

Film Version The Tempest ~ BBC Shakespeare

Short Story ~ Balboa ~ by Sabina Murray

Argument ~ "Blaxicans" and Other Reinvented Americans ~ by Richard Rodriguez

Poem ~ New Orleans ~ by Joy Harjo

Performance Task ~ Write an Argument

This collection focuses on how relocating to the Americas changed settlers' lives and how settlers changed the Americas through their interaction with the land and its native populations. Look back at Of Plymouth Plantation and at other texts in this collection. Write an argument that persuades readers to agree with your claim about how immigration changed America and the lives of those who settled here.

An effective argument

- states a precise claim, or position, on an issue
- develops the claim with valid reasons and relevant evidence
- anticipates opposing claims and offers well-supported counterclaims
- establishes clear, logical connections among claims, counterclaims, reasons, and evidence
- includes an introduction, a logically structured body, and a conclusion
- maintains an appropriate tone based on its audience and context

Key Learning Objectives

Cite text evidence. Determine central ideas. Determine themes. Support inferences. Determine meaning of words/phrases. Analyze language. Analyze story structure. Understand point of view and irony. Analyze and evaluate an argument. Determine author's purpose. Analyze drama interpretations. Analyze foundational texts.

Assignments

COLLECTION PERFORMANCE TASK

Write an Informative Essay ~

This collection focuses on ways that Americans during and after the revolution envisioned the future of their new nation. Choose three texts in this collection, including the anchor texts—the Declaration of Independence and the U.S. Constitution—and identify how each author, character, or founder finds a balance between preserving individual rights and forming a strong, long-lasting union. Write an informative essay in which you cite evidence from all three texts.

Your informative essay should include

- an introduction with a clear thesis statement about the conflict between centralized government and individualism as explored in the anchor texts and one other text from the collection
- a logically structured body that thoroughly develops the topic with relevant examples, details, and quotations from the texts
- transitions to clarify the relationships between sections of your essay and to link ideas with the textual evidence that supports them
- a conclusion that follows from the ideas in the body of the essay
- precise use of language with appropriate tone and style

Collection 2 ~ Building a Democracy

A New American Nation

This collection explores how people who are so different can work together to create a unified whole while also protecting the rights of everyone.

Analyzing the Text/Critical Vocabulary/Vocabulary Strategy/Post-test Completed for Each Text

COMPARE ANCHOR TEXTS

PUBLIC DOCUMENTS ~ The Declaration of Independence ~ Thomas Jefferson

from The United States Constitution: Preamble and Bill of Rights

ARGUMENT ~ The Federalist No. 10 ~ James Madison

HISTORY ARTICLE ~ Thomas Jefferson: The Best of Enemies ~ Ron Chernow

COMPARE TEXTS ~ Colonial American Poetry

POEMS

To the Right Honorable William, Earl of Dartmouth ~ Phillis Wheatley

On Being Brought from Africa to America ~ Phillis Wheatley

On the Emigration to America and Peopling the Western Country ~ Philip Freneau

SHORT STORY ~ A Soldier for the Crown ~ Charles Johnson

MEDIA ANALYSIS ~ DOCUMENTARY FILM ~ Patrick Henry: Voice of Liberty (A&E)

PUBLIC DOCUMENT ~ from The United States Constitution

PUBLIC DOCUMENT ~ Petition to the Massachusetts General Assembly ~ Prince Hall

HISTORY WRITING ~ Abigail Adams' Last Act of Defiance ~ Woody Holton (Video Link)

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- transitions to clarify the relationships between sections of your essay and to link ideas with the textual evidence that supports them
- a conclusion that follows from the ideas in the body of the essay
- precise use of language with appropriate tone and style

KEY LEARNING OBJECTIVES

Analyze and compare themes and topics. Analyze ideas and sequence. Analyze language. Understand a key term. Analyze style. Analyze structure.

Analyze and evaluate an argument. Analyze point of view. Analyze a video. Evaluate constitutional principles. Analyze foundational documents.

Assignments

Collection Performance Task

Write an Informative Essay

This collection focuses on ways that Americans during and after the revolution envisioned the future of their new nation. Choose three texts in the collection, including the anchor texts- the Declaration of Independence and the U.S. Constitution- and identify how each author, character, or founder finds a balance between preserving individual rights and forming a strong, long-lasting union. Write an informative essay in which you cite evidence from all three texts.

Your informative essay should include:

- An introduction with a clear thesis statement about the conflict between centralized government and individualism as explored in the anchor texts and one other text from the collection
- A logically structured body that thoroughly develops the topic with relevant examples, details and quotations from the texts
- Transitions to clarify the relationships between sections of your essay and to link ideas with the textual evidence that supports them
- A conclusion that follows from the ideas in the body of the essay
- Precise use of language with appropriate tone and style

Collection 3 ~ The Individual and Society

A Distinctly American Voice

In this collection, you will explore how writers in the early 19th century created a new “American” literature.

Novel Study ~ Edgar Allan Poe Anthology including The Cask of Amontillado, Fall of the House of Usher and The Pit & the Pendulum

Analyzing the Text/Critical Vocabulary/Vocabulary Strategy/Post-test Completed for Each Text

ANCHOR TEXT

POEM ~ from Song of Myself ~ Walt Whitman

ESSAY ~ Growing Up Asian in America ~ Kesaya E. Noda

Poems of Emily Dickinson

POEMS

The Soul selects her own Society ~ Emily Dickinson

Because I could not stop for Death ~ Emily Dickinson

Much Madness is divinest Sense ~ Emily Dickinson

Tell all the Truth but tell it slant ~ Emily Dickinson

ESSAY

from Walden ~ Henry David Thoreau

ANCHOR TEXT

ARGUMENT ~ Against Nature ~ Joyce Carol Oates

COMPARE TEXTS

SHORT STORY ~ The Minister's Black Veil ~ Nathaniel Hawthorne

SHORT STORY ~ The Pit and the Pendulum ~ Emily Dickinson

SHORT STORY ~ The Men in the Storm ~ Stephen Crane

SCIENCE WRITING ~ The Yuckiest Food in the Amazon ~ Mary Roach

SHORT STORY ~ A Journey ~ Edith Wharton

POEM ~ Ode to a Large Tuna in the Market ~ Pablo Neruda

COLLECTION PERFORMANCE TASK

Write a Narrative

The texts in this collection focus on the individual and how individuals fit into the larger schemes of nature and society. Consider the following quotation:

"Trust thyself: every heart vibrates to that iron string." (Ralph Waldo Emerson, from "Self-Reliance")

What does this quote really mean and how does it connect to the texts in this collection? Should we all listen to our own internal sense of what is right or wrong, or what is true or untrue? Look back at the anchor text “Song of Myself” and at the other texts in the collection. Then synthesize your ideas about the role of an individual in society by writing a personal, nonfiction, or fictional narrative.

An effective narrative:

- introduces a setting and main character and establishes a clear point of view
- engages readers by presenting a conflict, situation, or observation that sets the narrative in motion
- describes a clear and logical sequence of events
- uses a variety of narrative techniques, such as dialogue, pacing, and description
- reveals a significant theme related to the Emerson quotation
- concludes by resolving the conflict or by conveying the writer’s reflection on the experiences described in the narrative

Debate an Issue

This collection focuses on individualism, imagination, society, and nature. The anchor text “Against Nature” presents a critique of the way many writers have interpreted the natural world, including Henry David Thoreau in *Walden*. Do you agree or disagree with Joyce Carol Oates’s critical assessment of nature writing? Synthesize your ideas by writing a brief argument and then debating the issue with your classmates.

Participants in an effective debate

- argue for or against Oates’s assessment of nature writing
- draw upon evidence from “Against Nature” and at least one other text from the collection
- follow an orderly format in which speakers from each team take turns presenting their claims, counterclaims, reasons, and evidence
- encourage a thoughtful, well-reasoned exchange of ideas in which participants respond to diverse perspectives, build on each other’s ideas, and evaluate the reasoning of other speakers

KEY LEARNING OBJECTIVES

Cite text evidence. Summarize. Determine central ideas. Determine themes. Analyze ideas and events. Analyze language. Interpret symbols.

Analyze structure. Analyze structure and mood. Determine author’s purpose. Evaluate purpose and style.

Assignments

Collection Performance Task

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The texts in this collection focus on the individual and how individuals fit into the larger schemes of nature and society. Consider the following quotation:

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- Describes a clear and logical sequence of events
- Uses a variety of narrative techniques, such as dialogue, pacing, and description
- Reveals a significant theme related to the Emerson quotation
- Concludes by resolving the conflict or by conveying the writer’s reflection on the experiences described in the narrative

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Participate in an effective debate:

- Argue for or against Oates's assessment of nature writing
- Draw upon evidence from "Against Nature" and at least one other text from the collection
- Follow an orderly format in which speakers from each team take turns presenting their claims, counterclaims, reasons, and evidence
- Encourage a thoughtful, well-reasoned exchange of ideas in which participants respond to diverse perspectives, build on each other's ideas, and evaluate the reasoning of other speakers

Collection 4 ~A New Birth of Freedom

Civil War and Reconstruction

In this collection, you will explore how African Americans and women gained new freedoms after a bloody civil war.

Novel Study ~ Moby Dick by Herman Melville

ANCHOR TEXT

SPEECH ~ Second Inaugural Address ~Abraham Lincoln

SPEECH ~ What to the Slave Is the Fourth of July? ~Frederick Douglass

PUBLIC DOCUMENT ~ Declaration of Sentiments ~ Elizabeth Cady Stanton

HISTORY WRITING ~ Building the Transcontinental Railroad ~ Iris Chang

MEDIA ANALYSIS

DOCUMENTARY FILM ~ The 54th Massachusetts

POEM ~ Runagate Runagate ~ Robert Hayden

KEY LEARNING OBJECTIVES

Cite text evidence. Analyze ideas and events. Analyze language. Analyze structure.

Analyze author's point of view. Analyze author's purpose. Integrate and evaluate information. Evaluate seminal texts.

COLLECTION PERFORMANCE TASK

Present a Persuasive Speech

The important historical texts in this collection focus on the continuing work of bringing freedom and justice to all members of American society. Look back at the anchor text, Lincoln's Second Inaugural Address, and at the other texts in the collection. What messages about freedom—its meaning and its costs—do the texts convey? Synthesize your ideas by preparing a persuasive speech about a kind of freedom you would like to see expanded in today's world.

An effective speech

- identifies a type of freedom to be expanded and states a precise claim about it
- develops the claim with valid reasons and evidence from Lincoln's Second Inaugural Address and two other collection texts
- anticipates opposing claims and addresses them effectively with counterclaims
- establishes logical relationships among claims, reasons, and evidence
- has a conclusion that follows logically from the body of the speech and makes a persuasive call to action
- engages the audience by including a variety of rhetorical devices and techniques to support the claim
- maintains a formal tone through appropriate word choices and the use of standard English
- maintains interest with appropriate emphasis, volume, and gestures

Assignments

Collection Performance Task

Present a Persuasive Speech

The important historical texts in this collection focus on the continuing work of bringing freedom and justice to all members of American society. Look back at the anchor text, Lincoln's Second Inaugural Address, and at the other texts in the collection. What messages about freedom—its meaning and its costs—do the texts convey? Synthesize your ideas by preparing a persuasive speech about a kind of freedom you would like to see expanded in today's world.

An effective speech:

- Identifies a type of freedom to be expanded and states a precise claim about it
- Develops the claim with valid reasons and evidence from Lincoln's Second Inaugural Address and two other collection texts
- Anticipates opposing claims and addresses them effectively with counterclaims
- Establishes logical relationships among claims, reasons, and evidence
- Has a conclusion that follows logically from the body of the speech and makes a persuasive call to action
- Engages the audience by including a variety of rhetorical devices and techniques to support the claim
- Maintains a formal tone through appropriate word choices and the use of standard English
- Maintains interest with appropriate emphasis, volume and gestures.

Collection 5 ~ An Age of Realism

America Transformed

In this collection, students will explore how post–Civil War America experienced rapid industrialization, urban growth, and social change.

ANCHOR TEXT

SHORT STORY ~ To Build a Fire ~ Jack London

COMPARE TEXTS

NOVEL ~ from The Jungle ~ Upton Sinclair

INVESTIGATIVE JOURNALISM ~ Food Product Design

from Fast Food Nation~ Eric Schlosser

ESSAY ~ The Lowest Animal ~ Mark Twain

COMPARE TEXT AND MEDIA ~ Tenements and the “Other Half”

ESSAY ~ Genesis of the Tenement ~ Jacob Riis

IMAGE COLLECTION ~ Tenement Photos ~ Jacob Riis

REPORT ~ Child Mortality Rates

VIDEO ~ AMERICA The Story of Us: Jacob Riis HISTORY

SHORT STORY ~ The Story of an Hour ~ Kate Chopin

POEM ~ The Fish ~ Elizabeth Bishop

SHORT STORY ~ The Men in the Storm ~ Stephen Crane

SCIENCE WRITING ~ The Yuckiest Food in the Amazon ~ Mary Roach

SHORT STORY ~ A Journey ~ Edith Wharton

POEM ~ Ode to a Large Tuna in the Market ~ Pablo Nerud

COLLECTION PERFORMANCE TASK

Write an Analytical Essay

This collection opens with the quotation “Reality is that which, when you stop believing in it, doesn’t go away.” Review the anchor text, “To Build a Fire,” and the other collection texts. What particular themes or central ideas does each writer want readers to recognize about reality, and why? What stylistic choices does each author make to reveal a specific version of reality? Synthesize your ideas by writing an analytical essay.

An effective analytical essay

- includes a clear thesis statement, or controlling idea
- organizes central ideas in a logically structured body that clearly develops the thesis statement
- uses transitions to create a cohesion between sections of the text and to clarify relationships among ideas
- includes relevant textual evidence to illustrate central ideas
- has a concluding section that follows logically from the body

KEY LEARNING OBJECTIVES

Cite text evidence. Analyze technical terms. Interpret symbols. Analyze structure. Analyze author’s choices. Analyze irony and point of view. Determine author’s purpose. Determine author’s point of view. Evaluate use of satire. Integrate and evaluate information.

Assignments

Collection Performance Task

Write an Analytical Essay:

This collection opens with the quotation “Reality is that which, when you stop believing in it, doesn’t go away.” Review the anchor text, “To Build a Fire,” and the other collections texts. What particular themes or central ideas does each writer want readers to recognize about reality, and why? What stylistic choices does each author make to reveal a specific version of reality?

Synthesize your ideas by writing an analytical essay.

An effective analytical essay

- Includes a clear thesis statement, or controlling ideas
- Organizes central ideas in a logically structured body that clearly develops the thesis statement
- Uses transitions to create a cohesion between sections of the text and to clarify relationships among ideas
- Includes relevant textual evidence to illustrate central ideas
- Has a concluding section that follows logically from the body

Collection 6 ~ The Modern World

Life in a Global Society

In this collection, you will explore how Americans have responded to modern life in a globally connected world.

Novel Study ~ Moby Dick by Herman Melville

ANCHOR TEXT

SHORT STORY ~Winter Dreams ~ F. Scott Fitzgerald

COMPARE TEXTS

The Harlem Renaissance

Poems of the Harlem Renaissance

POEMS

Song of the Son ~ Jean Toomer

From the Dark Tower ~ Countee Cullen

A Black Man Talks of Reaping ~ Arna Bontemps

POEMS

Mending Wall ~ Robert Frost

The Death of the Hired Man ~ Robert Frost

Modern American Drama

ANCHOR TEXT ~ The Crucible ~ Arthur Miller

COMPARE TEXT AND MEDIA ~ Media Versions of The Crucible

AUDIO VERSION ~ The Crucible

PRODUCTION IMAGES ~ The Crucible

OPINION AND DISSENTS ~ Tinker v. Des Moines Independent Community School District

Supreme Court of the United States

SCIENCE ESSAY ~ The Coming Merging of Mind and Machine ~ Ray Kurzweil

SHORT STORY ~ Reality Check ~David Brine

ARGUMENT ~ The Ends of the World as We Know Them ~ Jared Diamond

POEM ~ The Universe as Primal Scream ~ Tracy K. Smith

KEY LEARNING OBJECTIVES

Cite textual evidence to support inferences. Analyze character motivation. Analyze science fiction. Analyze drama elements. Analyze language. Analyze structure.

Analyze structure of an argument. Analyze author's point of view. Analyze drama interpretations. Delineate and evaluate an argument. Analyze foundational works.

COLLECTION PERFORMANCE TASKS

Write an Argument

This collection opens with the quotation "Reality is that which, when you stop believing in it, doesn't go away." Review the anchor text, "To Build a Fire," and the other collection texts. What particular themes or central ideas does each writer want readers to recognize about reality, and why? What stylistic choices does each author make to reveal a specific version of reality? Synthesize your ideas by writing an analytical essay.

An effective analytical essay

- includes a clear thesis statement, or controlling idea
- organizes central ideas in a logically structured body that clearly develops the thesis statement
- uses transitions to create a cohesion between sections of the text and to clarify relationships among ideas

- includes relevant textual evidence to illustrate central ideas
- has a concluding section that follows logically from the body

Participate in a Panel Discussion

This collection focuses in part on the abundance of information in American society and how it affects our lives and future. Look back at the texts in this collection, including the anchor text *The Crucible*, and consider the quotation by Gertrude Stein: “Everybody gets so much information all day long that they lose their common sense.” What influences how people react to information? Write and deliver a reflective narrative about an experience you have had with information overload.

An effective reflective narrative

- explores the significance of a personal experience, event, or concern
- uses sensory language to convey a vivid picture
- includes narrative techniques such as dialogue, pacing, and description
- draws comparisons between the specific incident and broader themes about how information affects us

Key Learning Objectives:

- Cite textual evidence to support inferences. Analyze character motivation. Analyze science fiction. Analyze drama elements. Analyze language. Analyze structure.
- Analyze structure of an argument. Analyze author’s point of view. Analyze drama interpretations. Delineate and evaluate an argument. Analyze foundational works.

Assignments

Collection Performance Tasks

Write an Argument:

This collection opens with the quotation “Reality is that which, when you stop believing in it, doesn’t go away.” Review the anchor text, “To Build a Fire”, and the other collection texts. What particular themes or central ideas does each writer want readers to recognize about reality, and why? What stylistic choices does each author make to reveal a specific version of reality? Synthesize your ideas by writing an analytical essay.

An effective analytical essay

- Includes a clear thesis statement, or controlling idea

- Organizes central ideas in a logically structured body that clearly develops the thesis statement
- Uses transitions to create a cohesion between sections of the text and to clarify relationships among ideas
- Includes relevant textual evidence to illustrate central ideas
- Has a concluding section that follows logically from the body

Participate in a Panel Discussion:

This collection focuses in part on the abundance of information in American society and how it affects our lives and future. Look back at the texts in the collection, including the anchor text *The Crucible*, and consider the quotation by Gertrude Stein: “Everybody gets so much information all day long that they lose their common sense.” What influences how people react to information: Write and deliver a reflective narrative about an experience you have had with information overload.

An effective reflection narrative

- Explores the significance of a personal experience, event, or concern.
- Uses sensory language to convey a vivid picture
- Includes narrative techniques such as dialogue, pacing, and description
- Draws comparisons between the specific incident and broader themes about how information affects us

Textbooks

Title	Authors	Publisher	Edition	Website	Is Primary
CA Collections - Grade 11	Kylene Beers, Martha Hougen, Carol Jago, William L. McBride, Erik Palmer, Lydia Stack	Houghton Mifflin Harcourt Publishing Company	2017	https://my.hrw.com	Yes

Literary Texts

Title	Authors	Publisher	Edition	Website	Read in Entirety
The Scarlet Letter	Nathaniel Hawthorne	Barnes & Noble	2004	--	Yes
Edgar Allan Poe Anthology including <i>The Cask of Amontillado</i> , <i>Fall of the House of Usher</i> , and <i>The Pit & the Pendulum</i>	Edgar Allan Poe	Barnes & Noble	2004	--	Yes
Moby Dick	Herman Melville	Barnes & Noble	2016	--	Yes

A-G English 12

Grades:

12

Length:

Full Year

Environment:

Classroom-based

Honors:

None

Subject:

English (B)

Discipline:

English

Institution:

Sea Change Preparatory

Course Overview

English 12 is an expository-based course that focuses on developing argumentative reasoning and writing skills that prepares students to be successful in college level ELA courses. Selections chosen within this theme are used to inspire and motivate students to learn the objectives in the unit. Students focus on essential questions that fuel literary expression throughout thematically based units called “COLLECTIONS”. Students analyze and evaluate in writing or discussion, complex texts in a variety of genres of literary texts, informational texts, and media to build effective evidence-based arguments and to clearly convey information. Each collection reflects an engaging topic designed to engage students in social justice matters, as well as real-life scenarios. The classic and contemporary selections within the collections illustrate how the themes and topics transcend time and remain relevant to today’s readers. A wide range of text-dependent questions, engage students within the text. Students make inferences, and cite textual evidence to support their claims. Students are exposed to selections by writers from diverse cultures. They learn that textual analysis applies to a variety of media as well as print and then use skills to compare and analyze media. Students strengthen their range of writing through a wide range of writing styles such as informative/explanatory texts, narrative texts, college-level analytical essays, literary analysis, and long and short research papers. Extensive writing exercises, defined as “performance tasks”, are listed below each unit in the course. Students practice speaking activities such as debates, discussions, performances, role playing, and other oral interpretations and presentations. In addition, students receive extensive practice in aspects of language and style that includes elements such as sentence structure, parts of speech, active and passive voice, and critical vocabulary. Students are given flexibility in creating **Substitution Projects** that can replace a portion of assigned curriculum provided the substitution meets the objectives of the unit and teacher approval. The curriculum is divided into two semesters of 18 modules of instruction and two additional modules that include a culminating project, a power-point presentation of 3 concepts with self and world relevance, a portfolio and a final exam. This course follows the California Common Core State Standards for English Language Arts and the California English Language Development Standards for Grade 12.

Students are Required to complete one full length novel independent reading assignment per semester. Students use a digital resource that is provided with the course to help students find an appropriate novel and associated assignment to complete.

Assessments

Selection Tests within each unit are available online and administered at teacher's discretion.

Collection Tests are available online and administered at teacher's discretion.

Three Benchmark tests that span two semesters are available online and administered.

Final Exams are administered at the end of First and Second Semesters.

Unit One: Chasing Success Modules 1-6

In this collection, students learn that sacrifice is a key element in acquiring success. Success means achieving whatever goal a person decides is important. *Chasing* in this context means "doing whatever it takes to achieve a goal". The texts in this collection explore what success means to different people and what they do to achieve it. Students will analyze how details and other elements in an essay deliver the author's significant points about education. In other selections, students will analyze the American Education system, significance of test scores, the nature of children's success in school, public education and the "Right to Choose Single-sex Education". Students will examine an argument about two ways of viewing intelligence and the scientific research that indicates which one leads to greater success in life. Students will analyze a text's language and explore the impact of specific word choices that will help students draw inferences about characters and events. Later in the collection, students interpret and compare the dramatic elements of conflict and symbolism in a written drama and the same drama performed as an opera. The selection titles in this collection including, authors, writers, or producers, are listed below.

Sample Assignments:

Write a Review of Michael Lewis's address for the alumni newsletter from the viewpoint of a graduate in the audience. Comment on the relevance of his central idea, the focus and organization of his speech, the development of his central idea and the style of his delivery.

After reading *A Walk to the Jetty from Annie John*, outline a discussion of Annie John's view of her life on the island.

The collection includes text-book written questions that analyze the selections and require students to cite evidence in their answers. These questions can be assigned at the teacher's discretion.

Primary Collections Performance Task A (optional)

Debate an Issue. (Step by step instruction on pgs. 67-70 primary text Collections 12). With a group

of students, conduct a debate on whether all students should have longer school days and shorter vacations.

Primary Collections Performance Task B

Write a Compare-Contrast Essay (Step by step instruction on pgs. 71-74 primary text Collections 12). The essay should compare and contrast Annie John's experience with that of another character or person profiled in the collection. Include a discussion of the sacrifices these individuals make and whether these sacrifices are worth it.

Vocabulary Strategies Outlined and Practiced in the Collection: context clues, prefixes with multiple meanings, etymology.

Language and Style Outlined and Practiced in the Collection: subject-verb agreement, dialect.

Other Performance Tasks Suggested in the Collection: write a diary, write a letter from a first person point of view, examine dialogue and how it reveals conflict, write a critique of the opera version of *Die Zauberflöte*. Students **at this level** may not complete every task. They are assigned at teacher's discretion.

Selections Include: Students **at this level** may not complete every selection. They are assigned at teacher's discretion.

Marita's Bargain by Malcolm Gladwell. (essay)

Kewaun's Ambition by Paul Tough. (non-fiction)

Don't Eat Fortune's Cookie by Michael Lewis. (video-graduation speech)

A Right To Choose Single-Sex Education by Hutchison and Mikulski. (opinion from a Wall Street Journal article)

The Secret to Raising Smart Kids by Carol S. Dweck. (science article)

A Walk to the Jetty from *Annie John* by Jamaica Kincaid. (novel)

Next Term, We'll Mash You by Penelope Lively

Unit Two: Gender Roles Modules 7-12

Students will explore the complexity of gender roles in society including traditional roles of men and women as well as changes in gender roles that have occurred in recent decades. Gender roles are both cultural and personal. In many societies, including ours, gender roles determine how males and females should speak think, dress, and act. This collection explores how gender roles play out in our society including in male and female interactions, in how we see ourselves, and in how we view others. Students will be exposed to elements of Geoffrey Chaucer's genius in

a narrative poem from *The Canterbury Tales*. Students will analyze the narrator and frame story of a narrative poem. Students will analyze the techniques, such as irony, that Chaucer uses to convey his themes of personal greed and corruption. In another selection, students learn from a world with which they may be unfamiliar. Students use inference made to draw conclusions about social position in the neighborhood. Through the figurative language of poetry, students explore the complexity of a child-father relationship. Students will explore written and media generated political arguments such about education and rights for women, such as Saudi women, and analyze counter-arguments and rhetorical devices used in an argument. Later in the collection students will explore the provocative issue of gender inequality and the writer's evolving perspective on the issue. After determining the author's point of view, students will be challenged to determine their own point of view. Upon reading another selection, students will learn of the expected conformity of women during the era from 1940-1970. Young readers may not be familiar with the culture that the author mocks. Students will be led to fully comprehend this author's perspective. The selection titles in this collection including, authors, writers, or producers, are listed below.

Sample Assignments:

Write a two-page discussion about how and why the participants in the selection online article *In a Scattered Protest, Saudi Women Take the wheel* organized the protest. Was the protest effective? Cite specific textual evidence from the article to support your ideas. Then compare the similarities and differences of the depiction of the protest in the news video to the online written article.

After reading *The Men We Carry in Our Minds*, note in writing, the experiences that have influenced Sander's views about men and women.

The collection includes text-book written questions that analyze the selections and require students to cite evidence in their answers. These questions can be assigned at the teacher's discretion.

Primary Collections Performance Task A

Write an Informative Essay. (Step by step instruction on pgs.141-144 primary text Collections 12). Write an informative essay about understanding between men and women, drawing on *The Wife of Bath's Tale* by Chaucer and two other selections in this collection.

Primary Collections Performance Task B (optional)

Deliver a Reflective Narrative (Step by step instruction on pgs.145-148 primary text Collections 12). How have the texts in this collection changed the way you think about gender roles? Think about an experience in your own life that has challenged or strengthen your beliefs in the differences between men and women. Write a reflective narrative about your experience and then present it to the class.

Vocabulary Strategies Outlined and Practiced in the Collection: usage, consult a dictionary, multiple meanings, context clues.

Language and Style Outlined and Practiced in the Collection: inverted sentences, adjectives and adverbs, alliteration and consonance, sentence structure, syntax.

Other Performance Tasks Suggested in the Collection: character analysis, write a description, oral interpretation, oral presentation, debate. Students **at this level** may not complete every task. They are assigned at teacher's discretion.

Selections Include: Students **at this level** may not complete every task. They are assigned at teacher's discretion.

The Wife of Bath's Tale by Geoffrey Chaucer. (narrative poem)

The Pardoners Tale by Geoffrey Chaucer. (narrative poem)

Mallam Sile by Mohammed Naseehu Ali. (short story)

My Father's Sadness by Shirley Geok-lin Lim. (poem)

From a Vindication of the Rights of Women by Mary Wollstonecraft. (political argument)

In a Scattered Protest, Saudi Women Take the Wheel by Neil MacFarquhar and Dina Salah Amer. (online article)

Saudi Women Defy Driving Ban. (news video)

The Men We Carry in our Minds by Scott Russell Sanders. (essay)

From Pink Think by Lynn Peril. (essay)

History's Mysteries: The Knights of Camelot. (video History)

Unit Three: Voices of Protest Modules 13-18

In this title voices refers not only to spoken language but also to the work of writers and others who protest situations that they feel are wrong. In this collection, students will encounter voices of protest that span nearly three centuries expressed through many genres and tackling issues such as war, tyranny, slavery, environmental destruction, prejudice and poverty. Students begin the collection with Martin Luther King's historic speech on the Vietnam War. King presents a compelling argument about the need for change in American Policy. Students are guided in an evaluation of the reasoning and language King uses to persuade his listeners. Students learn to delineate and evaluate an argument as well as determine connotative meanings of the language used. To help students gain an understanding of a writer's ideas and evidence, students read an argument in a persuasive speech that uses complex inductive reasoning or "loaded Language". They trace and evaluate the argument that money spent on weapons to fight the Vietnam war would be better spent on education and social problems in our nation. Another lesson will explore

ideas about citizen's responsibilities to the government and to one's own conscience. Students will be able to analyze foundational documents and delineate and evaluate arguments. An essay is a vehicle for the exchange of ideas. Students examine events in an author's life that leads the author to the realization about the impact of human actions on the environment that he/she shares. Students can then analyze cause and effect and cite evidence to support inferences. Through analysis of an author's exposure of cruel practices of the English, students learn to recognize satire in its historical context when encountered in various forms in the media. Later in the collection, students will better comprehend satirical texts as they analyze an article that seems to defend the wealthy and criticize the middle class when the author is claiming just the opposite. Students learn to integrate and evaluate information that is presented in words and photographs as they study photojournalism that uses images and words to present a picture of poverty in America. To analyze the impact of word choice on meaning and tone in a poem, students study poetry that seeks to expose and address injustice. The selection titles in this collection including, authors, writers, or producers, are listed below.

Sample Assignments:

Write a short poem inspired by one of the images or statements in *Imagine the Angels of Bread*. Decide on a theme, or message, that you want to convey in the poem. Choose word and images that create an appropriate tone. Read your poem to your classmates and get feedback. Were you able to effectively convey your message in poetry.

Write a two-page discussion about how Jonathan Swift in *A Modest Proposal* increases the impact of his satire by making his proposal appear legitimate. Cite specific textual evidence from the essay in support.

The collection includes text-book written questions that analyze the selections and require students to cite evidence in their answers. These questions can be assigned at the teacher's discretion.

Primary Collections Performance Task A (optional)

Participate in a Group Discussion. (Step by step instruction on pgs. 221-224 primary text Collections 12) Using *Speech on the Vietnam War* and other texts in the collection, conduct a discussion on what connections are seen between examples of injustice explored in each text. Have a group discussion on the topic and then write a three-page summary of the discussion.

Primary Collections Performance Task B Write a Satire (Step by step instruction on pgs. 225-228 primary text Collections 12). In *A Modest Proposal*, Jonathan Swift proposes a satirical solution to one particular injustice as a way of exposing its horrors. Using Swift's essay as a model, write a satire on a topic covered in one of the other texts in the collection.

Vocabulary Strategies Outlined and Practiced in the Collection: suffixes, clarify precise

meaning, denotation and connotation.

Language and Style Outlined and Practiced in the Collection: imperative mood, combining sentences, gerunds and gerund phrases, active and passive voice, photo essay.

Other Performance Tasks Suggested in the Collection: write a review, write a letter, write a report. Students at this level may not complete every task. They are assigned at teacher's discretion.

Selections Include: Students at this level may not complete every selection. They are assigned at teacher's discretion.

Speech on the Vietnam War, 1967 by Martin Luther King Jr. (speech)

People and Peace, Not Profits and War by Shirley Chisholm. (speech)

From The Crisis by Thomas Paine. (essay)

From Civil Disobedience by Henry David Thoreau. (essay)

The Clan of One-Breasted Women by Terry Tempest Williams. (essay)

Who Speaks for the 1% by Jonathan Swift. (article)

Third world America by Alison Wright. (photojournalism)

Imagine the Angels of Bread by Martin Espada. (poem)

Elsewhere by Derek Walcott. (poem)

The Presidents: LBJ: Civil Rights and Vietnam. (video History)

Shirley Chisholm Runs for Presidential Nomination. (video History)

Unit Four Culminating Project, Final Exam and Portfolio End of First Semester Modules 19-20.

This unit is unique to the school's philosophy and Mission Statement.

Module 19: Culminating Project and Power-point Presentation.

Objectives:

Organize and apply information learned in the semester's work.

Effectively communicate knowledge through public speaking.

Accept the importance of working as independent individuals.

Ethically and responsibly use technology for educational purposes.

Organize, plan, and implement a project exhibition.

Create a quiz with varied question types and levels of difficulty.

Reflect and assess school life learning goals through project and semester's coursework.

Summarize and analyze the course relevance to self and world.

Module 20: Final Exam and Portfolio.

Objectives:

Evaluate and assess understanding of learning through final exam. The exam consists of multiple choice, completion and essay type questions which are designed to show a student's mastery and understanding of the first semester material.

Organize information learned in the semester's work.

Effectively communicate knowledge and reflection in writing.

Productive member of society who completes coursework in a timely fashion.

Ethically and responsibly use technology for educational purposes.

Reflect and assess school life learning goals through three modules and semester's overall coursework.

Unit Five Seeking Justice, Seeking Peace. Modules 21-30

The texts in this collection deal with what happens after someone suffers an act of violence. The person may respond with more violence, but revenge often leads to a cycle of violence that is difficult to escape. This collection raises the issue of whether it is better to avenge evil acts or end conflict through reconciliation. The Tragedy of Hamlet stands as the playwright's innovative response to the revenge drama tradition. Students are introduced to the soliloquies that express the hero's conflict and make him a character that has stood the test of time. Students will analyze the hero's conflict and make him a character that has stood the test of time. Students will analyze the conflicts that Hamlet faces at the beginning of the play and be guided to an understanding of how Shakespeare sets up his tragedy. Students will be exposed to film versions of Hamlet and learn to analyze multiple interpretations of drama to evaluate how each version interprets the text. Having just read Hamlet, students will have the background needed to analyze and appreciate a literary criticism of the play. Students will explore the ideas of the importance of fathers, vengeance, fear, and justice through shifting points of view and flashbacks. Students then explore one writer's presentation of the problem of violence in the community and solution and can analyze events developed in the text and draw conclusions about them. Students will analyze a speech with a complex organizational structure and learn how to extract main points and ideas. Lastly, to understand and enjoy literature, students must analyze language and determine its meaning. Students will explore the use of personification, repetition, and parallelism in poetry and

help them to determine figurative meanings of words and phrases as they are used to personify an idea. The selection titles in this collection including, authors, writers, or producers, are listed below.

Sample Assignments:

Discuss your conclusions about whether *CeaseFire* is the type of organization that could work in many different communities confronting the problem of violence. What ideas from the article offer the most valuable insight into the problems of violence and the solutions? How can these insights be applied to communities beyond Chicago-your own community or a community whose violent conflicts are frequently in the head-lines.

Choose three stanzas of *Hatred*. Rewrite them, conveying the ideas without personification. In two to five paragraphs, discuss how the absence of personification alters the poem's meaning and impact.

The collection includes text-book written questions that analyze the selections and require students to cite evidence in their answers. These questions can be assigned at the teacher's discretion.

Primary Collections Performance Task A

Write and Analytical Essay. (Step by step instruction on pgs. 399 primary text Collections 12) Using *Hamlet* and other texts in the collection, write an analytical essay on the effects of violence as presented in the collection.

Primary Collections Performance Task B (optional)

Write an Argument (Step by step instruction on pgs. 403-406 primary text Collections 12) In Blocking the Transmission of Violence, you learned about the violence interrupters' mission to act as mediators and prevent acts of revenge. Do you think revenge is always misguided, or is it justified in some cases? Write an argument stating your position.

Vocabulary Strategies Outlined and Practiced in the Collection: domain-specific words and phrases, Latin roots.

Language and Style Outlined and Practiced in the Collection: paradox, trailer, argument, vary syntax for effect, direct and indirect quotations.

Other Performance Tasks Suggested in the Collection: analysis, discussion, performance, journal entry, funeral speech, comparison, repetition and parallelism. Students **at this level** may not complete every task. They are assigned at teacher's discretion.

Selections Include: Students **at this level** may not complete every selection. They are assigned

at teacher's discretion.

The Tragedy of Hamlet by William Shakespeare. (drama)

Biography William Shakespeare (Video BIO)

Hamlet. (film versions)

Hamlett's Dull Revenge by Rene Girard. (literary criticism)

Tell Them Not to Kill Me by Juan Rulfo. (short story)

Who Speaks for the 1% by Jonathan Swift. (article)

Blocking the Transmission of Violence by Alex Kotlowitz. (article)

Nobel Peace Prize Acceptance Speech by Wangari Maathai. (speech)

Hatred by Wislawa Szymborska. (poem)

The Presidents: LBJ: Civil Rights and Vietnam. (video History)

Shirley Chisholm Runs for Presidential Nomination. (video History)

Unit Six Taking Risks Modules 30-35

People usually weigh the risk of an action against the importance of the goal they hope to achieve by doing it. The selections in this collection examine the risks people take and the reason why.

Students encounter arguments in personal conversations of current events in a variety of media and text sources. The function of persuasive techniques in developing arguments will show students how an author uses them to soothe and inspire a grieving population. Students will determine the author's purpose and delineate and evaluate an argument. Students must learn to empathize with people who live in very different circumstances and to recognize the common themes that connect the lives of all people. Students will read an account of a man surviving in Depression-era Detroit whose perspective on life is hopeful despite his circumstances. Students will be guided to determine a story's theme and analyze the role of setting. In another selection, students will be made aware of multiple themes when the themes are not stated specifically and guided to the central ideas and how they interact and connect. Expecting to be exposed to opinions regarding genetic engineering or genetically modified food, students will read about a program testing the use of genetic modification to combat disease. They will be able to support inferences and draw conclusions from a scientific article. For further exposure to scientific texts, students will close the collection with further reading and study that examines the pros and cons of new scientific discoveries. The selection titles in this collection including, authors, writers, or producers, are listed below.

Sample Assignments:

How does the poet in *Beowulf* keep readers engaged? In what ways does the poet build suspense? Cite specific textual evidence from the poem to support your ideas.

Using *The Mosquito Solution* as your main source, what is the author's belief that OX513A should be used to combat disease? What does he think about its opponents? Write an essay that address these questions and cite evidence in the article that help understand the author's perspective on the subject.

The collection includes text-book written questions that analyze the selections and require students to cite evidence in their answers. These questions can be assigned at the teacher's discretion.

Primary Collections Performance Task

Present and Argument. (Step by step instruction on pgs. 471 primary text Collections 12. Why do the characters and people in the texts take the risks they do? What do they learn from their risk-taking experiences? Synthesize your ideas by preparing and presenting an argument about the importance of taking risks in life.

Vocabulary Strategies Outlined and Practiced in the Collection: analyze nuances in word meanings, scientific terms, domain-specific words.

Language and Style Outlined and Practiced in the Collection: tone.

Other Performance Tasks Suggested in the Collection: discussion. Students **at this level** may not complete every task. They are assigned at teacher's discretion.

Selections Include: Students **at this level** may not complete every selection. They are assigned at teacher's discretion.

From Beowulf by The Beowulf Poet. (epic poem)

The Battle of Beowulf and Grendel (video HISTORY)

Explosion of the Space Shuttle Challenger: Address to the Nation by Ronald Reagan. (speech)

AMERICA The Story of Us: The Challenger and the End of the Space Race. (video HISTORY)

The Deep by Anthony Doerr. (short story)

Blackheart by Mark Brazaitis. (short story)

The Mosquito Solution by Michael Specter. (science article)

Are Genetically Modified Foods Scary by Palome Reyes. (science article)

Unit 7 Finding Ourselves in Nature Modules 36-38

The title *finding ourselves* can be interpreted in different ways. In this collection, it may mean that we understand we are surrounded by the natural world. It may also mean that in nature we can find deeper meaning for our lives. Students will explore the impact of author Annie Dillard's word choice, syntax, and her use of figurative language. In another selection, students will see how author Louise Erdrich uses her powers of language and observation to give readers a glimpse of her world. Students will read poems that take inspiration from the pastoral tradition but experiment with new themes and forms. The poem builds on but also departs from the tradition to create American forms. Students will understand how literary movements expand the ways of viewing the world. Students will read and analyze poems that allude to the centuries-old convention of pastoral poetry. As students may not be aware of the conventions that poets incorporate into the poem, when they recognize how poets do this, reading poems can be more interesting. Students will view a documentary about an environmental artist that uses music, video footage, and commentary to present information, and then integrate and evaluate the information presented in the film footage and audio track. In another selection, students explore both explicit and implied connections between the natural world, people, and the writer's cultural experiences. After the lesson, students will make inferences about an author's ideas, supporting their inferences with evidence from the text. Students will be able to identify the effect of the author's cultural context. Student will read an essay with a poet's sensibility. They will learn to combine textual evidence with their own prior knowledge and experience to make logical assumptions about the essay's deeper meaning of nature. Finally, as readers and as writer, students should be aware of the many choices that are available for structuring a work of fiction and the advantages afforded by each one. Students will read a frame story and learn how to consider how two narratives interact to convey themes about the power of nature and the relationship of humans to larger forces. The selection titles in this collection including, authors, writers, or producers, are listed below.

Sample Assignments:

After reading poems *Wild Peaches* and *Spring and All*, which poem speaks to you on a more personal level? Identify the reasons why you prefer the poem, including ideas related to content, style, and form. Incorporate details from the poem to support your reasons. Consider why the other poem does not appeal to you in the same way. Identify specific reasons. Organize your ideas in a three to five-page essay.

In her essay, Dilliard's observation of the weasel leads her to reflect on her own life. Write your own personal essay following these steps. Write about a memorable event in your life. Explain how this event led to an insight about your own life or about the human condition. Answer these questions and cite evidence in the article that helps understand the author's perspective on the subject.

The collection includes text-book written questions that analyze the selections and require students to cite evidence in their answers. These questions can be assigned at the teacher's discretion.

Primary Collections Performance Task

Present a Personal Narrative. (Step by step instruction on pgs. 517-520 primary text Collections

12). Review the selections in the collections. Think about how the texts convey ideas and insights about the natural world. Write and present a personal narrative in which you describe and reflect on your own experiences in nature.

Vocabulary Strategies Outlined and Practiced in the Collection: domain-specific words, consult a Thesaurus.

Language and Style Outlined and Practiced in the Collection: use precise details, appositives and appositive phrases.

Other Performance Tasks Suggested in the Collection: art analysis. Students **at this level** may not complete every task. They are assigned at teacher's discretion.

Selections Include: Students **at this level** may not complete every selection. They are assigned at teacher's discretion.

Living Like Weasels by Annie Dillard. (essay)

Local Deer by Louise Erdrich. (essay)

Wild Peaches by Elinor Wylie. (poem)

Being Here: The Art of Dan Hogan. (video documentary)

Pastorals by William Carlos Williams and Jennifer Chang. (poems)

Dwellings by Linda Hogan. (essay)

Trees by Baron Wormser. (essay)

The Hermit's Story by Rick Bass. (short story)

Unit Eight Culminating Project, Final Exam and Portfolio End of Second Semester Modules 39-40.

This unit is unique to the school's philosophy and Mission Statement.

Module 39: Culminating Project and Power-point Presentation.

Objectives:

Organize and apply information learned in the semester's work.

Effectively communicate knowledge through public speaking.

Accept the importance of working as independent individuals.

Ethically and responsibly use technology for educational purposes.

Organize, plan, and implement a project exhibition.

Create a quiz with varied question types and levels of difficulty.

Reflect and assess school life learning goals through project and semester's coursework.

Summarize and analyze the course relevance to self and world.

Module 40: Final Exam and Portfolio.

Objectives:

Evaluate and assess understanding of learning through final exam. The exam consists of multiple choice, completion and essay type questions which are designed to show a student's mastery and understanding of the second semester material.

Organize information learned in the semester's work.

Effectively communicate knowledge and reflection in writing.

Productive member of society who completes coursework in a timely fashion.

Ethically and responsibly use technology for educational purposes.

Reflect and assess school life learning goals through three modules and semester's overall coursework.

Textbooks

Title	Authors	Publisher	Edition	Website	Is Primary
California Collections 12	Kylene Beers, Martha Hougen, Carol Jago, William L. McBrideErik, Palmer Lydia Stack	Houghton Mifflin Harcourt	2017	www.hmhco.com	Yes

Literary Texts

Title	Authors	Publisher	Edition	Website	Read in Entirety
Close Reader 12	multiple authors	Houghton Mifflin Harcourt	2017	--	Yes

Other Materials

Title	Authors	Date	Material Type	Website
HISTORY, A&E, BIO branded videos	A&E Television Networks, LLC	2015	videos	--
NOVELWISE	--	--	digital resources for independent reading	--

English Language Development I

Grades: 9,10,11,12

Length: Full Year

Environment: Classroom-based

Honors: None

Subject: English (B)

Discipline: English as a Second Language (ESL) /
English Language Development (ELD)

Institution: Campbell Union High School District

Course Overview

In this two-period English Language Development, Language Arts course, students at the beginning level of English learn to communicate about a range of topics and academic content areas through listening, speaking, reading, and writing activities that target high-level thinking with appropriate support. Students are provided interactive and collaborative opportunities to express their own ideas as well as to question, interpret, and evaluate the ideas of others.

The student learning and performance goals for the course are based on the California English Language Arts State Standards, Grades 9-12, and California English Language Development Standards for Grades 9-12.

Student writing is integrated and comprehensive and includes the use of reflection, supported claims and assertions, primary and secondary sources, and point of view. The writing curriculum is deeply connected to the literature and essential questions of each unit and embeds California Standards for English Language Arts as well as the English Language Development Standards. Students will write autobiographical narratives, position papers, reflective essays, research reports, short stories, literary analyses, and persuasive essays.

Research-supported reading and metacognitive strategies that will be explicitly taught during this course are: planning and monitoring, determining text importance, making inferences, asking questions, making connections, synthesizing, and visualizing while reading.

Students will be guided through the use of Essential Questions that connect students to the learning by asking deep and abiding questions that all members of society face. The course curriculum is built around essential questions and texts that present students with relevant and challenging ideas.

Close reading will be used as an effective practice and will include direct, explicit instruction. The writing will be taught through strategic, focused instruction that emphasizes a variety of audiences

and purposes for writing, combining complex thinking with mechanics, and connecting writing to audience and purpose.

Other classroom instructional methods include small group differentiated instruction, reading foundational skills, graphic organizers, academic discussions, games, and drama, make words your own, vocabulary notebook, vocabulary study cards, Text Talk Read-aloud method, word shorts, discuss author's word choice, academic vocabulary word list Spanish-English cognates, cooperative classroom protocols, oral reading fluency routines, close reading routines and the use of word walls in all classrooms.

Unit 1: Introduction to the iLit App

Essential Question: What is iLit and how does it work?

Unit Overview: This one-week introductory unit is designed to help establish the iLit instructional routines and help the class learn how to use the program's features and activities, including the following:

- Library: Searching, selecting books, help features
- Lessons: time to read; vocabulary; read aloud; think aloud; classroom conversation; work time; and wrap up
- Routines: Time to Read, Rules for Conversation, Collaborative Projects, Writing, Peer Conferencing, Presenting, and Active Listening
- Notebook: Journal Class Notes, My work, Resources
- Assignments: Interactive Reading, Practice, Study Plans, Word Study, Oral Fluency, and Writing

Assignments

Reading Assignments: The iLit instructional model centers on whole-class anchor texts that include full-length novels and nonfiction trade books, shorter academic and informational texts, nonfiction literary texts, articles, poems, and dramas. For this unit students will read:

- *Mudslide* (Adapted from the Original Realistic Fiction)
- “Technology That Saves Lives” (Informational Text)

Writing Assignment: Critical Reading Question: Students will be asked to develop a one paragraph response about the reading which includes evidence from the text. Students will complete the assignment on their computers and publish by sending the paragraph to the teacher. Students will learn to cite textual evidence and produce writing that demonstrates their analysis of the text. Students will work through the writing process, focusing on audience, genre, and purpose.

Unit 2: Media and Technology

Essential Question: What are the pros and cons of digital life?

Unit Overview:

- Reading Skills and Strategies: Connect Text to Experience and Knowledge; Make and Modify Predictions; Compare and Contrast; Visualize; Paraphrase; Use Phrasing to Read Fluently; Make Inferences; Analyze a Character; Preview and Set a Purpose for Reading; Text Structure; Summarize
- Vocabulary and Word Study: Related Words; Multi-syllabic Words; Compound Words; Collocations; Open Syllable Patterns, Closed Syllable Patterns, Latin Roots, Prefixes
- Language: Use Words to Clarify Relationships, Analyze Elements of Literature, Understand Figurative Language, Vary Sentence Structure, Grammar Study Plan, Spelling Study Plan
- Writing: Plan and Organize an Explanatory Paragraph, Write an Explanatory Paragraph, Features of a Personal Narrative, Write a Narrative Paragraph, Organize Argumentative Paragraph, Outline an Explanatory Essay, Write an Explanatory Essay, Revise an Explanatory Essay, Edit an Explanatory Essay, Write a Summary
- Speaking and Listening: Present an Explanatory Essay, Listen to Presentations, Engage in Collaborative Discussions

Assignments

Read Assignments: Students will complete close readings of the texts (including annotations), answer guiding questions as they read the text, and hold class discussions on the topics and themes covered in the readings. Reading assignments include:

- “Dear Birth Mother, Please Hit Reply” by Kerry Herlihy (Personal Account)
- “Sherman’s Lagoon” by Jim Toomey (Comic Strip)
- “The Fun They Had” by Isaac Asimov (Science Fiction, Short Story)
- “Khan Academy” by Charles Boocock (Informational Article)
- “The Last Book in the Universe” by Rodman Philbrick (Science Fiction)
- “Genetic Information and Its Uses” (Academic Text)
- “Occupy Wall Street” by Craig Kanalley (News Article)
- “What Will they Think of Next?” (Informational Text: Report)
- “The Horrid Voice of Science” by Vachel Lindsay (Poetry)
- “On Global Warming” delivered by Leonardo DiCaprio (Speech)
- “Communication” by Melissa Shaw-Smith (Short Story)

Key Writing Assignment: Explanatory Essay: Students will develop an explanatory a 250-400 word essay about the significance of a historical event through the writing process. Students will work through the writing process, focusing on audience, genre, and purpose. Students will begin with prewriting which includes brainstorming and an outline and then move to writing their rough draft including embedded textual evidence. Students will work collaborative to edit and revise their essay before completing a final draft for submission. Students will present essay in oral presentation to class.

Unit 3: Elements of Drama

Essential Question:

Unit Overview: Playwright, Script, Stage Directions, Cast, Monologue, Dialogue, Stage, Theme, Comedy, Tragedy

- Reading Skills and Strategies: Paraphrase, Make Inferences, Monitor and Clarify by Retelling, Visualize, Compare and Contrast, Summarize, Identify Theme
- Vocabulary and Word Study: Word Families, Multiple Meaning Words, Connotative Meanings of Synonyms
- Language: Figurative Language, Analyze and Author's Choices, Condense Ideas
- Writing: Write an Original Scene, Author's Sources
- Speaking and Listening: Perform an Original Scene, Engage in Collaborative Conversation

Assignments

Reading Assignments: Students will complete close readings of the texts (including annotations), answer guiding questions as they read the text, and hold class discussions on the topics and themes covered in the readings. Reading assignments include:

- *A Midsummer Night's Dream* by William Shakespeare (Play, Adapted from the original)

Writing Assignment: Shakespearean Scene: students will re-write and perform a scene from the play in an alternate time-period using precise language, dialogue, and action. Students will provide stage directions and setting to reflect time and character. Students will analyze figurative language, character motivation, and plot in order to design the scene for a different time period while maintaining Shakespeare's story. Students will work through the writing process, focusing on audience, genre, and purpose.

Unit 4: Imagination and Innovation

Essential Question: How far can a dream take you?

Unit Overview:

- Reading Skills and Strategies: Connect Text to Experience and Knowledge, Make Connections, Understand Characterization, Compare and Contrast, Visualize, Make Inferences and Predictions, Summarize, Monitor and Clarify by Paraphrasing, Draw Conclusions, Cause and Effect, Analyze Character Development, Analyze Themes, Author's Purpose, Preview and Set a Purpose for Reading, Summarize
- Vocabulary and Word Study: Suffixes, Use Latin Roots to Determine Meaning, Multiple-Meaning Words, Word Families, Related Words, Connotation and Denotation, Multi-syllabic Words
- Language: The Influence of Spanish on English, Understand Figurative Language, Understand Expressions and Sayings, Identify Logical and Emotional Appeals, Structure for Parts of Speech, Grammar Study Plan, Spelling Study Plan
- Writing: Features of Narrative Writing, Select and Organize Content, Plan and Argumentative Paragraph, Write an Argumentative Paragraph, Plan an Argumentative Essay, Identify Claims and Counterclaims, Organize Ideas, Write an Argumentative Essay

- Speaking and Listening: Analyze an Oral Argument, Present an Argumentative Essay, Listen to Presentations, Engage in Collaborative Conversation

Assignments

Reading Assignments: Students will complete close readings of the texts (including annotations), answer guiding questions as they read the text, and hold class discussions on the topics and themes covered in the readings. Reading assignments include:

- “America Primitive” by Ted Wood (Science Fiction, Short Story)
- “The Microscope” by Maxine Kumin (Poetry)
- “World Changers” (Informational Text: Profiles)
- “Somebody Everybody Listens To” by Suzanne Supplee (Realistic Fiction)
- “Ahead of the Curve” (Informational Text)
- “Me and My Robot” by Elizabeth Woyke (Informational Article)
- “That Looks Like Garbage!” By Glenn Downey (Informational Article)
- “Apple Visionary Redefined Digital Age” by John Markoff (Obituary)
- “Empowering a Community” (Informational Text: Profile)
- “Taking Action” (Academic Text)

Writing Assignment: Argumentative Essay: Students will compose a 350-500 word essay, in which they develop a claim about the environment based on the readings and media from this unit. Students will include use of rhetorical appeals and counter argument in this multi-paragraph essay. Students will use evidence found in the readings and media as well as their own experience in order to support their claim and address the counter argument. Students will work through the writing process, focusing on audience, genre, and purpose.

Unit 5: Research Skills

Essential Question: How do you conduct research? (Focusing on research skills, including Sources of Information, Primary Sources, Secondary Sources, Evaluate Sources, Take Notes, etc.)

Unit Overview:

- Reading Skills and Strategies: Ask Questions, Paraphrase, Author’s Purpose, Make Connections, Synthesize
- Vocabulary and Word Study: Patterns of Word Changes, Connotations
- Language: Figures of Speech
- Writing: Write a Research Report About the Effects of Advertising
- Speaking and Listening: Present a Research Report, Engage in Collaborative Conversation

Assignments

Reading Assignment: Students will complete close readings of the texts (including annotations), answer guiding questions as they read the text, and hold class discussions on the topics and themes covered in the readings. Reading assignments include:

- “Buying Power” (Informational Text)
- “That’s Advertisement...” by Veronica Majerol (Magazine Article)
- “What’s for Sale? Your Self-Esteem” by Glenn Downey (Informational Article)
- “Really?!” (Advertisements)
- “Statistics Don’t Lie” (Informational Text)
- “Why I Lived with My Garbage for a Year” by Brennan Blazer Bird (Magazine Article)

Writing Assignment: Multimedia Presentation: students will create a five-minute presentation on societal pressure to consume through advertisement. Students will develop research focus and evaluate sources of credible and reliable information. Include a visual (poster or video), a notes page, and oral presentation of research. Students will work through the writing process, focusing on audience, genre, and purpose.

Unit 6: Connections

Essential Question: Does everybody need somebody sometime?

Unit Overview:

- Reading Skills and Strategies: Connect Text to Experience and Knowledge, Author’s Purpose, Visualize, Ask Questions to Make Inferences, Cause and Effect, Identify Reasons and Evidence, Read Fluently, Make and Confirm Predictions, Cause and Effect, Generalizations, Author’s Viewpoint, Synthesize Information and Ideas
- Vocabulary and Word Study: Multiple-Meaning Words, Context Clues, Prefixes, Connotations, Word Families, Acronyms and Initialisms, Domain-Specific Words, Greek Roots, Language Sensory
- Language: Similes and Metaphors, Influence of Arabic on English, Figurative Language, Grammar Study Plan, Spelling Study Plan
- Writing: Features of Narrative Nonfiction, Supporting Details in Explanatory Writing, Develop Characters, Write a Narrative Essay, Organize Events in Sequence, Set the Scene for a Narrative Essay, Write a Satisfying Conclusion, Revise and Edit,
- Speaking and Listening: Analyze an Argument, Engage in Collaborative Conversation

Assignments

Reading Assignments: Students will complete close readings of the texts (including annotations), answer guiding questions as they read the text, and hold class discussions on the topics and themes covered in the readings. Reading assignments include:

- “What Are Friends For? A Longer Life by Tara Parker-Pope, Newspaper Article
- “Anything Can Happen” by Kenneth Oppel, Short Story
- “We Beat the Street By The Three Doctors: Sampson Davis, George Jenkins, Rameck Hunt, with Sharon M. Draper (Autobiography)
- “Brothers By Jon Scieszka (Memoir)
- “Someone Who Used to Have Someone By Miriam Waddington (Poetry)
- “Fish Cheeks By Amy Tan (Memoir)
- “Furball Therapy By Carol Ricker-Wilson (Informational Article)

- *Thank You, M'm* By Langston Hughes, Short Story
- *Christopher* By Eoin Colfer (Short Story)
- "A Hunger to Be Free" By Nelson Mandela (Autobiography)

Key Writing Assignment : Characterization in Non-fiction Poster: students will analyze and evaluate a number of non-fiction texts to discover how the author developed character. They will prepare a chart to identify the strategies authors use to develop character in non-fiction articles. Students will then choose one text to focus on, and compose a 450-750 word essay in which they discuss characterization. Students will work through the writing process, focusing on audience, genre, and purpose.

Unit 7: Elements of Poetry

Essential Question: What are the elements poetry? (Focusing on the elements of poetry, including Rhyme, Rhythm, Meter, Repetition, Alliteration, Figurative Language, Sensory Language, etc.).

Unit Overview: Rhyme, Rhythm, Repetition, Figurative Language, Alliteration, Vivid Adjectives and Adverbs, Sensory Language, Symbol, Allusion,

- Reading Skills and Strategies: Identify Theme, Ask Questions, Monitor and Clarify by Paraphrasing
- Vocabulary and Word Study: Related Words
- Writing: Write a Poem
- Speaking and Listening: Present a Poem

Assignments

Reading Assignments: Students will complete close readings of the texts (including annotations), answer guiding questions as they read the text, and hold class discussions on the topics and themes covered in the readings. Reading assignments include:

- "All Good People" By Rudyard Kipling (Excerpt from the Poem "We and They")
- "The Butterfly" By Pavel Friedmann (Poetry)
- "But Since You Finally Asked" By Nikki Giovanni (Poetry)
- "Fast" By Roger Bonair-Agard (Poetry)

Writing Assignment: Original Poem: students will write an original poem of twenty or more lines with a clear theme and tone. Students will include examples of alliteration, repetition, rhyme, symbolism, and figurative language. Students will work through the writing process, focusing on audience, genre, and purpose. Students will present the poem to the class orally and turn in a written copy.

Websites

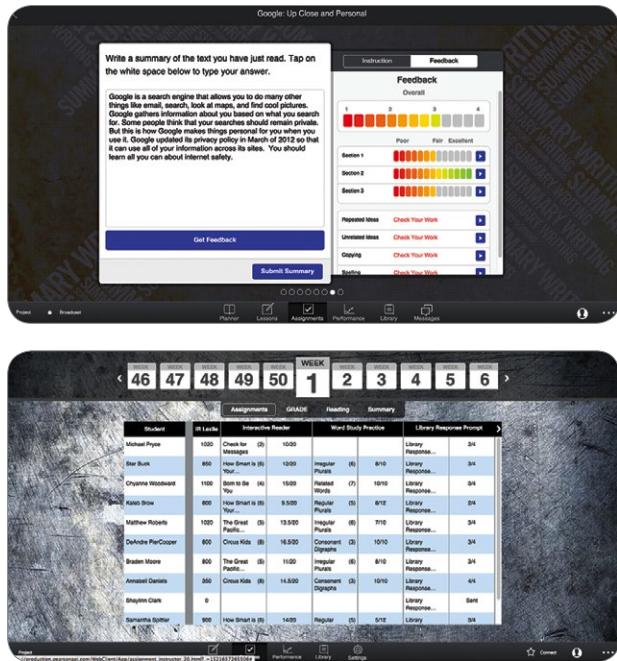
Title	Authors	Organization	Website
iLIT ELL Level F	--	Pearson	https://www.pearsonschool.com/index.cfm?locator=PS2pOu

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iLit20: Implementation Essentials

This half-day session is designed to provide teachers with the critical digital program components they need to ensure success on Day One in the classroom. Participants dig into the components, design, and structure of the program. This session is interactive and includes application-oriented activities so participants can immediately apply what they have learned. By the end of the training, participants will be able to:

- Navigate through the unique features of the Teacher App and Student App;
- Understand the assignments and how to send them to students;
- Understand assessment and progress-monitoring options; and
- Plan for instruction.

ISBN: 0000122671

* Maximum 15 participants.



Savvas.com/iLit20

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Digital Licenses (per student)		
iLit20 1-Year Digital License	9780328880546	\$32.00

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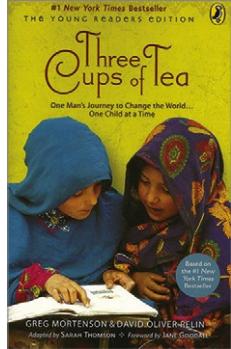
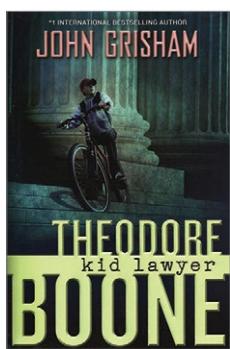
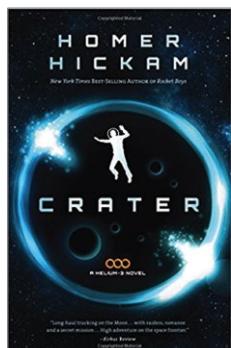
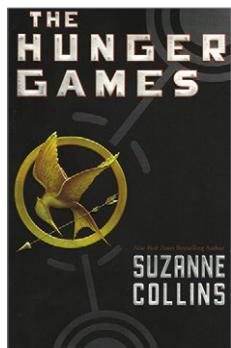
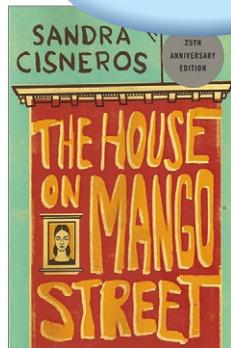
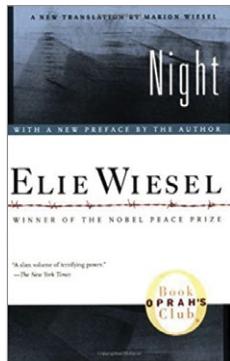
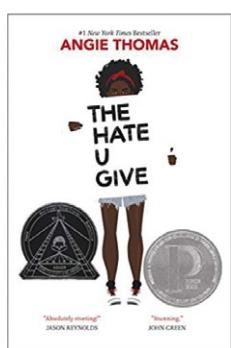
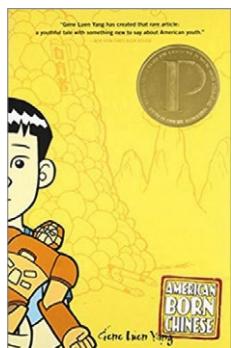
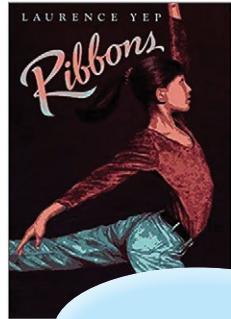
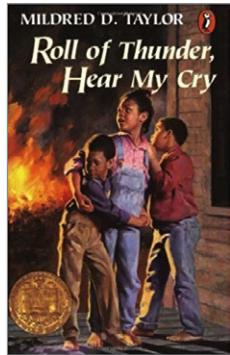
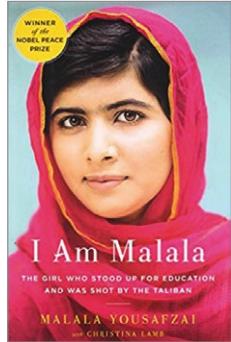
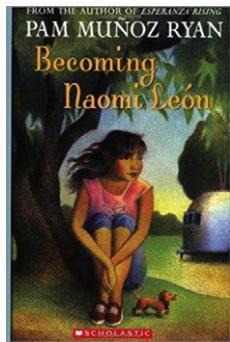
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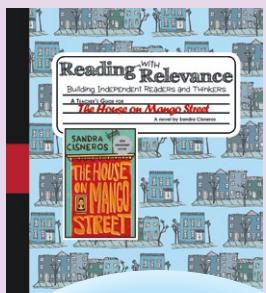
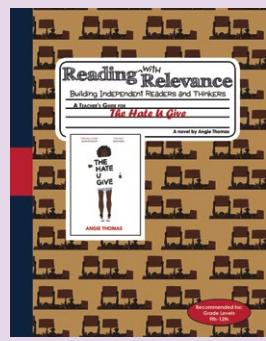


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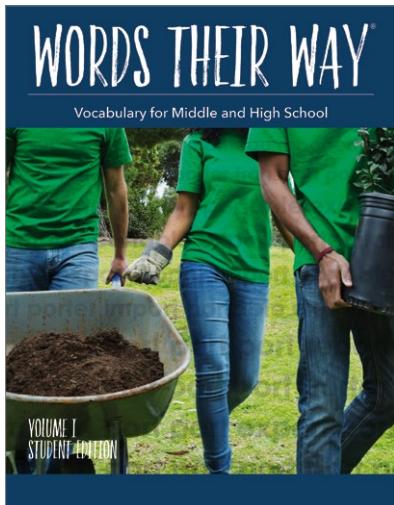


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Words Their Way®: Vocabulary for Middle and High School

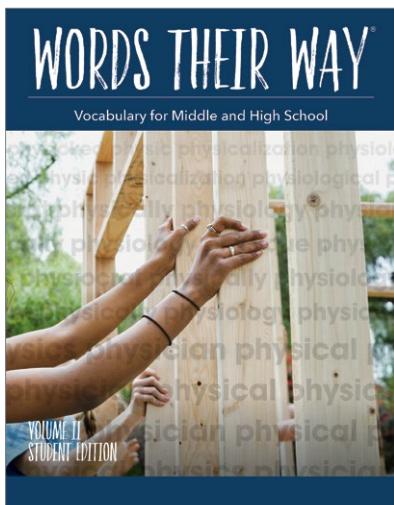
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From the *Words Their Way*® authorship team: Donald Bear, Shane Templeton, Marcia Invernizzi, Francine Johnston, Lori Helman, Kevin Flanigan, Latisha Hayes



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Use *Words Their Way®: Vocabulary for Middle and High School* to systematically address reading, writing, grammar, vocabulary, and communication skills. During this workshop, participants explore how to use program components, including teacher resources as well as the *Student Work Text*, to deliver customized instruction that is appropriate for their students' interests and abilities. Participants learn how to select appropriate texts and teach active reading strategies in both individual and whole-class settings. This workshop includes strategies for teaching novels in the middle school classroom.

ISBN: 0000119463 (½ day)

* All PL sessions can be delivered virtually or on-site and accommodate 30 participants unless noted otherwise. Duration will vary depending on content and delivery modality.

Words Their Way: Vocabulary for Middle and High School © 2014				
Description	13 Digit ISBN	Price	Description	13 Digit ISBN
Volume 1 Classroom Package Contains 30 Student Editions, Teacher Edition, and Vocabulary Routine Cards Package (1 set of 4)	9781428439795	929.97	Volume 2 Classroom Package Contains 30 Student Editions, Teacher Edition, and Vocabulary Routine Cards Package (1 set of 4)	9781428439801
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Professional Learning resources available.
See pages 40–41.

Students can self-select titles based on interest and level



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iLit delivers a research-proven instructional model through a ground-breaking mobile instructional system, making it accessible, adaptive, and engaging for today's teachers and students.

iLit uses a gradual release approach. First, the teacher models an instructional skill, such as using textual evidence to make inferences. Then, the teacher guides the class as they work together to practice the skill. Students then apply the skill at their own level on adaptive activities.

The instructional model is broken into six stages:

1. Self-selected reading
2. English Language Development and Vocabulary
3. Teacher-guided reading
4. Paired and small group discussions
5. Guided practice
6. Independent, adaptive work

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Description	13 Digit ISBN	Price
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1-Year Digital License	9780328896530	77.00
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- Quick formative assessments and embedded support helps teachers customize instruction

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Initial Training	Follow-Up Training	In-Class Support
Initial Training includes hands-on and step-by-step training on product features needed to get students started with <i>iLit</i> . The Education Specialist tailors the agenda and topics so teachers can maximize the best product features for their student population and goals.	Follow-up days of support allow participants to move past the “how-to” and dive deeper into increasing comfort with technology and meeting student’s individual needs. The approach is extremely consultative and focus areas are aligned to the district’s goals and plans for usage. These services are intended to bring teachers from understanding to applying.	In-class support comes in the form of modeling, coaching, and consultation focused on practices that maintain or improve implementation fidelity. A strong emphasis is placed on targeted areas such as Differentiation and Data. Flexible delivery options available. Participant size varies based on the type of support provided.

* All Participants are required to have a computer. Maximum number of participants is 15 unless otherwise noted.

ISBN: 3 days: 9781402628450

Additional Days:

ISBN: 28 days: 9781402628429

ISBN: 1 day: 9781402628443

ISBN: 45 days: 9781402628436

ISBN: 65 days: 9781402628511

iLit: Technology and Digital Classroom Management

This one-day, follow up session focuses on the effective implementation of *iLit* technology and best practices in the classroom. Participants receive hands-on practice using applications and devices required for *iLit* instruction.

ISBN: 9781402628443

iLit20: Implementation Essentials

This half-day workshop is designed to support educators in implementing the program with fidelity.

Participants dig into the components, instructional design, and structure of the program. Participants will practice applying specific features and design elements (including instructional philosophy, lesson structure, and content) to classroom practice through hands-on activities and observation of a demonstrated lesson. Participants will receive a prescriptive, week-by-week implementation plan to use following the workshop that can be customized to their needs.

ISBN: 0000122671

* All PL sessions are six hours in length and accommodate 15 participants unless noted otherwise.

iLit: Partnership Plus

Our most powerful and flexible form of support with a full-time, dedicated consultant provides you with up to 140 days of services over the course of 12 months. Education Specialists mentor and train staff, and provide support planning and progress monitoring at all levels of the implementation.

ISBN: 9781402628504

Technology Services**iLit Remote IT Consultation**

A Savvas Systems Engineer works with your district IT staff to provide information, guidance and recommendations to prepare for your *iLit* implementation. Topics include System Specifications, System Overview, Reporting and more!

ISBN: 9781402628917

Comprehensive Technical Analysis

Savvas Systems Engineers work onsite and remotely with your district IT staff to evaluate your district's readiness to implement *iLit*. The Infrastructure Analysis focuses on site readiness for increased technology usage. The Operations Analysis focuses policies, procedures and plans around technology usage. Upon completion, a written report of findings and recommendations is provided.

ISBN: Technical Infrastructure Analysis: 0000121550

ISBN: Technical Operations Analysis 0000121570

ISBN: Technical Analysis Additional Days Onsite: 0000121560

Meeting the Needs of Special Education Students (15 Days)

Learn how to support students with special needs and provide access to the curriculum. These sessions focus on teaching students with social, emotional, academic, or physical disabilities. Topics include special education leadership, the power of co-teaching, and Response to Intervention (RtI). Explore Universal Design for Learning (UDL), Positive Behavioral Interventions and Supports (PBIS), and Assistive Technology (AT).

This institute provides support in the area of scaffolding instruction when implementing new curriculum programs by using various components including: the use of text-to-audio functionality, visual representations, and the use of technology to enhance and deepen instruction.

Flexible delivery options available. Participant size will vary depending on the type of support provided.

ISBN: 0000121644

ISBN: Meeting the Needs of Special Education Students Additional Service Day: 0000121634

Meeting the Needs of English Language Learners (15 Days)

English language learners (ELLs) are the fastest-growing student population. These sessions help teachers support ELLs and meet Rigorous State Standards. Learn research-based strategies and sound pedagogical practices for English language development. Recognize language proficiency levels, review language acquisition theory, and discover how to facilitate language learning. Build on cultural and equity assumptions to motivate ELLs.

This institute provides support in the area of scaffolding instruction when implementing new programs by using various components including the use of visual representations, vocabulary/academic language development, and the use of technology to enhance and deepen instruction.

Flexible delivery options available. Participant size will vary depending on the type of support provided.

ISBN: 0000121653

ISBN: Meeting the Needs of ELLs Additional Service Day: 0000121624

SIOP® Training for Teachers (3 Consecutive Days)

Educators gain an in-depth understanding of the components of the SIOP Model and techniques to implement it in their classrooms in this three-day workshop. Participants gain practical skills to collaborate, share, and implement lesson plans that incorporate all eight components and thirty features of the SIOP Model in order to teach content while developing students' academic and social language.

Participants are provided with *Making Content Comprehensible for English Learners: The SIOP Model* to support implementation upon returning to their schools.

ISBN: For K–12 teachers: 0000112992

ISBN: For PreK–K teachers: 0000119360

ISBN: For Elementary teachers: 0000112995

ISBN: For Secondary teachers: 0000112994

ISBN: For California teachers: 0000122030

SIOP® Training for Administrators

School and district administrators use the best-selling, research-based book *The SIOP Model for Administrators* to learn about the SIOP Model and understand how it can improve instruction for all students, including English learners. Participants consider the roles that coaches and administrators can play in supporting teachers using the SIOP Model and are provided with *The SIOP Model for Administrators*, 2nd edition to support implementation upon returning to their schools.

ISBN: 0000112990

SIOP®: Developing Academic Language

Learn how to boost students' academic language skills to meet today's rigorous new college and career-readiness standards. Participants examine the language demands of their lessons and create language targets to promote academic language development for all students, including English learners. The workshop is suitable for teachers who want to extend practice with building academic language and literacy skills and may have already studied the SIOP Model's components and features. Participants are provided with the *Developing Academic Language with the SIOP Model* text to support sustained implementation of the techniques and strategies presented in the workshop.

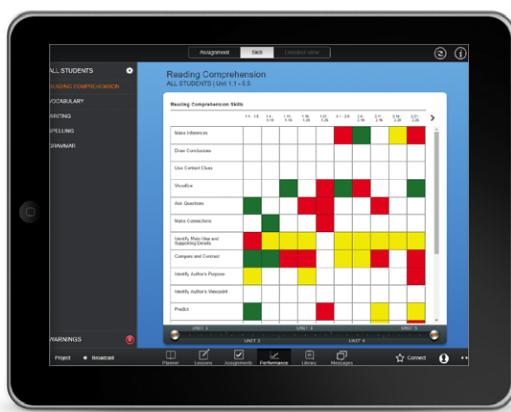
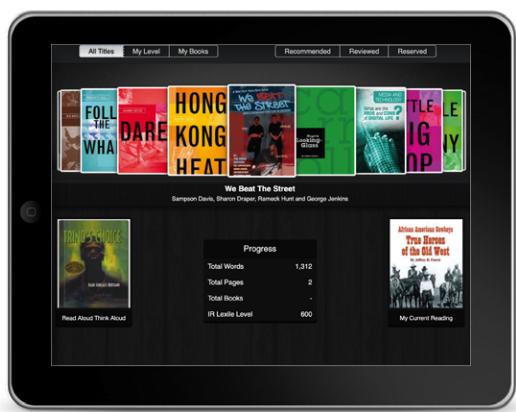
ISBN: 0000119488

iLit™ 45

Grades 6 and up

Proven Literacy Intervention for Non-Proficient Secondary Readers

Designed for students reading two or more years below grade level, *iLit*™ 45 is an ELA solution that complements or replaces a core literacy program for a dedicated class period while delivering explicit reading instruction at a level commensurate with adolescent interests and experiences. This digital-first, teacher-led program features a systematic daily routine based on the gradual release of responsibility model that includes time for whole group, small group, and one-on-one intervention and practice. Explicit instruction addresses foundational skills and all major reading components while also motivating reluctant readers during independent reading time as they select texts at their independent reading level from a highly engaging digital library of 3000+ texts.



iLit45 Professional Learning

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my Savvas Training is your one-stop shop for live and on-demand training! Access tutorials, live webinars, chat support and more!

iLit45: Onsite Training and Professional Learning

To drive the fidelity of the implementation, Savvas provides support that begins with the “how-to” of *iLit* and extends to strengthening instruction and increasing student outcomes through the use of *iLit*.

Description	13 Digit ISBN	Price
1-Year Digital License (per student)	9780328896530	\$77.00

Prices and availability are effective 10/01/21 and are subject to change without notice.

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iLit45

iLitELL

iLit20



iLit™ ELL

Grades 6 and up

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Develop language through reading, writing, speaking, and listening for all English learners—newcomers to long-term ELs. With 180 lessons for English learners, 65 new-comer specific lessons, and more than 200 printed texts, *iLit™ELL* meets English learners where they are and builds language and literacy from there.

Results have been phenomenal: Nearly 2+ years of reading growth in a single year!

Program includes:

- **46+ translations** *iLitELL* provides translations in 46 different languages.
- **Online or offline** The *iLit Anywhere* app allows students to work online or offline. Once students return to the Internet, everything is synced. (Designed for Chromebook™ and iPad®.)
- **Blended Learning Model** Teachers can engage readers with *iLit* print libraries, paper-and-pencil practice, and other resources for a blended learning classroom.



Description	13 Digit ISBN	Price
Digital Licenses (per student)		
iLitELL 1-Year Digital License	9780328896547	77.00

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iLitELL

Professional Learning resources available.
See pages 46–47.



A rich collection of functionality and content enhances *iLit ELL* to further support English language development for students who need it most.

The instructional model

iLitELL delivers a research-proven instructional model through a ground-breaking mobile instructional system, making it accessible, adaptive, and engaging for today's teachers and students.

iLitELL uses a gradual release approach. First, the teacher models an instructional skill, such as using textual evidence to make inferences. Then, the teacher guides the class as they work together to practice the skill. Students then apply the skill at their own level on adaptive activities.

A world of high-interest content

iLitELL features over 3,000, high-interest books in the student library, all available via each student's device. Students can look up the meaning of any word in the text, translate it into different languages, or check out a visual definition.

Personalized study plans let students gradually master essential skills.

iLit ELL Professional Learning

Visit pd.savvas.com to see all PL offerings!

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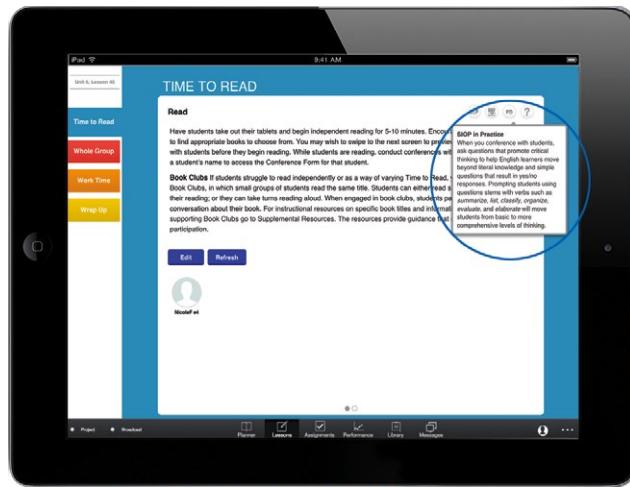
Ask about our Program Activation Services!

Our activation services provide you with an orientation to the program components and design, in order to prepare you for the first day in the classroom.

iLitELL: Professional Learning 3-Day Package

A Savvas Education Specialist will work closely with you to devise a prescriptive and detailed implementation plan that outlines goals and plans for usage, progress monitoring, and accountability. Day One includes Initial Training focused on the "how to" of *iLit*. Follow-up days of in-class or workshop-style support are designed to increase comfort levels using the program and strengthen instructional practices.

ISBN: 9781402628450



Sentence frames, word lists, and pictures support learners at point-of-use. Proven SIOP® In Practice notes and integrated language development support save teachers time.

The instructional model is broken into six stages:

1. Self-selected reading
2. English Language Development and Vocabulary
3. Teacher-guided reading
4. Paired and small group discussions
5. Guided practice
6. Independent work

Powerful teaching tools

Instruction, assessment, and data, all in a single teacher app. Teachers can easily adapt and personalize instruction with quick formative assessments woven into *iLitELL*'s instructional model.

- *iLitELL* is designed specifically for English learners reading two or more years below grade level.
- Quick formative assessments and embedded support helps teachers customize instruction.

Find the *iLit* program for you!

iLit45

iLitELL

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Social Studies

a-g World History Through Film

Grades: 9,10,11,12

Length: Full Year

Environment: Classroom-based

Honors: None

Subject: History / Social Science (A)

Discipline: World History / Cultures / Historical Geography

Institution: Gorman Learning Center

Course Overview

The scope of World History Through Film provides the latitude to range widely across all aspects of human experience: economics, science, religion, philosophy, politics and law, military conflict, literature, and the arts. The course will involve viewing films about historical events and issues, using those films as a pathway to understanding the stories we tell ourselves about our own past, and interpreting the purposes behind those stories. Students will uncover patterns of behavior, identify historical trends and themes, explore historical movements and concepts, and test theories.

The course is aimed at developing critical thinking and college-level skills and will require students to refine their ability to read for comprehension; perform critical analysis; summarize, categorize, compare, and evaluate information; write clearly and convincingly; express facts and opinions orally; and use technology appropriately to present information.

Throughout each unit, students will demonstrate their understanding of the material by participating in activities that include but are not limited to the following:

- Critical Reading
- Socratic Seminars
- Quizzes
- Tests
- Group Projects
- Individual Projects
- Written Reflections
- Essays
- Discussions
- Storyboarding

Unit 1- Eastern Civilizations

In this unit, students will study ancient civilizations that arose in China, Japan, and the Middle East specifically looking at the unique aspects of their culture as well as their connection to the modern world.

Unit Outcomes:

1. Chinese Civilization
 - Confucius
 - Dynastic Cycle
 - Mongols
2. Japanese Civilization
 - Samurai Culture
 - Japanese Imperialism
 - Post-World War II Japan
3. Middle Eastern
 - Iran Hostage Crisis
 - Israeli-Palestinian Conflict
 - Arab Spring

Essential Understandings/Questions:

1. Summarize Confucius' influence on Chinese culture.
2. Describe early Chinese culture including the Dynastic Cycle & Mandate of Heaven
3. Generalize who the samurais were and what they meant for Japanese culture/
4. How and why did Japanese imperialism occur?
5. Trace the development and outcome of the U.S. occupation of Japan.
6. Summarize the Iran-Hostage Crisis including the declassified Argo story.
7. Compare and contrast the Arab Spring with the Israeli-Palestinian conflict.

Assessment:

The assessment for this unit is for the students to write a college entry-level essay in MLA format summarizing the material learned throughout the eastern civilization unit. The prompt for this essay will require them to address the Essential Understandings/Questions for the unit.

Films for this unit may include, but are not limited to the following titles:

- Biography: Confucius
- Warrior Graveyard: Samurai Back from the Dead
- The Last Samurai
- Genghis Khan: Rise of a Conqueror
- Argo

Assignments

Example Assignments:

___ Read and complete:

___ Current Event 1: Find a current event related to one of the following places: Israel, India, China, Afghanistan, or Iraq. The article should connect to one of the following BIG themes: religion, military, economics, government, or culture. Print or cut out the article and write a 1/2 page reflection on why that BIG theme is significant.

___ Read R-8 The Muslim World and Africa p. 52-61

___ Complete section review on p. 61 #1-5

___ Read R-9 Civilizations of Asia p. 62-69

___ Complete section review on p. 69 #1-5

___ Read: 1.1 The Italian Renaissance p. 74-80

___ Complete section assessment on p. 80 #1-5

Unit 6- Abuse of Power/Human Rights Violations

In this unit, students will evaluate historical events such as slavery, genocide, and piracy where those who had power or were authority figures used their power in a way that negatively affected other races, individuals, states, or ethnic groups.

Unit Outcomes:

1. Slavery

- Atlantic Slave Trade

2. Genocide

- The Holocaust

 Background to the Murder

 The Final Solution

 Healing

- Rwanda

3. Russian Imperialism to Communism

- Absolute Rulers in Russia

- The Russian Revolution

- The Soviet Union and Fall of Communism

Essential Understandings/Questions:

1. Describe why slavery is considered an abuse of power and give several examples.

2. What was the Triangle Trade Route and how many Africans were affected?

3. Summarize, other than the Holocaust, what hardships have Jewish people experienced in their existence.

4. Generalize the role propaganda played in Hitler's quest to rid Europe of its Jewish population.

5. Describe how the Nazis systematically removed 6 million Jews from Europe.

6. Evaluate the efforts made after the Holocaust to help heal the memories of the Holocaust.

7. Compare and contrast the Jewish Holocaust with the Rwanda genocide.

8. How were the reigns of Ivan III and Ivan the Terrible similar/different?

9. Why does history call Peter “The Great”?
10. What is Communism and how did it come to be?
11. Describe the events of the March Revolution and the Bolshevik Revolution as well as their impact on Russia.
12. Describe the reigns of Vladimir Lenin and Joseph Stalin and how they were significant to the USSR.
13. What was the Cold War and how did Communism unravel?

Assessment:

The student will conduct research on an individual or group involved in resistance during the Holocaust and World War II. Students will present their findings in a three to five-minute presentation using a visual (photographs, maps) and documents (letters, diaries, memoirs, poems, songs).

Films for this unit may include, but are not limited to the following titles:

- 12 Years a Slave (Slavery)
- Hotel Rwanda (Genocide)
- Captain Phillips (Piracy)
- Schindler’s List (Genocide)
- Sometimes in April (Genocide/Rwanda)
- The Boy in the Striped Pajamas (Holocaust)
- Joseph Stalin: Man of Steel (documentary)
- The Russian Revolution (documentary)

Assignments

Example Assignments:

- Read and complete:*
- Read 7.4 Revolution in Russia p. 389-394*
- Complete section assessment on pg. 394 #1-5*
- Choose ONE option below to complete:*
- Choice 1: Print World War I and the Russian Revolution Test from pearsonrealize.com test bank.*
- Choice 2: Take the topic 7 assessment on p. 395, questions: 1, 3, 4, 9, and 10*
- Read 8.1 Revolution and Nationalism in Latin America p. 400-405*
- Complete section assessment on p. 405 #1-5*

Final Project Example:

- ___ Read and complete:
- ___ Choose ONE project below to complete:
- ___ CHOICE 1: Spend time reviewing the course this week and Take Printable end of course test 1 found online at pearsonrealize.com under printable tests
- ___ CHOICE 2: Choose a current issue in a specific country. Explore that issue or problem and come up with a solution to the problem by referring to what you have learned in history this year. Prepare a 5-10 minute presentation on the issue, the solution, and an explanation as to why you think your solution will work.
- ___ CHOICE 3: After a year of surveying world history, consider your position as a soon to be voting citizen of the United States in the modern world. What issues is your generation facing? Which one most concerns you and can you think of any solutions? What solutions are the politicians proposing? Prepare a 2-3 page essay on this topic
- ___ CHOICE 4: Current Event 9: Review the current events you collected this year and choose one to investigate. Did the issue develop further? Was there a conclusion to the issue? How is the government of the country involved continuing to monitor or control the situation? Identify the groups involved and each party's culpability. Has another nation had a similar situation or issue they have dealt with recently? Contrast how the two different nations have handled this issue. Write an essay of 2-4 pages or create a multimedia presentation of at least 7 slides and 5-7 minutes.

Unit 5- Women in History

Students will examine the lives of prominent women in history as well as their contributions to government, culture, and society.

Unit Outcomes:

1. Prominent Leaders
2. Prominent Authors
3. Revolutionaries

Essential Understandings/Questions:

1. Who was Cleopatra and why is she significant?
2. Who was Queen Elizabeth and why is she significant?
3. Who was Isabella of Castile and why is she significant?
4. Who was Jane Austen and why is she significant?

Assessment:

Each student will research one famous woman from history (i.e. Empress Wu, Hatshepsut, Jane Austin, Susan B. Anthony, Helen Keller, Anne Frank). Students will be allowed to create any type of project desired, however, they must include a background/biography, accomplishments, visuals, and a summary card. Students are not allowed to do a PowerPoint, poster, or paper. They must

be creative!

Films for this unit may include, but are not limited to the following titles:

- Elizabeth the Golden Age (Queen Elizabeth of England)
- The Help (Civil Rights/Equality/Women in the South)
- Elizabeth
- The Messenger: Joan of Arc
- The Queen

Assignments

Example Assignments:

- ___ Complete section assessment on p. 7 #1-5
- ___ Read: R-2: The Ancient Middle East and Egypt p. 8-13
- ___ Complete section assessment on p. 13 #1-5
- ___ Read R-3 Ancient India and China p. 14-21
- ___ Complete section assessment on p. 21 #1-5
- ___ Read R-4 The Americas p. 22-25
- ___ Complete section assessment on p. 25 #1-5
- ___ Short Answer: What from the past influences society today? Either make a list or write a short answer.

Unit 4- Warfare

In this unit, students will explore the evolution of warfare ranging from the ancient world up through the modern warfare tactics used in the world today.

Unit Outcomes:

1. Ancient Warfare Tactics
 - Chariots
 - Phalanx
 - Cavalry
2. Medieval
 - Siege Warfare
 - Artillery
 - Knights/Crusades
3. Gunpowder to Modern
 - Open Battlefield vs. Guerilla Warfare
 - Industrialization
 - Modern Technology
 - Rules of Warfare

Essential Understandings/Questions:

1. Summarize the warfare techniques and strategies used in the ancient world and evaluate their effectiveness.
2. Describe warfare tactics used during the Medieval period.
3. Compare and contrast ancient, medieval, and modern warfare based on Sun Tzu's principles.
4. Describe the chronology of advances in technology and the development of modern warfare.
5. Compare and contrast the advances in technology from ancient warfare to modern warfare.

Assessment:

Students will research a famous warrior in history (i.e. Hannibal Barca, Julius Caesar, Alexander the Great, Genghis Khan) and create a presentation, which will include a brief biography, tactics used, and battles. The student will also take an end of unit assessment.

Films for this unit may include, but are not limited to the following titles:

- The Art of War (documentary)
- Braveheart: Fact or Fiction (documentary)
- Braveheart (Medieval Warfare)
- Black Hawk Down (Modern Warfare)

Assignments

Example Assignments:

Assignment

- Read and complete:*
- Read: R-5: Ancient Greece p. 26-30*
- Complete section assessment on p. 30 #1-5*
- Read R-6: Ancient Rome and the Origins of Christianity p. 31-37*
- Complete section assessment on p. 37 #1-5*
- Read R-7 Medieval Christian Europe p. 38-51*
- Complete section review on p. 51 #1-5*
- After this week's reading, what can you add to the answer(s) you listed or wrote about last week: What from the past influences society today?*

Unit 3- Africa

This unit will be a study of the origins of early African civilizations, an evaluation of European imperialism and its long-term effects on an entire continent, an investigation into South African apartheid, and a brief study of post-colonial events that received global attention.

Unit Outcomes:

1. Geography and African Kingdoms
 - Northern Africa (Islamic Trade Routes)
 - Western Africa (Mali and Ghana)
 - Eastern Africa (Egypt)
 - Southern African (Zimbabwe)
2. The Age of Imperialism
 - Struggles for Independence
3. Modern Africa
 - Apartheid in South Africa
 - Modern day conflict in Africa

Essential Understandings/Questions:

1. Recognize the diverse geography of Africa and its impact on culture.
2. Summarize the major African Kingdoms.
3. Describe the European motivation for colonizing Africa.
4. What effects did European Colonization have on the continent of Africa?
5. Describe events that led to Africans struggles for independence.
6. Describe the system of apartheid and its effects on the people of South Africa.
7. Describe the causes, events, and effects of what happened in Rwanda, Darfur, Somalia.

Assessment:

Students will take a map quiz to show their understanding of the regions of Africa. Students will also identify the Trans-Saharan trade routes and explain the importance of this to the growth of West African kingdoms.

Films for this unit may include, but are not limited to the following titles:

- Darfur
- The Good Lie (Sudan)
- The Constant Gardener (Kenya)
- Amistad (Slavery)
- Blood Diamonds (Post-Colonialism)
- Tsotsi (South Africa)
- Invictus (South Africa)
- Sarafina (South Africa)

Assignments

Example Assignments:

- Read and complete:
 Read 2.3 European Conquests in the Americas p. 121-129
 Complete section assessment on p. 129 #1-5
 Read 2.4 European Colonies in North America p. 130-134

- ___ Complete section assessment on p. 134 #1-5
- ___ Read 2.5 *The slave Trade and its impact on Africa* p. 135-140
- ___ Complete section assessment on p. 140 #1-5

Unit 2- Western Civilizations

In this unit, students will study the impact Western cultures have had on modern society. The unit will include an in-depth look into the Greeks, Romans, French, and British.

Unit Outcomes:

1. Classical Greece
 - Greek Mythology
 - The Iliad & The Odyssey
 - Persian Empire and Wars (Marathon, Thermopylae, Salamis)
 - Athenian Golden Age
 - Alexander the Great & Hellenistic Culture
 - Gifts of the Greeks
2. Rome
 - Rise & Fall of the Roman Republic
 - Roman Contributions
 - Rise of Christianity, Islam, and the Crusades
3. French
 - The Franks
 - Hundred Years War
 - Absolutism and Absolute Monarchs
 - The Enlightenment
 - The French Revolution
 - Napoleon Bonaparte
4. British
 - Gifts of the British
 - Imperialism in India & Africa
 - Consequences of Imperialism

Essential Understandings/Questions:

1. Identify the ways in which the geography of Greece helped shape Greek culture.
2. Summarize the 5 W's of the Trojan War.
3. What was Greek Mythology and how did it affect the culture of Greece?
4. Compare and contrast the Greeks and the Persians.
5. Describe and characterize the Athenian Golden Age.
6. Trace the development of Alexander the Great and his accomplishments.
7. Who were the earliest Romans and how did each contribute to the founding of Rome?
8. Compare and contrast the Roman Republic and the Roman Empire.
9. What key people and actions fostered the spread of Christianity?
10. Summarize the factors that contributed to the decline of the Roman Empire.
11. Describe and identify an absolute Monarch.

12. Describe the French Revolution and summarize the effects of the French Revolution.
13. Trace the development, reign, and impact of Napoleon Bonaparte.
14. Describe the positive and negative effects of British imperialism?
15. What role did imperialism play in Europe prior to WWI?

Assessment:

The student will create a newsletter or brochure informing the public about an upcoming event in the Colosseum. Students will also create a storyboard summarizing and illustrating each western civilization. Lastly, students will have an exam on Western Civilization where they will be required to answer multiple-choice and short-answer questions.

Films for this unit may include, but are not limited to the following titles:

- The Greeks: Crucible of Civilization (documentary)
- Britain: Engineering an Empire (documentary)
- Gladiator (Rome)
- Kingdom of Heaven (Religious Conflict)
- Last of the Mohicans (Imperialism and Conflict)
- Les Misérables (French Revolution)
- Guns, Germs, and Steel Episode 3: Into Africa (documentary)

Assignments

Example Assignments:

- ___ Read and complete:
- ___ Read 3.4 The Enlightenment p. 176-183
- ___ Complete section assessment on p. 182 #1-5
- ___ Read 3.5 The American Revolution p. 184-189
- ___ Complete section assessment on p. 189 #1-5
- ___ Read 3.6 The French Revolution begins p. 190-198
- ___ Complete section assessment on p. 198 #1-5
- ___ Add the United States to your list of countries and the governments they operated under in 1750. Define any new government types using the text glossary.

Textbooks

Title	Authors	Publisher	Edition	Website	Is Primary
World History: Patterns of Interaction	Roger B. Beck, Linda Black, Larry S. Krieger, Phillip C. Naylor, Dahia Ibo Shabaka	McDougal Littell/Houghton Mifflin School	1/2007	--	Yes
World History: The Modern Era	Pearson	Pearson	2016	--	No

Multimedia

Title	Authors	Director	Series	Date	Website	Medium
The Last Samuri	John Logan, Edward Zwick, and Marshall Herskovitz	Edward Zwick	--	2003 --		DVD
Argo	Chris Terrio, Tony Mendez, and Joshuah Bearman	Ben Affleck	--	2012 --		DVD
Gladiator	David Franzoni	Ridley Scott	--	2000 --		DVD
Kingdom of Heaven	William Monahan	Ridley Scott	--	2005 --		DVD
Les Mis?rables	William Nicholson, Alain Boublil, Claude-Michel Sch?nberg, Herbert Kretzmer	Tom Hooper	--	2012 --		DVD
Darfur	Uwe Boll & Christ Roland	Uwe Boll	--	2009 --		DVD
The Good Lie	Margaret Nagle	Philippe Falardeau	--	2014 --		DVD
Sometimes in April	Raoul Peck	Raoul Peck	--	2005 --		DVD
Amistad	David Franzoni	Steven Spielberg	--	1997 --		DVD
Braveheart	Randall Wallace	Mel Gibson	--	1995 --		DVD
Black Hawk Down	Mark Bowden & Ken Nolan	Ridley Scott	--	2001 --		DVD
Elizabeth: The Golden Age	William Nicholson & Michael Hirst	Shekhar Kapur	--	2007 --		DVD
The Help	Tate Taylor & Kathryn Stockett	Tate Taylor	--	2011 --		DVD
12 Years a Slave	John Ridley & Solomon Northup	Steve McQueen	--	2013 --		DVD
Schindler's List	Thomas Keneally & Steven Zaillian	Steven Spielberg	--	1993 --		DVD
Captain Phillips	Billy Ray & Richard Phillips	Paul Greengrass	--	2013 --		DVD

Other Materials

Title	Authors	Date	Material Type	Website
Miscellaneous videos on selected locations	--	--	Video, DVD	--

Engineering America: U.S. History + Engineering & Architectural Design

Grades: 11,

Length: Full Year

Environment: Classroom-based

Honors: Honors

Subject: History / Social Science (A)

Discipline: U.S. History

Institution: University of California Curriculum Integration (UCCI)

Course Overview

This course serves to help students make connections between U.S. History and the engineering innovations that helped form our nation. Students will not only use the engineering design process as they attempt to solve the historical challenges presented to them, but they will also look at the Code of Ethics that governs decisions in the world of engineering; they will examine how decisions made by powerful people had an impact on the landscape and forever altered the way things are done in the US. This course seeks to explain the political, social, economic, and technological factors that prompted the need for engineering innovation in US History. Upon completion of the course, students will think and act like historians, understanding that source, contextualizing, and corroborating historical sources are used to analyze and address present day issues. Their understanding will be demonstrated in a culminating project in which small student teams design/build a scale model of a modern “ideal” US city informed by their understanding of history. Upon completion of this course, students will understand the design process, logistical thinking, and relevance of engineering in American life provides a foundation that could serve as an opportunity for further study in engineering as a career.

Unit One - Engineering the Dream

Recurring Assignment: Engineering Portfolio

**Students generate an online portfolio of written work samples, photographs of artifacts, video evidence of key assignments, and a step-by-step exposition of the culminating project. Assignments and projects are to be linked using a logical navigation sequence and following contemporary (HTML5-compliant) design features to ensure platform-friendly review. The portfolio will be used to assess content knowledge for both US History and the Architectural Design Pathway with a focus on the capacity to demonstrate drafting and design standards including but

not limited to scale, accuracy and tolerances, and material selection in relation to products, buildings, and other structures. Each assignment added to the portfolio must include an abstract correlating the end product with its historical basis, e.g. in Unit 1 - Key Assignment 2, students compose an abstract to explain the origins of the US Constitution and use a chart of the Engineering Design Process to visually complement the abstract.

Overview:

In this unit, students examine the documents that were engineered by those who sought to make the New World into a new, free, nation. The Declaration of Independence, the Bill of Rights, and the U.S. Constitution serve as foundational documents that set the stage for the development of the United States as a nation. After exploring the key ideas of the Enlightenment, and the role and function of quad charts as an organizational tool in engineering, students will create a quad-chart for the Declaration of Independence. The use of the quad chart will help the students think critically about the Declaration of Independence by having them summarize and consider the purpose of the content. Just as in engineering, the design has to have all these elements in place before the "product" can be produced, or written in the case of the Declaration of Independence. Next, students will explore the Engineering Design Cycle, and apply the cycle to the problems faced by America as a young nation. Students will then walk through the design cycle and apply it to the Constitution. Lastly, students will explore the role of the Bill of Rights in the government system of the United States. In a short essay, students will compare and contrast the Bill of Rights to a code of ethics for engineers.

Key Assignment 1: Quad Charts and the Declaration of Independence

Quad charts are technical documents used to briefly describe an invention or innovation through writing and/or illustration where each of the quadrants categorizes information or ideas. After instruction on various types of quad charts used in the field of engineering, students review key Enlightenment philosophies and the events leading up to America's separation from Britain and create a quad chart for The Declaration of Independence. (As an alternative (or extension) students could create a quad chart for a specific, assigned section of the Declaration of Independence and share with the class or in small groups.) The quad chart should ask the students to identify the Declaration or their assigned sections with a picture that represents the main idea of the text they've been assigned; a summary of the section including the Enlightenment ideas found in the passage, its purpose, and its benefit to society as a way of demonstrating how the ideals of the Enlightenment influenced the creation of and concepts in the Declaration of Independence. (Suggestions for quadrant categories: "Objective," "Picture Title," "Benefit/Goals," and "Connections.")

Example quad charts: <http://www.slideshare.net/minwir/project-management-1-16207009> and <http://blogs.mtu.edu/engineering-research/files/2015/10/Quad-Chart-Template-and-Examples.pdf>

Key Assignment 2: The Engineering Design Cycle and the Constitution

The Engineering Design Cycle is a series of steps that engineers follow to come up with a solution to a problem. In the case of the young American nation, the most pressing problem was finding an effective government system that upheld the ideas of the Enlightenment espoused in the Declaration of Independence. To model the design cycle process students apply the engineering design cycle to the Articles of Confederation. Then, after exploring (through their text or class lecture) the ways in which the Articles of Confederation failed to meet the desired solutions (in other words, after students research the weaknesses of the Articles of Confederation), students will work in small groups (3-5 students) to apply and create an Engineering Design cycle chart that implements the steps of the design process and demonstrates how the Constitution improved upon and addressed the weaknesses of the Articles of the Confederation. Students share their Design Cycle charts in poster form through a gallery walk. Through this assignment, students demonstrate an understanding of the Articles of Confederation, how the Constitution was designed, and how the design cycle can be applied across disciplines, whether designing a government or a new machine or tool. (As an extension, students can first use the Design Cycle to create their own form of government that addresses the problems of the Articles of Confederation, before they read and analyze the actual Constitution.)

Key Assignment 3: The Bill of Rights

In establishing the Bill of Rights to the Constitution, the engineers of our government system were guaranteeing that they would honor the “natural rights” of the citizens. Structural engineers similarly guarantee their work and the public’s safety by adhering to a code of ethics. Students will work in small groups of 2-3 to read, compare and contrast the Bill of Rights with an Engineering Code of Ethics from an engineering society, such as those published by the American Society of Civil Engineers found here:

http://www.asce.org/uploadedFiles/About_ASCE/Ethics/Content_Pieces/CodeofEthics2006.pdf.

Students document their findings in a graphic organizer. Students will use their completed organizer to write an individual essay exploring the role of the Bill of Rights in creating a democratic government and its significance in influencing how the government functions. Likewise, students will explore how a code of ethics influences the work of engineers and create an analysis of how the two are similar and how they are different.

Unit 2 - The Civil War and Reconstruction

Overview:

This Unit explores the causes of the Civil War and the unexpected consequences of the Reconstruction Era. The students will research the impact of such simple machines as the cotton gin and the McCormick Reaper on the labor force and the economy of pre- and post-Civil War America. Students will use computer aided drafting as they learn documentation standards,

processing, and manufacturing of models of machines and their predecessors. The unit will examine the treatment of freed slaves in the post-Reconstruction era under Jim Crow laws and Black Codes as they look at the patent process and the difficulties African Americans had in getting equal access to protection against infringement. In order to further understand patent laws, students will look for ways to improve the patent processes and present their ideas to the class.

Key Assignment 1: The Cotton Gin

After instruction in and discussion of the sectional differences between the North and the South prior to the Civil War, students read this article <https://www.asme.org/engineering-topics/articles/history-of-mechanical-engineering/how-the-cotton-gin-started-the-civil-war> (or one similar of the teacher's choosing) on the contribution of the Cotton Gin to the Civil War. Then students research the progression of technology focusing on the evolution of manipulatives, chemical refining, and foundational materials used to develop agrarian tools such as the cotton gin and McCormick Reaper. Students use technical documentation standards (i.e. CAD and associated methodologies used in professional drafting) to draft and communicate the design (orthographically and in planar views), processing (using annotation methods in a "key" to editorialize relevant historical connections), and manufacturing of an agricultural device/machine of their choosing. Students should also fabricate models of the machine and its predecessor using recyclable materials or other scaled manipulatives in order to explore the simplicity of these history altering machines, while also understanding that new technology in chemical refining made the manufacturing of these machines possible (see possible resources for student research below). In a concluding presentation, students will share their model with the class and correlate the impact of the device/machine/invention on the labor force and how the increase in production capacity boosted agricultural output allowing for continued population growth and urban development. For example, a student may research the invention of the reaper and how it became an essential component of the combine / harvester and how such inventions contributed to slavery in the south. Possible resources: <http://www.ck12.org/book/Engineering%253A-An-Introduction-for-High-School/section/6.5/> ; <http://www.ck12.org/earth-science/Petroleum-Power/rwa/300-Years-of-Fossil-Fuel-Use/>

Key Assignment 2: African American Inventors in the post-Reconstruction South

As the Civil War ended, slaves were granted their freedom, but just over a decade later many African Americans faced similar living conditions and limits to their freedom with Jim Crow laws and Black Codes. Students will explore the limits placed on African Americans after the end of Reconstruction in class readings, lecture and discussions from their district approved text. Amongst these injustices was the lack of recognition through the patent system for African American inventors, exacerbating the lack of equal rights and keeping African Americans from the benefits of economic and technological developments. Students will research and present to the class an invention or innovation designed by African Americans in the second half of the 1800s

and make connections to present day applications of those inventions. In addition, students will research the requirements to apply for and hold a design patent and explore the impartiality (or lack thereof) for minorities in this time period. Students will analyze the patent application process (19th century versus modern-day) and make recommendations for improvement as a part of their presentation. The students should create a multimedia presentation (Prezi or PowerPoint) to share with the class highlighting their invention, its inventor and their proposed solutions to the patent process in order to demonstrate their understanding of the injustices created by the Black Code and Jim Crow laws.

Unit 3 - Industrial Revolution and Westward Expansion

Overview:

In Unit 3, students examine how basic discoveries (tools, implements, machines) lead to mechanization and/or automation, ultimately improving productivity and efficiency in manufacturing. Students will research the Captains of Industry to ascertain how these men embraced new technology and took advantage of new materials to build railroads, bridges, and other structures that changed the face of America. Students will discover the necessity of developing new sewage and sanitation technologies, because of the rapid growth brought on by the Industrial Revolution. Students will also explore the relevance of working conditions, labor unions and building codes.

Key Assignment 1: Captains of Industry and Modeling

After exploring the role of the leaders of the Industrial Age, known as the Captains of Industry, (using their district approved text or the video series the "Men Who Built America" - <http://www.history.com/shows/men-who-built-america>), students will examine as a case study the construction of the Eads bridge undertaken by Andrew Carnegie and James Eads using new materials (Bessemer steel, concrete etc.) to erect this engineering marvel of the industrial age. Students will begin by reading this article on the engineering accomplishments of the Eads Bridge (http://msc.aisc.org/globalassets/modern-steel/archives/2011/03/2011v03_eads_bridge.pdf). Students will then research the history of metals in early-manufacturing, the introduction of alloys, and the relationship between raw materials and those processed for use in the bridge. Students will apply this knowledge along with drafting skills (measurement, tolerance, drafting standards) in a build activity engineering challenge where students attempt to maximize the effectiveness of a bridge design to support a greater load. Suggested models include cable, truss, or pier bridges. After the bridges are tested, students will write an analysis of why their bridge performed the way it did compared to the strengths and weaknesses of real-life bridge design (e.g. dual-truss design allowing for longer spans between below-deck piers; or, a cable design supporting a span between only two piers) and why such engineering and material advancement were critical for the industrial age.

Key Assignment 2: Transcontinental Railroad

After a class discussion and reading in their text on the role of westward expansion, the significance of railroads and the role of immigrant labor for America's industrial growth, students will research and prepare a report detailing the logistical requirements to build the Transcontinental Railroad. The research will enable the students to understand the vast complexity in large scale engineering projects that require a large labor force. Students will calculate the following materials that were required to construct the Transcontinental Railroad from Oakland, California to Promontory Summit, Utah: how many railroad ties; pounds of steel for stakes; weight and volume of ore; and cost of life. Students must plan how many workers are needed to shovel base rock, relocate base rock, hammer in railroad spikes, and move rails. Additionally, students will include an analysis of labor needs for the job. Students will calculate how many workers it would take to build the Transcontinental Railroad in the time span of 6 years (based on 1863-1869 while identifying the total available work hours limited by weather and daylight). Students will then create "field manager guidelines and suggestions," to be included in their report, for working with the labor force used to build the Transcontinental Railroad. In order to create these guidelines, students research attitudes towards immigrant workers (such as the Chinese and Irish) and create suggestions for "managing" workers in culturally sensitive ways. (Suggested Activity: Akin to the competition between Central Pacific and Union Pacific where the companies raced towards Salt Lake City laying base gravel, railroad ties, and tracks to maximize the bond monies received for total miles of completed track, students compete in a race to move heavy loads from opposing, equidistant endpoints in a simulation activity where teams are awarded for ensuring safe and complete delivery of an undamaged payload.)

Key Assignment 3: Urbanization and the Industrial Revolution

Students explore the impact of rapid urbanization during the Industrial Revolution (i.e. unsafe and unsanitary living conditions) through a case study. Students will explore the challenges faced specifically by Chicago. With closer proximity to one another, pollution, and the onslaught of disease, the citizens of Chicago recognized the need for improved waste management, so Chicago built the first underground sewage system. To facilitate this learning, students watch the PBS series (can be found on Netflix) called **How We Got To Now**, episode 1 "Clean." While watching, students should take notes and document the successes, failures, and outcomes as a result of the sewage system. Using the movie and researching primary and secondary sources regarding life in Chicago before, during and after the sewage system was built, student groups will create a presentation on the following: life on the streets of Chicago before the "new" sewage system was built; how population density convoluted the waste management problem; the operational characteristics of the sewage system, including details about its construction and materials used; the success and/or failure of the system. A good resource for finding the trouble

with the soil and what happened in winter conditions can be found at: <https://books.google.com/books?id=LA8OAAAAAYAAJ&pg=PR18&lpg=PR18&dq=what+happened+to+the+sewage+in+Pullman%27s+h8YWv&sig=vGbURUcKAHWj4HozuRd1O4VyVkk&hl=en&sa=X&ved=0ahUKEwitnPPd6-HNAhVN-2MKHa5XCtwQ6AEIWjAJ#v=onepage&q=what%20happened%20to%20the%20sewage%20in%20Pullma>

Based on applying the construction practices of the time, students evaluate the project's efficacy. Presentation should include a discussion of how this engineering feat changed the world (for example, municipal waste management, health, chlorinated water, infrastructure of cities, attitudes of "can do") along with discussion of the conditions it was in response to. Through this assignment, students will learn the history of the modern city as well as how engineering impacted not only infrastructure but also public health and attitudes. They will use what they learn in this research as they design their culminating project--the ideal modern city.

Key Assignment 4: Building Codes, Working Conditions and Unions

Along with unsanitary living conditions, many workers faced unsafe working conditions. In order to gain a better understanding of the types of dangers faced at the time, students will closely examine perhaps the best known industrial accident of the age, the Triangle Shirtwaist Factory fire and its connections to the labor movement/unions. After introducing the events of the fire and the events/conditions that led up to the fire via class discussion or video (like the one found here: <https://www.youtube.com/watch?v=hCB4SgXRgKg>) students will participate in a class discussion or fishbowl on the ethics of the event/circumstances. Students should reference an Engineering Code of Ethics during their discussion (like the one introduced in Unit 1) to determine if the business owners and/or the building designers had any responsibility for the death of the workers at the Triangle Shirtwaist Factory. Students should then imagine that they were a worker in New York at the time. Based on their discussion, students will write a letter to their local newspaper encouraging or discouraging workers from joining their local union and demanding safer working conditions and building codes. Students should base their reasons in their letter off of the Code of Ethics and their research of the demands of unions at the time.

Unit 4 - Imperialism and WWI

Overview:

Structural and architectural design is influenced by the society and environment in which it was created. In this unit, students will explore how the innovation and engineering of the Industrial Revolution set the stage for the Imperialism of the late 19th and early 20th century. First, students will read and analyze how innovations of the late 19th and early 20th century made the imperialism of the 1900s possible while creating orthographic drawings to document the technology of the time. Next, students will explore how the challenges of the Spanish American war led to changes in military technology, and they will represent the emerging technology of the time with freehand graphics. Students will then turn their attention to the modern marvel of the Panama Canal and explore its design aspects through a close read of an article that explores the engineering of the canal and fabricate a scaled model focused on the functionality of the lock

system (e.g. hydro-electric generators, pumping stations, fluid transfer systems, et cetera).

Key Assignment 1: *Guns, Germs, and Steel*

Students will explore the way the inventions of the Industrial Age paved the way for and made possible the imperialism of Africa and Asia by Western powers through the creation of a multimedia presentation (such as Prezi or PowerPoint) based on one or more of the following: the book (or TV show) *Guns, Germs, and Steel*; *The Tools of Empire*; or, *The Influence of Sea Power Upon History*. (Students could read a section from one of the books as selected by their teacher.) These books focus on the role technology and engineering advancements played in shaping and creating the environment for the Imperialism of the western world in Africa and Asia. In an oral presentation supported by multimedia (PowerPoint, Prezi, et cetera), students should detail the role three of the technologies played in America's imperialism of Africa and Asia alongside orthographic drawings of at least three of the technologies (guns, weapons etc) mentioned in the book or section.

Key Assignment 2: The Splendid Little War and the Impact of Environment on Design

Structural design is shaped by history and the environment. The Spanish American War demonstrated that while America's Navy was mostly prepared for America's changing role as a major player in the world, America's Army was not. Students explore in a class discussion and lecture how the Spanish American War came to be and how the short conflict changed America's perception of itself and its role in the world. Students then use this information to inform their research into how the Spanish American War influenced the way in which America's Army and Navy were structured and equipped. Students write a report on their findings, using proper citations. In their paper, students should use freehand graphics to visually demonstrate the structural design of 3-4 of the ships or weapons mentioned in their report with notations that explain how the lessons of the Spanish American War influenced the design of the weapon, ship or vehicle.

Key Assignment 3: The Panama Canal

The Panama Canal is one of the Seven Wonders of the Modern World and a key component in America's naval superiority in the 20th century. Students will write a newspaper article announcing the Canal's opening as a reporter from 1914. In preparation for their article, students will read in their history text about America's changing attitudes and its role in the world during the age of Imperialism. Students will then explore the structural engineering components of the canal. Students will read and annotate a document on the engineering behind the Panama Canal such as the one found here <https://www.aip.org/commentary/panama-canal-engineering-marvel> or here

<http://www.scientificamerican.com/slideshow/panama-canal-the-worlds-greatest-engineering-project>. Next, students will construct scaled models of no less than three sequential locks using CAD software. As part of their models, students should articulate how hydroelectric power is used and generated by the canal and how the fluid dynamics lift incredible loads. This technical information as well as their drawings and the historical significance and engineering marvel of the canal should all be included in their newspaper “front page” or article on the opening of the canal.

Key Assignment 4: The 14 Points

Students will closely read and annotate The 14 Points as a way of understanding President Woodrow Wilson’s goals for America at the end of WWI. Students will create a quad chart summarizing the purpose, the key players/stakeholders, the desired end result (of the treaty) and the measure of success for the treaty based on the 14 points. Once students have created their quad-charts they will analyze the key components (or read key selections from) the Treaty of Versailles in small groups in order to determine if the treaty was a success in light of the goals laid out by President Wilson using the Engineering Design Process. Students will write a short, multi-paragraph summary of their analysis of the treaty and as a group rewrite a section of the treaty in a way that would have better realized Woodrow Wilson’s goals as laid out in the 14 points.

Unit 5 - Great Depression and the New Deal

Overview:

The industrial growth of the late 19th c. led to rapid economic growth in the early 20th c. However, the time period of economic prosperity came crashing down in America’s worst economic downturn, The Great Depression. After exploring the causes of the Great Depression students will examine the role of the government in addressing the Great Depression, in large part through major feats of engineering and public works projects.

Key Assignment 1: The Hoover Dam and Structural Design

The Roaring 20s came to a screeching halt with the Great Depression’s emergence. Students will examine in their class text the impact of the Great Depression on individuals and communities and the government’s response. One way President Hoover (finally) addressed the suffering of those impacted by the Great Depression was through the building of the Boulder (Hoover) Dam. As a congressperson who is supporting the building of the dam, students will develop a presentation on the benefits of the dam to share before the class as fellow members of Congress. Students are to research the structural design of dams and analyze how efficiently the Hoover Dam was built, comparing material use, cost, time, and labor (<http://www.roadsbridges.com/engineering-behind-hoover-dam-and-its-bypass>). In addition, students will address the potential benefit to the community of the project in addressing challenges of the Great Depression. The presentation

should include compelling arguments justifying building the dam and technical information on the construction of the dam, including visuals such as a quad chart, graphs, and/or drawings.

Key Assignment 2: The TVA Science and Technology

President Roosevelt promised a “New Deal” for America and among the most reaching New Deal programs was the TVA or Tennessee Valley Authority. Students read in their history text about the changing role of government and the various New Deal agencies and their critics. Students then investigate the series of dams and hydro-electric (and later nuclear) plants in the Tennessee River Valley that were built as part of the New Deal and that drastically changed the landscape of America. Students will investigate the use of hydro-electric power across the American landscape and how communities exploited these natural resources to continue to build capacity for cities and an expanded labor force. Students will then create a sketch of two facilities built as part of the TVA project. The sketches should include orthographic drawings scaled to the current landscape using Internet-sourced images (e.g. students use Google Maps to generate a scaled drawing based on a GPS-sourced live image of a specific location within the current-day United States or its territories)

http://www.21stcenturysciencetech.com/Articles_2011/Summer-2011/Roosevelt_TVA.pdf.

Students will then create an impact report on the financial and environmental impact of the two dams or power plants using the data and specifications in their sketches. Based on the details of the dams or power plants the students sketched and researched students will write a recommendation to Congress on whether or not the proposed facilities should be built and why.

Unit 6 - WWII

Overview:

The Great Depression was dramatically and swiftly brought to an end by the attack on Pearl Harbor and US entrance into WWII. In addition to studying the events that led up to the attack, students will look at why the attack was so devastating, and why the US was helpless to defend the harbor. The students will see the “Sleeping Giant” wake and in addition to examining innovations and technologies that came out of WWII, students examine the inadequate housing and facilities in U.S. Internment Camps as a means to under the broader injustices of Japanese internment. To further encourage students to imagine all possible scenarios in the design process, students will research 1)the errors in the engineering design process with the use of the Higgins boat and 2) discuss the Code of Ethics wrapped around and through the development and use of the Atom Bomb.

Key Assignment 1: Pearl Harbor

The disaster still evident today at Pearl Harbor was a result of a variety of presumptions which began with warfare policy and lack of foresight. In this assignment, students will investigate how the following impacted the outcome of the attack: the layout of the harbor (how the fleet was physically docked) or the lack of alternate (courses) for egress; the capacity to rapidly mobilize the resting fleet; minimal land-to-air protection of the neighboring airstrip where the squadron of fighter planes were kept; and, the communication system used to alert and mobilize ground troops. Students will generate a large-scale chart to identify the steps missing from the Engineering Design Process (i.e. lack of forethought) when evaluating the aftermath and present their findings to a military review board.

Key Assignment 2: Japanese Internment

Students will turn their attention from the attack to America's response and the internment of Japanese Americans as a result. Students will begin by reading first-hand accounts of the treatment of Japanese-American immigrants including Executive Order 9066; and *A Farewell to Manzanar* by Jeanne Wakatsuki Houston (either in part or in its entirety). While reading *A Farewell to Manzanar*, students will document the references to poor living conditions found in the camps. Students should make note the lack of natural resources accessible by the camp, the weather extremes not addressed by the inadequate designs of the temporary housing (too hot in the summer months, freezing temperature in the winter months) and a lack of proper sanitation systems. (Students can refer back to Unit 3 Assignment 3 to remember the consequences of inadequate sewage/sanitation systems.) By means of comparison, students conduct research on residential construction practices of the 1940s, such as can be found in these two linked resources: http://www.dot.ca.gov/ser/downloads/cultural/tract_housing_in_ca_1945-1973.pdf or

<https://heritage.utah.gov/history/world-war-ii-post-war-residential-building-types>

Using evidence from their text and their research, students will produce a digital presentation that illustrates the poor construction, the life of the Japanese immigrants, and the personal and material loss they endured.

Key Assignment 3: D-Day and Higgins Design

After a class discussion on the significance of D-day and viewing photographs and re-enactments in video (such as the opening scene of *Saving Private Ryan*) students will examine the key transport ship in D-day, the Higgins boat. While the Higgins boat has been attributed to the pivotal success of D-Day by delivering our soldiers directly to the beaches of Normandy, they were well known for one critical design-flaw: soldiers stood behind a great steel wall that provided little protection from the onslaught of firepower aimed directly at those closest to the beach. In teams, students will design a more effective means to deploy soldiers, limited by the materials and technology available in 1944 (e.g. iron, steel alloys, NOT materials like kevlar and carbon fiber).

Emphasis should be placed on students identifying online databases where material hardness (e.g. Rockwell hardness standards), malleability, and weight per cubic measure help guide decisions about material selection. Students generate a host of planar and orthographic drawings which are evaluated by the whole group via a gallery walk format. Based on this research, students will write a report to the War Department as a commander planning an amphibious assault during WWII. Students will demonstrate their understanding of the brutality of D-day by explaining from a technical, historical and strategic perspective the need for these improved transport ships.

Key Assignment 4: The Atomic Bomb and Ethics in Engineering

As WWII dragged on, president Truman made the controversial decision to use America's new and terrifying weapon, the atomic bomb. As students research the development of the Atomic Bomb, students learn how the German threat impacted its development and influenced Truman's decision to use it. Students, in a Socratic Seminar, consider the proposal to use this unproven technology in warfare. In their discussion, they will address the essential ethical questions to consider before using a technology. Students must identify the theoretical impact to the landscape, and its inhabitants upon detonation (consider researching locations like Battle Mountain, NV). In addition, students must include an environmental impact report focused on the predicted use of (or restriction to) the affected region(s). (The teacher could further this discussion with bridged topics like genetic modification or chemical warfare.) During the Socratic Seminar, students consider the emotional aspect of the decision to use the atomic bomb and reflect on the Engineering Code of Ethics and the role this played in the Manhattan Project.

After noting their takeaways from the Seminar, students write an expository essay in which they extend their understanding of the Engineering Code of Ethics to a current engineering topic with potentially far-reaching effects. (Solar farms that are desecrating the desert; desalinization of ocean water; etc.)

Unit 7 - The Nifty 50s

Overview:

With the horrors of WWII in their rearview mirror, America sped into the 1950s creating an explosion of culture and consumer products. These innovations brought about a changing perception of the American dream and new engineering challenges. Students will explore how the culture and baby boom of the 1950s led to changing home designs by creating a digital or physical poster of the changing design elements of homes in the 1950s. Next, students will explore a key aspect of America's love affair with the automobile by analyzing America's blossoming Interstate Highway System. Students will apply their design skills by creating and proposing an improved freeway system in a presentation that meets industry standards.

Key Assignment 1: Tract Homes and Design Efficiency

As the 1950s began, Americans were ready to forget the problems of the world and work on creating the American dream. Students investigate early tract home developments across the US by reading an article such as the following: <http://ushistoryscene.com/article/levittown/>. Students research the key design elements shared amongst similar developments built across the country in this time period and create a digital or print comparison of communities at the time. Students reflect on the how the baby boom and post-war attitudes of Americans led to the development of these communities, and hypothesize how the post-war attitudes influenced the design of these homes. Students will include images of developments from multiple states, their analysis on how attitudes impacted design and the relationship between tract home design and modern day community planning in their digital or print comparison (poster board) as a way of exploring the ideals of post WWII America.

Key Assignment 2: The Freeway System and the Communist Threat

Though Henry Ford has been attributed with making the automobile affordable to every family, Eisenhower has been attributed with giving those families a road to drive upon. Students will read in their history text of the development of the freeway system, in part because the fear of Communist aggression led government leaders to prepare to mobilize the US military. Students investigate this connection and examine the strengths and weaknesses of each route (see road use reports from NHTSA or the DOT) in relation to the fear of an offshore aggressor and the daily demand for private transportation on these same roadways. Their research should include the Federal Aid Highway Act of 1956, the number of cars on the road from the start to the end of the 1950s, and how the newfound mobility of a nation permeated and affected life in the US. Working as a military contractor, students will present their findings/connections in an industry-style report advising the army on the best route to Florida, or to California in case of an invasion, being sure to justify their decision and explain its superiority over two alternative routes.

Unit 8 - The Cold War

Overview:

As WWII drew to a close, a new threat to America emerged in the shape of the Communist aggression of the Soviet Union. Throughout much of the 1950s, 60s and beyond America's policies, spending, and engineering expertise were focused on preventing the spread of and defeating the "threat" of the Communist Soviet Union. Students will explore the changing nature of the Cold War by creating a 3D timeline of key cold war events. Next, students will explore the impact of Sputnik on creating change in America's education system or in our space program by applying the Engineering Design Process to the challenges created by Sputnik. The review of the Engineering Design Process and the acquisition of the skills necessary to build 3-D models will be key in preparing students for their culminating project, engineering an ideal city.

Key Assignment 1: The Cold War 3-D Timeline

Students will create a timeline of the following Cold War Events using scaled 3-D model components (e.g. a replica of the UN Building in New York City, a replica of the U2 plane, miniature bricks placed upon one another to form a wall-in-progress, et cetera). Facilities with the capacity to implement 3-D printing may use online resource files (e.g. <http://www.thingiverse.com/>) to generate models where students apply scale to final printed components. In a presentation of the timeline, students will explain the events that lead to each point in history. A teacher - generated rubric will guide the students in their research and presentation.

- Yalta Conference-February 1945
- United Nations is formed- June 1945
- Berlin Blockade and Airlift-June 1948-May 1949
- NATO formed-1949
- Korean War-1950-1953
- U2 Spy Plane Incident- May 1960
- Bay of Pigs Invasion-April 1961
- Berlin Wall Construction Begins-August 1961
- Cuban Missile Crisis-October 1962
- Vietnam War - November 1955 - April 1975

Key Assignment 2: Sputnik and the design of Engineering Education

Students will analyze America's math and science education of the 1950s through the lens of the Engineering Design Process in light of the changes made to America's education system as a result of the launch of Sputnik and America's fear of communism. Students will read in their texts or articles such as this one <http://news.harvard.edu/gazette/story/2007/10/how-sputnik-changed-u-s-education/> on the influence of Sputnik on America's education system and the fear that Sputnik's launch meant the US was woefully behind the Russians in math and science. In groups of 2-3 they will create a presentation to share with the Department of Education on the validity of changing math and science education at the high school level to include a greater focus on engineering. (Possible extension: Students apply the Engineering Design Process to one of the failed NASA projects leading up to Apollo 13. In this version of the assignment, students continue to build upon drafting techniques by generating technical drawings of the key components responsible for specific failures including but not limited to the latching mechanism of Apollo 1, responsible for the lives of all three astronauts. Students will present their findings to a mock NASA Review Board, where they will address the component failures [annotated in their technical drawings] and defend

suggested improvements using visual aids [drawings]).

Unit 9 - Civil Rights

Overview:

As the Cold War created uncertainty and upheaval overseas, the Civil Rights movement created drastic change domestically. After exploring these changes in a class discussion on key civil rights events and legislation, students will examine how the gains of the civil rights movement changed the designs of public facilities, in particular schools. Building upon their exploration of building standards in Unit 4 (The Industrial Revolution) students will create a report contrasting and analyzing the design and building codes of public facilities of the 1960s and 1970s. In the final project, students examine the ways in which the ubiquity of the television in American homes by 1960 increased the reach and impact of the Civil Rights movement, analyze connections to contemporary social movements and hypothesize new technological modes of communication through engineering innovations that could continue to spur change.

Key Assignment 1: African Americans fight for legal equality denied since the end of Reconstruction

Students will review the impact of Jim Crow and Black Code laws by reading a teacher selected section of Roll of Thunder, Hear My Cry (consider chapter one). Based on their reading, students form a hypothesis and then research how buildings were designed in the era of segregation. Students create a written report on how integration caused by Brown v Board , the Montgomery Bus Boycott, and other seminal developments of the Civil Rights movement changed building and planning methodologies/requirements/practices (consider the need for “Separate but Equal” bathrooms, classrooms, et cetera). Student’s reports should focus on evolving building standards (see local building codes) of the 1960s and 1970s by comparing public facilities (e.g. school buildings, mass-transit stations like a bus depot or an airport, et cetera) and demonstrate how integration impacted design and cost of both public and private projects. In this report, student should also address the effective use of space and how Integration provided an increase in design flexibility.

Key Assignment 2: Television, social media and civil rights

In order to examine the role of innovative technology (television) in the advancement of Civil Rights, students investigate a resource such as the following website: Get Up! Stand Up! The Civil Rights Movement and Television

<https://www.paleycenter.org/education-class-get-up-stand-up-civil-rights-movement-television/>

Students learn that, by 1960, 90% of homes had televisions, which meant 90% of people had access to information and ideas not accessible before. This increased access to information increased the reach and impact of the Civil Rights Movement and its leaders. Students extend their understanding of this impact by making comparisons, through classroom instruction and research, to contemporary social and civil rights movements/issues that have also reached more people through an increase in access to information due to technological innovations. Finally, students apply the applicable skills learned in the context of architectural design to a new engineering context, utilizing the engineering design process to conceptualize and design a communication tool that they imagine would be the next step for spreading/disseminating information and promoting ideas and/or movements. Students write a spec sheet or quad chart (or similar document) that communicates purpose, audience and design and/or other relevant metrics. (If available, students may go so far as to use a 3D printer to create a model of the design.) Finally, in a presentation or essay, students compare and contrast their new tool and its hypothesized effects to past innovations and their influence, demonstrating an understanding of important moments/leaders in the Civil Rights movement and the ways in which engineering innovations can change lives.

Unit 10 - It's a Great Big Beautiful Tomorrow-engineering the future city

Culminating project:

Culminating Assignment: Students have surveyed American History through the lens of Engineering and learned additional skills related to general engineering practices, design and drafting standards, and the use or application of materials throughout history. In this culminating assignment, student groups (2-3 students max) will gather together the successes and failures witnessed in developing communities over the last 200 years to build an ideal American city of today. In contemporary terms, we refer to this as master planning. Students will research how the need for the following critical areas for master planning are decided upon: public utilities including water, sewage, and power; transportation systems including private and public modes within and beyond the borders; resource management including local public service offices and entities; and, business and commerce all while following local, state and federal laws. The stages of this project will include:

1. Identifying city parameters (i.e. borders, landscape, natural resources, et cetera)
2. Drawing orthographic models of the public utility backbone, the roadways, community services, private residences, public open space, and locations for business and commerce
3. Presenting the initial design to a review panel to “authorize” the project (suggested connection with local public works professionals) and ensure all aspects of a master plan are addressed
4. Construction of a scaled model (stress using recyclable or recycled materials)
5. Presenting the scaled model (annotating the design features in the presentation) to the review panel

6. Generating the projected cost to develop and open the future city
7. Participating in a gallery walk of all models during which student projects are judged based on how effective the design addresses these or any teacher-created criteria:

- open city streets
- areas for sharing culture
- places for innovation/creative thinking
- parks
- what to do with homeless
- Affordable housing
- schools
- senior living
- Hospitals

In their presentations, students should discuss specific failures/successes/moments from history that influenced their designs, and based on those insights, they indicate why their designs improve upon/prevent/create the components required to build an ideal city. Through this assignment, students draw upon history learned throughout the course, and they apply it to the innovative approach and design of their city. A teacher-created rubric will inform students of parameters and expectations.

Textbooks

Title	Authors	Publisher	Edition	Website	Is Primary
District approved U.S. History textbook	any	any	any	--	Yes
Engineering Fundamentals: An Introduction to Engineering	Saeed Moaveni	Cengage	2010 (4th ed.)	--	Yes

Water Policy to Water Wars: The Role of Economics and Government on Our Most Precious Resource

Grades: 12

Length: Full Year

Environment: Classroom-based

Honors: None

Subject: History / Social Science (A)

Discipline: Civics / American Government

Institution: San Bernardino County ROP

Course Overview

This course satisfies the A-G CSU and UC college entrance requirement and meets the California State High School Graduation requirements of a semester each of economics and U.S. Government.

This class, centered around water and replaces the traditional semester long Government and Economics class that is required by the State of California for graduation. Water, and the industry that surrounds it, is uniquely qualified to provide the necessary lessons because it is subject to decision making processes, policies, local, state, and federal laws and regulations, and economic choices like any other commodity. It has a unique difference in that it is a requirement of life at the most basic level making policies and choices a life or death issue. Water is also scalable. That is, it can be, and often is, used in both extremely small and large amounts. This ensures that students will experience water at local, regional and global levels. These scalable levels are increasingly important as water becomes a progressively more important topic around the globe due to climate change and population increases. Students will research, investigate, problem solve, analyze, document, perform mathematical equations and conduct exercises on many different areas. Due to the nature of this class, group and discussion work are included. This provides excellent real life experience for students as they learn to listen, research, analyze, collaborate, problem solve, and make informed decisions about water, economics and government throughout their lives.

The course is divided into three units: Introductory, Economics and Government. The Introductory Unit will provide students with general water knowledge and may be used before either the Economics or Government Units. All three units are comprised of Key Assignments and optional additional activities and exercises. Key Assignments may take several class periods depending on complexity, class size and will typically produce a written product. Students will utilize a notebook

for their assignments which will be turned in with their final project. The notebook should be organized by Unit and Assignment and can be used as a reference tool as well as part of their final project for the end of each course.

Introductory Unit- The World of Water

Unit Overview: This unit serves as an introduction to the world of water and is designed to provide a basic understanding of water supply, geography, and individual water-use. It may be used to prepare students for the upcoming semester in either the Economics or Government classes. Teacher and student resources for this unit are located in the Introductory Unit folder.

Most people never think about water; we act as though there is an inexhaustible supply because it simply comes out of the tap whenever it is needed. Yet, this is not the case around the world or even in the United States. Water is not limitless, nor is access to it. Although global water problems are relatively more well known, there are many areas within the U.S. and California where safe drinking water is not available due to pollution, poverty, and poor infrastructure systems. In this unit, students will explore the limits of water, the hydrological cycle, where it comes from in California, and how much water is embedded in everything they use and eat.

Assignments

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Key Assignment 1: How Much Water Is There Anyway?

Water is a finite substance and clean drinkable water is in limited supply. The amount and location of available water has shaped civilizations for millennia. This assignment illustrates both quantity and availability of the world's water supplies.

97%

Oceans and seas

2%	North and south poles
1%	Available for human and animal consumption

Students will use beakers, colored water, and pipettes to investigate how much water is located in the oceans, underground as groundwater, surface water, and the remaining amount that is both available and potable. The teacher will lead a class discussion on the scarcity of fresh available water. Students will prepare a Lab Report documenting their findings which can be added to the notebook.

A Student Lab Report guideline is provided in the Introductory Unit, Student Resources, Key Assignment 1 folder.

Key Assignment 2: Water Keeps Going Around and Around

The basics of the hydrologic cycle is critical knowledge for further work in this course. To provide a refresher lesson, students will work in groups to explore the United States Geological Survey (USGS) website and Environmental Protection Agency (EPA) website. After exploring the websites, the teacher can lead a short discussion on different geographical areas and the water cycle. For example, what areas have dry summers? Where is the雨iest area? Students will explore and discuss their own area. This will aid students in understanding the part geography plays in water.

<http://water.usgs.gov/edu/watercycle-kids-adv.html>

https://www3.epa.gov/safewater/kids/flash/flash_watercycle.html

A water cycle experiment is included in the Teacher Introductory Unit, Key Assignment 2 folder. While this is a more “scientific” experiment than would be expected in a Economics class, it would serve as a refresher for students on the physical properties of water and is recommended. If utilized, students will prepare a lab report and add it to their notebook.

Key Assignment 3: What’s Cool About California? The Geography Of Water

Throughout the year, students will study California water and the role geography has played in shaping water in both Economics and Government. In this investigation, students will work in groups to understand the unique geography of California and what that means for our water supply. Students will use topographical maps to explore California’s hydrologic regions and investigate population centers and their proximity to water. Students will complete the booklet, the Geography of Water, which is provided by the Metropolitan Water District of Southern California.

A Geography of Water Teacher Guide is located in the Teacher Introductory Unit, Key Assignment 3 folder. It can also be downloaded at:

http://www1.mwdh2o.com/mwdh2o/pages/education/h2o/content/The_Geography_of_Water.pdf

The Geography of Water student workbook will be the lab report for this unit. It can be ordered at: <https://www.surveymonkey.com/r/?sm=5nsUhcVO%2b5t%2bOUZHBk7O2w%3d%3d>. When completed it can be added to the students notebook.

Key Assignment 4: How Much Water Do You Use?

Water is embedded in every area of our lives from the manufacturing process to daily personal needs. Students will explore how much water they individually use by answering questions in an online water footprint calculator. The calculator includes food choices, home energy use, and other water using practices. Scores are automatically calculated in four categories: home, diet, energy, and “stuff.” Students will log their individual category scores in their logbook and work in groups to plot the scores in excel and create a graph. The teacher will post them anonymously and lead a class discussion about the findings and possible ways to reduce their water footprint.

The water calculator can be found at: <http://www.watercalculator.org>

Students will place their individual water footprint in their notebook.

Introductory Unit 1 - Final Project - Students will create ten social media posts (Instagram, Twitter) highlighting what they have learned in this unit. Topics might include water conservation tips, geographical information about California or thoughts on water scarcity.

Unit 1- Supply and Demand, Opportunity and Scarcity

Economics is the study of choices and how societies, governments, businesses, households, and individuals allocate their scarce resources. On a global level, economists are well known for advising the president and congress on economic issues, formulating policies at the Federal Reserve Bank, and contributing to the development of public policies including social justice, health care, welfare, school reform and efforts to reduce inequality, pollution and crime.

On a personal level, economics can provide valuable knowledge for making decisions in everyday life. It is a tool to approach questions about the desirability of a particular financial investment opportunity, whether or not to attend college or graduate school, the benefits and costs of alternative careers, and the impacts of public policies including water supply and infrastructure, universal health care and a higher minimum wage.

In water, there are many competing factors that lead to choices. This unit will explore three important economic concepts: Supply and Demand, Opportunity Cost, and Scarcity. All three are so closely intertwined in water they are almost indistinguishable. Water embodies the same challenges as other commodities involving economic principles with one major difference: we must have it to live. Water is a primary resource. All living things need it in some quantity just to exist but as students learned in the Introductory Unit, it is also an embedded resource. It's in our bodies, our food, our air, and our manufactured products. It is, in fact, the critical resource that we, and other living things, need to survive.

The unit concepts are:

Supply and Demand - the amount of a commodity, product or service available and the desire of buyers for it. Throughout the world, water demand is often larger than supply in populated areas

and efforts have been made to bring water to thirsty populations. These same supply principles have been utilized in the United States beginning in the pre-colonial era. In California, large engineering projects like reservoirs and the State Water Project were built specifically to increase supply to meet demand. However, we may be at a point when that is no longer possible and demand must be reduced to meet available supply. Additionally, there are times when supply is too great. Floods are an example of too much water in a short amount of time. Consequently, in water, the ideal situation is that supply is available when needed (summer) but excess supply (floods) is managed to avoid disasters. In other words, water supply and demand fluctuate dramatically based on the season, weather, customer and business needs, emergencies (fires, earthquakes) and availability.

Opportunity Cost - the loss of potential gain from other alternatives when one alternative is chosen. That is, if one thing gains value, something else loses value. Opportunity cost can be applied to water by considering the competing factors that lead to choices. For example, if more water is diverted to agriculture, the environment may not have enough water to sustain critical wetlands and fish populations. Is this important? Most scientists say yes! Wetlands and fish populations perform a significant role in water quality by filtering harmful pollutants out of water. This allows water utilities to receive higher quality water. Higher quality water is less expensive to treat to drinking water standards and directly affects the price of water for customers. Many customers struggle to pay their water bill now. In the end, diverting water to agriculture for food production may seem like a good idea but is it really a good idea if the end effect is a higher water bill? These are the types of Opportunity Cost decisions that water purveyors and public agencies throughout the world make on a daily basis.

Scarcity - the lack of sufficient resources to produce all the goods and services that people desire. All water choices come down to scarcity. Water resources are already stretched thin in many areas of the world and scarcity is predicted to be the leading problem of this century. It is an increasing and constant problem as populations grow, the climate changes, the effects of pollution become more apparent, and droughts reoccur. In California, which has "engineered" water supply solutions to the highest degree of any society, scarcity remains a problem. Scarcity in California is complicated by the fact that the major population centers are hundreds of miles from significant water sources. The majority of supply occurs in areas with very little population in the upper reaches of northern California such as the cities of Redding and Santa Rosa. The majority of people live in southern California where there is very little precipitation. The reason most people live in southern California is the Mediterranean climate. In other words, the very absence of precipitation and the corresponding days of sunshine have lead directly to the water issue that we must manage. The problem was "corrected" by large conveyance projects. These are expensive to build, maintain and have tremendous environmental costs. Californians have engineered a system that has sustained a lifestyle that is famous throughout the world. There is concern among government officials and water purveyors that California, in particular southern California, is approaching a level that will not be sustainable. The solutions to these problems will need to be addressed, at least partially by utilizing economics.

Assignments

Key Assignment 1 - Global Water Issues

Part 1 - Rising Tensions Over the Nile River Basin: A Global Commons Case Study

The United States experiences common water problems including floods, droughts, water quality issues, and infrastructure maintenance problems in a similar manner to other countries. But for developing nations these problems are exacerbated by extreme poverty, corruption, wars, and many other issues residents in the United States don't normally experience. In this Key Assignment, students will analyze the concept of a global commons dilemma through an evaluation of a primary source document. Students will begin the unit by performing close and critical reading of The Middle East Media Research Institute Inquiry and Analysis Series – No. 165 February 27, 2004: Rising Tensions over the Nile River Basin by Dr. Nimrod Raphaeli and respond in writing to the Reading for Comprehension questions that follow. The article communicates why several African nations are in conflict regarding the use of the Nile River as a water source.

Part 2 - Tragedy of the Commons

The second part of this Key Assignment introduces students to the concept of The Tragedy of the Commons and applies the concept to address the global water crisis. In 1968, environmentalists introduced the concept called the Tragedy of the Commons. The tragedy being the notion that any resource that is open to everyone – such as the air, rivers and lakes, or the ocean – will eventually be destroyed because everyone can use the resource, but no one is responsible or fully accountable for preserving it. When people are not compelled to preserve resources for the welfare for future generations, the Tragedy of the Commons occurs. Students will gain insight into the global water crisis and interpret information illustrating the lack of access to freshwater in many developing nations.

The reading for comprehension answer key and Tragedy of the Commons guideline is provided in the Economics Unit 1, Key Assignment 1, Teacher Resources folder. The reading for comprehension questions, reading material and Tragedy of the Commons discussion questions are provided in the Economics Unit 1, Key Assignment 1 Student Resources folder.

This lesson is provided courtesy of Water-Partners International. Additional information and lessons are available at www.water.org

Key Assignment 2: The Colorado River: Sharing a Regional Resource

The Colorado River, a source of imported water (outside the immediate area) for southern California, is the hardest working river in the western states. It is over allocated, meaning that more water is allocated to water purveyors than actually physically exists in the river. Although it is small compared to rivers in other parts of the U.S. (Mississippi River, Ohio River, Arkansas River, etc.), the importance of the Colorado River to the seven western states and Mexico that use it as a water source cannot be overestimated. It is the lifeblood of the region.

To prepare students for this lesson and provide an overview of our own “local” river, students will watch a National Geographic documentary on the Colorado River and the Grand Canyon.

<https://www.youtube.com/watch?v=mgYcC7jEe44>

A longer more comprehensive video will outline the ways the Colorado River is allocated to the

seven states within the U.S. and Mexico as well as the origins of the water allocations.

https://www.youtube.com/watch?v=rU_IcjLEFI

To complete this Key Assignment, students will physically act out the Colorado River's flow. This will illustrate the cause and effects of over allocation as well as Supply and Demand principles. Using the "floor" map located in the Teacher Resources, Key Assignment 2 folder, students will each be assigned a station along the Colorado River. The materials needed to complete the "experiment" are:

- Three buckets: 1 for the Green River headwaters, 1 for the Colorado River headwaters, 1 for the outflow bucket.
- 30 solo cups
- The map. The map is designed to be printed on 16 foot X 20 foot paper so students can walk on it but can be used in a 8.5 X 11 regular paper size. If the smaller size is used, a large skein of blue yarn would be helpful to lay on the floor in the shape of the Colorado River and its tributaries.

There are 28 stations on the map (25 for rivers and streams, 1 for Lee's Ferry, 1 for the U.S./Mexico border and 1 for the Gulf of Mexico). Each student or team of students is assigned a station. Beginning with a student and 1 empty bucket at the Green River Headwaters, the student puts 4 and ½ solo cups of water into the bucket representing the flow that the Green River puts into the river. The bucket is passed to the Flaming Gorge student who removes ½ solo cup and puts the water into the outflow bucket. The Flaming Gorge student passes the bucket to the Duchesne River student who adds a solo cup of water to the bucket. The same pattern is followed on the Colorado River Headwaters side of the map until the two buckets meet at the confluence of the two systems above Lake Powell in Utah. At that point the two buckets are combined. The experiment proceeds to Lake Powell, that student removes 1 solo cup of water and pours it into the outflow bucket. Students will continue moving the bucket and add/remove water as necessary. The students who are assigned to the three non-water places (Lee's Ferry, the U.S./Mexico border, the Gulf of Mexico) should loudly announce their location as the bucket passes them. This experiment will assist the students to understand that rivers are living systems with constantly changing levels due to constant inflow and outflow. Plants, animals, and people depend on this fluctuating system of supply and demand. When levels are artificially (by people) or naturally (by drought) disrupted, additional problems will occur.

The idea for this assignment was provided by the Water Education Foundation. More lessons can be found at www.watereducationfoundation.org

The Colorado River map is provided in the Economics Unit 1, Key Assignment 2, Teacher Resources folder.

Key Assignment 3 - Different Perspectives About Water

There is tremendous competition for a limited water supply throughout California. Stakeholders often make trade-offs, especially during drought. This exercise will assist students in learning who the stakeholders are and what water is used for on a state level. Students will be divided into groups in order to research and discuss which stakeholder's views are the "most important." At the end of the discussion, a vote will be held to choose the top three stakeholder perspectives. To

learn if student groups arrived at different conclusions, the teacher will lead a class discussion and assist students by creating a master chart illustrating the conclusions of the class.

Portions of this assignment were provided by the Metropolitan Water District of Southern California.

The discussion worksheet is provided in the Economics Unit 1, Key Assignment 3 Student Resources folder

Key Assignment 4 - Water-Use Opportunity Costs

Building on the stakeholder perspectives that students investigated in Key Assignment 3, students will now learn about drought issues and apply mathematical principles to opportunity cost. Students will use production possibilities curves, and apply the concepts of scarcity, choice, and opportunity costs to the various uses of water.

Imagine a world where you would not have to give up anything to consume water. Water, time, and money are valuable resources in the economy. If water in California was not scarce, we had unlimited time and unlimited amounts of money there would not be an opportunity cost to having a fish tank or watering your grassy lawn! But the imbalance between our desires (unlimited wants) and available resources (limited) is what creates the condition of scarcity and forces us to make choices based on our preferences. Opportunity cost represents what individuals, groups, and society 'give-up' for the choices that each of these make. Opportunity cost is the next best alternative to alternative choices. The application of the principle leads one to the conclusion that no choice or decision is costless (even if it has a price equal to zero). Benefit/cost analysis allows us to determine the most productive option for a given objective. This lesson should provide insight and understanding that people obtain additional quantities of desired goods, services or activities by reducing the production or consumption of other goods, services, or activities.

The production possibilities curve is used by economists to illustrate scarcity, opportunity cost, and allocation of goods and services. The model is used to explain economic growth and efficiency for an economy.

Students will learn to:

- Recognize and give examples of the opportunity cost of water as applied to uses
- Calculate the opportunity cost of increasing the chosen use of water.
- Explain "efficiency" using a production possibilities curve.
- Graph production possibilities curves from tables.

Portions of this assignment are provided by the Metropolitan Water District of Southern California.

A teacher guideline, PowerPoint and assignment answer key are provided in the Economics Unit 1, Key Assignment 4, Teacher Resources folder. The student Opportunity Cost of Water assignment is provided in the Economics Unit 1, Key Assignment 4, Student Resources folder.

Economics Unit 1 - Final Project - Students will research an area currently experiencing a water

scarcity problem. Some areas of interest for their project may include central California, Africa, Honduras, Borneo, and the Arctic. Students should analyze the reason(s) for scarcity including supply and demand for the region, the opportunity cost, key stakeholders, supply and demand curves, and steps to alleviate the problems. Students will then create a 5-minute multimedia presentation in the form of a PowerPoint, Prezi or other platform illustrating their research and possible solutions. These should include long-term solutions and students are encouraged to be creative and plan into the future, much like water suppliers do.

Unit 2- Market Economies and Price

Unit Overview: Building on the Key Assignments in Unit 1, students will now research, discuss, and analyze market economies and water pricing. Water pricing (rates) is a critical issue in California, the United States and around the world. Due to the necessity of the product (water), there have been questions about the validity of charging for water under any circumstances. In many areas, the water itself is free but treatment and conveyance are expensive. Treatment, distribution and operations systems must be built and maintained. In large projects like the State Water Project in California, electricity is a key cost. Water is heavy (about 8 pounds a gallon) and moving it over mountains uses a significant amount of power which is provided by electricity. This is extremely expensive as are chemicals for treatment and water hardware (pipeline, valves, meters, treatment facilities, etc.) for the distribution system. This is compounded by the need for maintenance which is often performed on a daily basis.

How does economics intersect with water? An important economic concept is price determination in a market. It means, that everything being equal, in a competitive market, the unit price for a particular good, or other traded item such as labor or liquid financial assets, will vary until it settles at a point where the quantity demanded (at the current price) will equal the quantity supplied (at the current price), resulting in an economic equilibrium for price and quantity transacted.

One obstacle to thinking clearly about water-use arises from the prevalent assumption that water is somehow different from other resources. According to this view, water is unique because we need water, and our use of water is therefore a right. Consequently, we tend to use water as if it were unlimited, when it clearly is not. In studying water resources, it is best to confront these underlying assumptions at the outset, asking: what does it mean to say that we need water? How much water do we need? Is water fundamentally different from other resources?

Economic reasoning and empirical observation tell us that our “need” for water depends:

- On our circumstances or situation;
- On our personal interests, values, and tastes; and,
- On the price of water.

Assignments

Key Assignment 1 - When Is a Basketball a Substitute for Water?

In the Introductory Unit, students explored their “water footprint.” This Key Assignment provides a more in-depth analysis that includes price, choices, incentives and the law of demand. Typically,

people respond predictably to positive and negative incentives. Prices are the mechanism to send signals and provide incentives to buyers and sellers. When supply or demand changes, market prices adjust, affecting incentives.

Students will consider different patterns of water-use, calculate their own families' monthly usage, and compare it to usage by a fictitious average family. Then consider why different people use different amounts of water and how their use might be reduced. In the process, students discover the important connection between the amount of water we think we need and the price we pay for it.

In fact, the average American uses about 75 gallons of water per day (nationwide), even though the estimated humanitarian need for water (sanitation, cooking, and cleaning) is only about 13 gallons per day per person. In California, the gallons per day is much higher. Once students acknowledge that people have many and varied uses for water and that only one of those uses—the very small amount of water that replenishes bodily fluids—is both universal and irreplaceable, they are ready to address the question of how people decide how much water to use and to analyze proposals for reducing water-use. In the process of analysis, students will find that many water-use issues can be successfully addressed without resorting to calling other people's water-use "stupid," or branding their actions "immoral." Economic reasoning tools help students understand the logic of people's choices as they consider questions like:

- Why do farmers grow rice in the California desert?
- Why don't people care enough about water to turn off the faucet when they brush their teeth?
- If we have a water shortage, why does the city water the median-strip gardens on the streets in our town?
- Why do people insist on a grass lawn?

We tend to think of water as being different from other resources, but in the real world, people's desire for and use of water is similar to other goods, services, and resources, in that it changes in response to the price they pay for it. Far from being held hostage by their vital need for water, people prove themselves to be very adaptable, finding many substitutes and ways to use more or less water as the price changes. The evidence is strong that both urban and agricultural water-users change their behavior in response to changing prices:

- Economists Olmstead and Stavins (2007, pp. 4) compared numerous water studies throughout the United States and found that a ten percent increase in the price of water resulted in an average decrease in water consumption of about three to four percent.
- California was able to reduce the demand for water significantly throughout the state during the 2011-2017 drought. (State Water Resources Control Board). Much of this reduction was attributed to price increases implemented by water purveyors.
- The Environmental Protection Agency estimates that residential water consumers will reduce water consumption by 2 to 4 percent for a 10 percent increase in price. Industrial users will have a greater response -- closer to a 5 to 8 percent reduction for a 10 percent increase in price.
- From 1985 to 1995, the price of water delivered to farmers in California's Westlands Water District rose from an average of \$16.25 per acre-foot to \$58.11. This was also a period when water supplies to the district fell because of a drought and environmental regulations.

Farmers responded by fallowing all but their best lands, growing crops that yielded higher returns, and installing drip irrigation systems. Low-paying crops such as safflower, barley, field corn, rice, and sorghum disappeared in favor of fruits and vegetables such as tomatoes, lettuce, garlic, onions, asparagus, melons, sweet corn, grapes, and almonds (Anderson & Snyder, 1997; Clemings 1996; Westlands Water District, 1994).

Prices also help people recognize that not all uses of water require water of the same quality. For example, a residential building boom in Utah caused water prices to increase drastically—and people responded with practical ingenuity. Shares of water rights held by ditch companies sold for as much as \$3,200 per unit, a fourfold increase since early 1993. The high cost of water led some towns to install two pipelines to each home, one carrying drinking water, the other untreated water for lawns and gardens (Anderson & Snyder, 1997; *U.S. Water News*, 1994).

Choices as mundane as switching brands at the grocery store when an old favorite becomes too expensive, or buying a compact car when gas prices rise, rarely merit attention. The price changes and our use changes accordingly. Switching from a hose running in the driveway to a car wash that recycles water, or installing a low-flush toilet, or lining irrigation canals—these are actions analogous to those in the grocery store and car examples. Why, then, are these water-related choices often made in response to regulation and law rather than through individual choice? The answer is revealed when we look at the price of water. Throughout the United States, water is priced as if it were not very scarce; it's no wonder people use it as if it will never run out.

As students identify the ways in which they could change their lives to adapt to the availability of water, they'll find that they, too, possess the ingenuity to figure out how a basketball or a coal mine can be a substitute for water.

This lesson was partially provided by the Foundation for Teaching Economics. More information can be found at www.fte.org

A lesson plan and handouts are provided in the Economics Unit 2, Key Assignment 1, Teacher Resources folder.

Key Assignment 2 - Market Economies and Price - Will Supply Ever Meet Demand?

In this Key Assignment, students will explore the key concepts of Markets, Demand, Supply, Equilibrium Price, Shifts in Supply and Demand, and Elasticity of Supply. Students will analyse supply and demand by completing a series of activities that includes internet searches to find examples of how water is used, the sources of water supply and the creation of hypothetical straight line supply and demand curves to illustrate water market equilibrium. To complete this Key Assignment, students perform an additional internet search to find examples of shifts of supply and demand for water and illustrate those shifts on their original market equilibrium.

How does a market economy determine prices? In this Key Assignment, students will research sources, water-uses, and graph hypothetical supply and demand curves. Evidence will support that consumers buy more water at lower prices as opposed to higher prices and that the quantity supplied of water is directly related to its price. The intersection of the supply and demand curves is the market price. They will apply equilibrium analysis to illustrate how shifts in the supply and demand for water affect its market price. At the conclusion of this Key Assignment, students will be

able to:

- Define market, supply, demand, and equilibrium
- Graph tabular data and from that data write the equation for a straight line
- Compare and contrast two specific linear functions
- Find the solution for two linear equations

The Metropolitan Water District of Southern California provided this lesson. A lesson plan, PowerPoint, and assignment answer key are located in the Economics Unit 2, Key Assignment 2, Teacher Resources folder. A student worksheet is located in the Economics Unit 2, Key Assignment 2, Student Resources folder.

Key Assignment 3 - How Is Water Elastic?

A key concept in economics is that prices change in response to consumers' willingness to pay a particular price. Therefore, price elasticity of demand measures consumers' responses to changes in price.

Students have probably learned that if a restaurant charges \$1 for a bottle of water, they will sell more water than if the price for a bottle is \$3. However, the amount of water the restaurant sells depends on consumer demand at a given price. The market demand curve depicts how much of a service or good consumers want to buy at each possible price. Price elasticity of demand is a measure for how sensitive or responsive consumers are to a change in the price of a good or service. Water is inelastic meaning demand is not very sensitive to changes in the price of water. Elastic goods, such as airline tickets, are very sensitive to price changes. A modest change in the price of tickets will lead to a large change in the quantity demanded of tickets. Unit elastic goods exhibit a market demand curve where the percentage change in quantity is equal to the percentage change in price.

The availability of substitutes influences the price elasticity of demand. For example, ice cream could be substituted by frozen yogurt, a fruit smoothie, a candy bar, etc. How much flexibility a consumer has in their decision making depends on the cost and number of close substitutes.

In this Key Assignment, students will learn the concepts of price, price elasticity of demand, elastic, inelastic, substitutes, choice, and incentives by examining residential and farm use.

Students Will Be Able To

- Apply the law of demand to the price elasticity of demand
- Define price elasticity of demand
- Understand the factors that determine whether the price elasticity of demand is elastic or inelastic.
- Calculate the price elasticity of water
- Analyze the effect of elasticity on total revenue

The Metropolitan Water District of Southern California provided this lesson

Key Assignment 4 - Waste Is In the Eye of the Beholder

If water is necessary for life, why are diamonds more valuable? Water is cheap and diamonds are expensive even though we know that water is scarce. We could live without diamonds, but not without water; yet we use water as if it weren't valuable. Drought, water shortages, and water rationing are recurring news stories. Still, we act as if we had an endless supply, running water down the drain while we brush our teeth or down the gutter when we clean the driveway. Why is that? Economists call this the diamond-water paradox.

It would be easy to lay the blame on greed or thoughtlessness, but blaming "bad" people has limited usefulness. And surely, we all know people who are neither greedy nor thoughtless who use water with little apparent concern that it will run out. This lesson suggests that we can learn more by examining the institutions our society uses to allocate water than we can by pointing fingers at others' "wasteful" practices.

When it comes to water-use, price and availability are the key considerations. How easy is it for us to get water? What do we have to give up to get it? For most of us, not very much, especially not in comparison to what we must give up to get a diamond. How hard is it for us to get *more* water? Again, for most of us, it's not very hard. When was the last time you turned on the faucet and no water came out? As long as the price is low and water is easily available, we will use water in ways others might think wasteful. When price and availability change, our use will change.

Anyone who has hiked or backpacked in a hot environment knows how carefully hikers use the water in their canteens, and television news reports remind us how valuable water is to people caught up in natural disasters. But students may not realize that our everyday use of water is guided by the same principles as those involved in extreme or extraordinary circumstances. The shipwrecked sailor and the backyard gardener both use water in response to their judgment about how much water is readily available and how much they must pay in time, effort, or money to get it. This is another way of saying that, from their own points of view, people use water *rationally*. As students participate in this Key Assignment, they learn that:

- People usually have good reasons (even if they aren't *your* reasons) for the ways in which they choose to use water; and
- In order to change the way people use water, we must change the incentives they face.

As more American cities search for ways to avoid future water shortages, they find that if they give signals to show that water is precious, people respond by using less. One of the most effective signals is price; we have much evidence that changing the price of water changes the amount of water people use. As we know from our study of markets, at higher prices, people use less of a given commodity and search for alternative means of achieving their ends. Water is no exception. Changing the price of water has proven to be more effective at impacting water consumption than other, non-price mechanisms such as rationing, outdoor water bans, or requiring particular technologies like low-flow faucets and toilets. During the most recent California drought this is exactly the method that many water agencies used to meet their state mandated targets set by the State Water Resources Control Board.

Agricultural users also generally pay less than the actual value of water. Western water law allows many farmers to pump groundwater or divert river water without ever paying for the water itself, and government projects provide water to farmers at well below cost. "The U.S. farmer, for example, typically pays only one-fifth of the true cost of irrigation from federal projects. The

situation is much the same throughout the rest of the world, where revenues collected from farmers barely cover 10-20 percent of the construction and operating costs." (*Social Education* [October 1997], p. 338)

Cost-based pricing understates the value of water. Economic reasoning tells us that the full price of water includes not only the cost of water provision but also the *opportunity cost*, the value of alternative water-uses. Pricing water at its real value would encourage water conservation and more efficient water-use.

"Raising the price of water would encourage all users – homeowners, farmers, businesses, and industrial users – to examine carefully how they use water, for what purposes, and in what quantity. Economists agree that rate increases would encourage water-users to eliminate marginal economic uses and use the water for more productive purposes. An increase in rates might stimulate new water-saving technologies and efforts to harvest water. Effluent water would become more attractive to potential users as the price of potable water rises (Glennon 2009, 226)."

This Key Assignment involves two separate activities: recreating a scene from a famous play (*Romeo and Juliet*) and an exercise to help students see that the way people use water *depends*—on the conditions in which they find themselves, on their interests and personal preferences, and most importantly on the price and availability of water. Portions of this Key Assignment were provided by www.fte.org.

A lesson plan and other necessary materials are located in the Economics Unit 2, Key Assignment 4, Teacher Resources folder.

Key Assignment 5 - Closer to Home; the Price of Water In Southern California

Water rates are critical to every water utility. If rates are set too low the utility can not pay for its workers, supplies or replace infrastructure. If rates are set too high there is likely to be a legal challenge. It is no wonder that most utilities agonize over rate setting procedures and requirements. It is not unusual for a rate study to take a year and cost several thousand dollars.

California rate structures must legally be tied to the cost of service, that is how much does it cost to provide water and maintain the water system. Most of us think of ourselves when we think about rates and single family residential (SFR) customers are typically the majority of water-users in most cities. But SFR customer rates are not the same as the rates for commercial, industrial, institutional or multi-family (apartments or mobile homes). That is because the cost to provide service to those customers is different than SFR customers. Consequently, a water utility must take into consideration the different classes (SFR, commercial, industrial, institutional, multi-family) of users as well as how much water they use. This will vary on a utilities supply portfolio (imported, surface or ground). A utility must calculate the cost of providing water to all classes of customer as well as the supply type. For example, the cost of service is different for a utility to supply a SFR with groundwater (generally the cheapest source) at the same time as a business that uses imported water (generally the most expensive source). Another consideration that is hotly contested within a water utility is low income customers. Utilities have to consider what is a rate for "lifeline" service, commonly called minimum indoor usage, which is necessary to cook, bathe, flush toilets, wash clothes and other personal necessities.

Water prices vary tremendously within very small geographical areas. This is due to a number of factors including whether the water company is private or public, the water supply portfolio (is water imported from northern California, is surface water available, etc.) and water rights.

In this Key Assignment, students will work in groups to research and analyze their own water rate as well as the rates of surrounding communities. Students begin by providing a copy of their water bill (with personal information blacked out) and use excel to graph this information. The water bill may include “tiers” of water pricing, special taxes, meter or ready to serve fees. All of this should be graphed to illustrate the wide variety of pricing structures. Next, students will use the internet to locate the Urban Water Management Plan for their water company. This document, published every five years, provides information on almost every aspect of a water utility including water supply sources. Students should note the supply sources on their excel document. At the conclusion of the group work, the teacher may combine the excel sheets and lead a larger class discussion.

It is possible most students will have the same water utility. In this case, the teacher should assign neighboring cities or locations for this exercise to provide more information for discussion.

Students will add the small group excel worksheet to their notebook.

Economics Unit 2 - Final Project - As a final project for this unit, students will research water prices throughout California. Students will work in groups and select five water utilities in diverse locations on the internet. After selection, students will plot water prices on an excel sheet. As a second part of this project, students will research the income levels of these areas to determine if water prices disproportionately affect these areas. In conclusion, students will prepare a poster illustrating this information and present this to the class.

This information is readily available on a variety of websites including simple google searches, the water utilities website and the State Water Resources Control Board website.

Unit 3- Agriculture

Agriculture is the largest water consumer in the world. Almost 70 percent of water worldwide is used either directly (plant-based foods) or indirectly (animal products) to feed the world's seven billion people. Much of this water comes from rivers and lakes but in the last century, groundwater has been mined in an increasing amount for production. Developing nations have little to no regulations on these practices or on the pollution of water that will be used for food crops.

In the United States, a growing environmental movement has successfully lobbied for regulations to protect water supply. California has the strictest drinking water standards in the world but has been slow to develop regulations on farmers. After all, everyday, one person in five throughout the world eats a food that was produced in California. This is due to a long growing season, a maximum amount of sunshine, abundant water resources and extremely fertile soil in the Central Valley.

As students learned in previous Key Assignments, the water needed to grow food is still part of their “water footprint” and is embedded in their water-use number. This is compounded by the availability of water intensive foods that were not available until the advent of modern shipping

methods including rail and truck. This enables us to eat many of the foods we love at any time of the year rather than during a specific growing season. It would be hard to overstate the importance of this and it does not exist in most parts of the world.

Because of the necessity for food, policy makers have often ignored agricultural water issues and left them to regulate themselves. As droughts become increasingly common and consumers became more aware of past practices, this is changing. In California, water-use restrictions are typically imposed on urban dwellers rather than farmers. This is changing as a result of the last drought and farmers have made large strides in water efficiency.

Assignments

Key Assignment 1 - Introduction to Agriculture and Water

In this Key Assignment, students will discuss the limited amount of fresh water on earth, identify how best management practices can reduce water consumption, discuss the need for water conservation and protection related to population growth and agriculture, and compare and contrast methods of irrigation for water conservation.

Part 1 - Students begin by watching the video (link below) and discovering the answers to the following three questions:

1. How is water-used in agriculture?
2. What methods do farmers use to irrigate their crops?
3. What best practices can be implemented to use water more efficiently in agriculture?

<https://www.youtube.com/watch?v=zdrzktN0Q4c>

Students should record their answers in their notebook.

Part 2 - The teacher will then present the PowerPoint and engage the students in a discussion by asking questions that correspond to the appropriate slide. Students should record their answers in their notebook.

Portions of this lesson were provided by National Agriculture in the Classroom. More information is available at www.agclassroom.org

A PowerPoint, Vocabulary, Key Facts and PowerPoint questions are provided in the Economics Unit 3, Key Assignment 1, Teacher Resources folder.

Key Assignment 2 - Is Agriculture Important to the Economy?

Students will explain why economics are important to sustainability, describe the relationship between a sustainable economy and the environment, develop a model demonstrating how agricultural production creates a ripple effect that impacts local and global economies, social stability, and discuss how investments build an economy.

Part 1 - Students begin by watching the video (link below) and discovering the answers to the following three questions:

1. What is the foundation for an economy?
2. What is a market?
3. How does the increased wealth that comes from a strong market impact a community as a whole?

<https://www.youtube.com/watch?v=d1ogX94qJlg&feature=youtu.be>

Students should record their answers in their notebook.

Part 2 - The teacher will then present the PowerPoint and engage the students in a discussion by asking questions that correspond to the appropriate slide. Students should record their answers in their notebook.

Portions of this lesson were provided by National Agriculture in the Classroom. More information is available at www.agclassroom.org

A PowerPoint, Vocabulary, Key Facts, Infographic and PowerPoint questions are provided in the Economics Unit 3, Key Assignment 2, Teacher Resources folder.

Key Assignment 3 - Farmers and Fishers

Agriculture is often at odds with the fishing industry specifically because water that is diverted for agriculture often causes economic losses in fish and therefore to the fishing industry. Creative solutions are important to keep both groups prosperous and out of the court system. However, these solutions must not violate water rights law. In this Key Assignment, students will work together in small groups to learn if they can create a way out of a dilemma between farmers and fishers.

A demonstration video is available at:

https://www.youtube.com/watch?time_continue=95&v=_dVDqQvVd58

1. Read the scenario aloud to students. Explain that they must solve the dispute over water in the valley.
2. Divide students into groups of 4-6. Distribute role cards to each group so that half of the students are fishers and half farmers. Tell students it is up to them whether they share their "personal" information with the others in their group.
3. Place a prize (candy, etc.) in the middle of the table for each group. Challenge students to solve the water problem and tell them that they can keep the prize only if you cannot improve on their solution.
4. Display the overhead describing the criteria for a "better" solution.
5. Display the overhead with the rules governing property rights for this situation:
 - Prior appropriation
 - Beneficial use = irrigation, recreation (including fishing), conservation
 - No salvaged water rule is in effect
 - No use-it-or-lose-it rule is in effect.
6. Give student groups time (5-10 minutes) to work on the problem.

7. Call time and direct groups to jot down their solution on a piece of paper (for verification purposes, if necessary).
8. Allow each group to report their solution.
9. Use the decision-tree transparencies to illustrate the problem and the range of solutions that you cannot improve upon. (Students may keep the prize if their solution was to have the fishers pay the farmers any amount from \$25,000 to \$80,000 for the water.)
10. Emphasize to students the role of property rights, the “rules of the game,” in allowing them to come to a “willing buyer – willing seller” agreement.

This activity is provided by www.fte.org

A PowerPoint and lesson plan are provided in the Economics Unit 3, Key Assignment 3, Teacher Resources folder.

Key Assignment 4 - How is Water Used in California?

The Reasonable and Beneficial Use Doctrine (Reasonable Use Doctrine) is the cornerstone of California’s complex water rights laws. All water-use must be reasonable and beneficial regardless of the type of underlying water right. But what constitutes beneficial water-use is a hotly debated topic that generates lawsuits and court actions that can take years to resolve. For an overview of the Reasonable and Beneficial Use Doctrine, the teacher can play the video on this subject provided by a leading water law firm in the link below:

https://www.youtube.com/watch?v=xEgTbASQ_g

In this Key Assignment, students will perform close and critical reading of the “Just the Facts - water-use in California” paper published by the Public Policy Institute of California. The teacher will lead a class discussion on the division of water between environmental, agricultural and urban uses, specifically do students consider these divisions reasonable and beneficial?

To further their knowledge about agricultural water-use, students will select one crop that grows in the central valley (almonds, peaches, tomatoes, etc.) and assess its economic value as well as its value as a food crop. For example, students may find that an extraordinary amount of money is generated by avocados but they are also extremely water intensive. Is an avocado worth its water? Why? The majority of crops have information readily available on the internet with a simple search. To complete the assignment, students will write a report and include the water-use (high, low, moderate water-use), interesting facts about their crop and whether this crop adheres to the Reasonable and Beneficial Use Doctrine. Students should add this report to their notebook.

The “Just the Facts - Water-use in California” document is provided in the Unit 3, Key Assignment 4, Student Resources folder. The Reasonable Use Doctrine document is provided in the Unit 3, Key Assignment 4, Teacher Resources folder.

Key Assignment 5 - Is a Salmon Worth More Than a Cash Crop?

As students learned in earlier Key Assignments, the majority of California surface water flows through the Delta. In Key Assignment 3, students learned that water is allocated or diverted for use to support farms and urban populations in other parts of the state (imported water). The rest is allowed to flow to the ocean to support wildlife, plants, and fish. Is there an economic cost

associated with this practice? In drought years, water for the environment is reduced to continue to provide water for farms and urban dwellers. Commercial fisheries suffer, sometimes for multiple years as reproductive cycles are disrupted. Salmon are an important symbol in California for the health of the river system and as a species for commercial fishing as well as a sacred fish for Native American peoples. Additionally, several varieties of salmon return to California rivers from the Pacific Ocean to spawn generating significant revenue for California. For background information on salmon, teachers may show this video:

<https://www.youtube.com/watch?v=ZskYQNO-cHo>

Part 1 - Salmon runs have always strengthened the economy in California. From the original inhabitants to the current fishing industry, Californians have harvested salmon for food and money. To illustrate this, students will review the *Historical Abundance and Decline of Chinook Salmon in the Central Valley Region of California* paper published in 1998 that documents historical salmons runs. Although the entire article is provided, for this Key Assignment, students should begin reading on page 493, with the heading: Commercial Period: 1850 to the Present. This paper documents the number and value of enormous salmon runs from 1856-1957 as well as the value of these runs. Students need not read further than page 498. Important note on the historical runs: they are listed in pounds. For the purpose of this exercise, students should use the approximate value of 1 salmon = 16 pounds when needed.

Part 2 - To provide contrast to the historical runs, students will research the current number of salmon and their economic value on the following website:

<https://fishbio.com/field-notes/the-fish-report/value-california-salmon> Students should pay particular attention to the number of harvested salmon in 2015 as well as the benchmarked value of \$215 per salmon. This can then be compared to the 2016 harvest located on a different page: <https://fishbio.com/field-notes/the-fish-report/underwhelming-2016-salmon-season>

If students use the same \$215 price, what was the economic change between 2015 and 2016?

Students will use excel to plot the number of salmon and their value. The excel sheet should be added to their notebook.

The Historical Abundance and Decline of Chinook Salmon in the Central Valley Region of California is provided in the Unit 3, Key Assignment 5, Student Resources folder.

Part 3 - Students will analyze the economic value of historical and current salmon runs compared to the crop they selected in Key Assignment 4. Given their current knowledge, students will work in small groups to discuss which, if any, agricultural crop is worth more economically than a healthy salmon run. This information and answers will be recorded in their notebook.

Economics Final Project - Building upon the Unit 3, Key Assignments 4 and 5, students will work in groups to present their findings. This should include the economic value of salmon and one crop to the economy, the water-use of the crop, the reason salmon runs have declined in recent history, the financial and spiritual effect this has had on Native American tribes, and whether students would continue to allocate water in the proportion noted in the Pacific Institute article. Students will use the internet to research different salmon types and their home rivers and create a poster

illustrating their crop, its water needs, and a picture of their salmon type. A class discussion should follow each presentation.

Government (Semester 2)

Government Unit 1 ? Ancient Ideas and the Founding of American Democracy

Unit Overview: The American government is unique and the envy of people around the world. Yet, the ideas that form the basis of our government were often embodied in other cultures. The founders of the United States studied other cultures and systems of government for inspiration. This unit will explore some fundamental concepts about the origins of American Democracy and how these concepts developed our attitudes about water.

Did water play a part in the formation of the United States and does it affect the way it is governed? Yes! This is not unusual as students are challenged to think about civilizations around the world, their laws and customs, and the founding principles of the United States. Water is not always mentioned specifically but it is vitally important to a healthy population, economy and democratic way of life. Throughout this unit, students will research, analyze and discuss several questions including:

? What other civilizations influenced our government?

? If the United States had less naturally occurring water, would the earliest settlers have stayed here?

? Would westward expansion and the policies that promoted it have continued if early settlers had encountered deserts instead of abundant water?

? Would court cases that involve water and test Constitutional limits continue to be decided in the courts including the Supreme Court?

? Do the three branches of government agree on water issues?

? Does government have a responsibility to protect the environment?

? How can citizens, including students, take action on water issues?

The fact is the United States, particularly in the area east of the Rocky Mountains, is extremely water rich. They are countless rivers and streams, from the smallest of creeks to the Mighty Mississippi River. The Great Lakes in the northeast, by themselves, are one of the most important water resources in the world. West of the Rocky Mountains, water sources are more scarce and although the Colorado River is small compared to the Ohio or Allegheny Rivers, it is still a large river that made settlement in the southwest possible. Yet, many of these waterways are polluted, over allocated, and the fish and other wildlife that surround them have become extinct or are at the brink of extinction in multiple areas. Is this what the founders envisioned? Most students will think of agriculture as the primary driver in the search for water and that is true. The early American settlers were generally interested in farming. But also true is that earlier societies like hunter gatherer civilizations existed for millennia without agriculture. These indigenous Americans relied on free flowing water for immediate personal needs and sustainable food sources including fish,

birds, and animals that are attracted to water. This is especially true in California; only two tribes were agricultural. The rest of the 500 distinct sub?tribes or groups were hunter gatherers and never developed agriculture in any form. They didn't need to for the abundance of food and water was immense. In fact, water plays a key role in every area of American government from its earliest formation to present day policies.

Assignments

Key Assignment 1 ? Ancient Attitudes ? The Cradle of Democracy ? Two vastly different societies made fundamental contributions to American Democracy. Searching for models for the new government they were creating, America's founders studied both the democracy of Athens and the republic of Rome, but they favored the latter. In The Federalist essays, James Madison, Alexander Hamilton, and John Jay argued that Athenian democracy was unstable. They thought Athens was too easily ruled by group passion, rather than reason: Had every Athenian citizen been a Socrates, every Athenian assembly would still have been a mob. (The Federalist, No. LIV; by Alexander Hamilton or James Madison)

To justify the size of the House of Representatives, the author argued against a larger assembly by claiming that in large groups, like the Athenian assembly, "passion never fails to wrest the sceptre from reason." Popular liberty might then have escaped the indelible reproach of decreeing to the same citizens the hemlock on one day and statues on the next. (The Federalist, No. LXIII; by Alexander Hamilton or James Madison.) In support of a 6?year term for Senators, the author cited the misfortune that befalls a government without such continuity. He claims that Athens' short terms of office led to inconsistency and lack of personal accountability. Although the Founding Fathers favored the republicanism of ancient Rome over the direct democracy of Athens, they admired the achievements of ancient Athens. Even today, the ideals of Greek democracy influence the way we govern ourselves. Direct initiative, or the right of citizens to propose and vote on legislation, has roots in Greek democracy. In ancient Athens, all decrees had to be ratified by the assembly of citizens before becoming law. In 1977 Senator James Abourezk proposed a constitutional amendment to allow direct initiative nationwide. Many states, including California, have some form of direct initiative. To further illustrate the contributions of both the Greek and Roman governments, two videos

are provided:

<https://docs.google.com/document/d/1QVBTH6lF9GqmPC5WTFaUFyLb-q7VRDMr2Z8FBMMHoHE/edit> 23/35

Greek Contributions

<https://www.youtube.com/watch?v=0fivQUIC7?8>

Roman Contributions

<https://www.youtube.com/watch?v=3B5pGiWptb4>

Once students are familiar with these concepts, they will complete the worksheet provided in the Government Unit 1, Key Assignment 1, Teachers Resource folder. An answer key is provided in

the same folder. Portions of this Key Assignment are provided by ICivics. More information can be found at www.icivics.org

Key Assignment 2 ? The Public Trust Doctrine

Think about water (lakes, rivers, etc.), air, and the ocean. Who owns these public spaces and resources? The short answer is that you do. The concept of public spaces and resources like water being owned and shared by the public is not a new one; in fact, it dates back over 2,000 years to the times of Roman emperor, Justinian, and has been a part of our democracy since its founding. Under Roman law, the public's right to use common resources like the waters and surrounding shores was paramount. "By the law of nature these things are common to mankind, the air, running water, the sea, and consequently the shores of the sea." ? Roman Empire's Justinian Code, 535 AD This legal concept has been affirmed in numerous court rulings throughout the history of the United States and protects resources for the public from beaches to navigable waterways and harbors, to wetlands and wildlife, to tributary streams and groundwater. The inclusion of this concept from the beginning of our democracy has been vital. It asserts the right of each person, as a member of the public, although shared with others, is inalienable, in the same way as each person is protected in their ownership and use of private property and the right to breathe the air.

Unfortunately, much of the public is unaware of the Public Trust Doctrine. To inform the public, students will create a facebook page explaining what it is, why it is important, and what the protected uses are for the public. A list of protected uses under the Public Trust Doctrine can be found at: <http://flowforwater.org/public?trust?solutions/protected?uses/> Additional information can be found in the document "Protecting California's Rivers: Confluence of Science, Policy and Law," which is provided in the Government Unit 1, Teacher Resources, Key Assignment 2 folder and in the videos:

<https://www.youtube.com/watch?v=j1mME3T3jLc>

https://www.youtube.com/watch?v=1VSIAWeSPeE&list=PLh4Y_n8ue_I0OjYPoHB0Pm_bjj1BubC05

https://www.youtube.com/watch?v=E4z8XvSFiO4&list=PLh4Y_n8ue_I0OjYPoHB0Pm_bjj1BubC05&index=2

https://www.youtube.com/watch?v=M6mW6NmQBY8&list=PLh4Y_n8ue_I0OjYPoHB0Pm_bjj1

<https://docs.google.com/document/d/1QVBTH6IF9GqmPC5WTFaUFyLb-q7VRDMr2Z8FBMMHoHE/edit> 24/35

BubC05&index=3

Key Assignment 3 ? Did the Founding Fathers "Borrow" Water Ideas Also?

There is no doubt that the Greeks and Romans contributed to American Democracy. But did they contribute to our ideas about water and how to maintain a water system? This Key Assignment explores this concept. Students will read two articles for information on water in Roman and Greek cultures (links below) and read the research paper on New England water supplies. The research paper is quite long and for the purposes of this assignment, students need only read pages 4?9.

<https://www.smithsonianmag.com/science?nature/ancient?roman?water?networks?made?empires?vulnerable?180953679/>

<http://quest2016?03.weebly.com/water?in?ancient?greece.html>

These videos provide an overview of Roman water distribution and early water systems:

<https://www.youtube.com/watch?v=pAUqodcXyWQ>

<https://www.youtube.com/watch?v=nhkxD6bD2AY>

Students will work in groups to prepare a poster that lists both the similarities and differences between Roman and Greek water systems and early American water systems. These will be presented to the class. The research paper is provided in the Government Unit 1, Teacher Resources, Key

Assignment 3 folder.

Key Assignment 4 ? Do the Declaration of Independence and the Constitution Include Water?

Founding Documents ? The Declaration of Independence and the Constitution are documents that provide the ideological foundations for the democratic government of the United States. The Declaration of Independence provides a foundation for the concept of popular sovereignty, the idea that the government exists to serve the people, who elect representatives to express their will. The US Constitution outlines the blueprint for the US governmental system, which strives to balance individual liberty with public order. In the United States National Archives in Washington, DC, armed guards stand on constant watch in the Rotunda for the Charters of Freedom. There, underneath bullet-proof glass and beneath the watchful eyes of a state-of-the-art system of cameras and sensors, the faded pages of three documents are enshrined: the Declaration of Independence, the Constitution, and the Bill of Rights. At night, the documents are stored in an underground vault, rumored to be strong enough to withstand a nuclear attack. Why are these pieces of paper so highly protected and cherished? In short, it's because they serve as the ideological foundations for the government of the United States. They express both the inspiration for American democracy and the blueprint for carrying it out.

The Declaration of Independence In 1776, the thirteen British colonies in North America were rebelling against British rule, after more than a decade of strife over taxation and government representation. As the Revolutionary War got underway, representatives from each of the colonies agreed it was time to put forward a statement expressing the colonies' reasons for desiring independence. This task fell upon Thomas Jefferson, a 33-year-old Virginia lawyer. Jefferson was inspired by the English Enlightenment philosopher John Locke, whose writings on government put forward two ideas that would become quite important to Jefferson: That all humans are born with "natural rights," including the right to protect their lives, liberty, and property. That government is a "social contract" between people and their rulers, which can be dissolved if rulers fail to promote the people's welfare. Although these ideas seem pretty tame by modern standards, in the eighteenth century they were tantamount to treason. The nations of Europe were led by monarchs, who exercised the divine right of kings and owed little or no consideration to the will of their

subjects. English citizens had some rights, certainly, but no one would dare to say that the English monarchy could simply be dissolved. Nevertheless, Jefferson, in writing the Declaration, hoped to dissolve the relationship between the American colonies and Britain. He drafted the Declaration and gave it to his colleagues, John Adams of Massachusetts and Benjamin Franklin of Pennsylvania, for revisions. After incorporating their suggestions, Jefferson submitted the Declaration to the colonial representatives for approval. At the most basic level, the Declaration of Independence is a list of grievances against the British Crown, seeking the sympathy of the international community for the cause of the colonies in revolting against their mother country. But at a higher level, the ideas expressed in the Declaration serve as the inspiration for American democratic values. They are some of the most poetic and meaningful words in all of American writing: "We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty, and the pursuit of Happiness. That to secure these rights, Governments are instituted among Men, deriving their just powers from the consent of the governed. That whenever any Form of Government becomes destructive of these ends, it is the Right of the People to alter or to abolish it, and to institute new Government, laying its foundation on such principles and organizing its powers in such form, as to them shall seem most likely to effect their Safety and Happiness." These ideas, that all men are created equal and that government is based on the consent of the governed, became the foundation for the United States political ideal of popular sovereignty: that the government exists to serve the people, who elect representatives to express their will.

The colonial representatives voted to adopt the Declaration of Independence on July 4, 1776, which has been celebrated as the official birthday of the United States ever since.

The Constitution

Although the Declaration served as an inspiration for American democracy, it did not outline an actual system of government. In the years during and immediately after the Revolution, the United States government operated under the Articles of Confederation, a government system that placed most power in the hands of state governments. By the late 1780s, it was clear that the Articles weren't working. The United States needed a new, stronger blueprint for government. In 1787, representatives from the states met in Philadelphia, Pennsylvania at the Constitutional Convention. Their task was a difficult one: to create a government system that was powerful enough to meet the needs of the United States, but not so powerful that it would become tyrannical. Likewise, they wanted to balance the will of the majority with the rights of the minority, so that the powerful many could not trample the few. Under the leadership of Revolutionary War hero George Washington, the delegates debated the elements of a new Constitution. The final version, influenced strongly by Virginian James Madison and New Yorker Alexander Hamilton, reinforced the idea that government derives from a social contract by citizens for their mutual advantage: "We the People of the United States, in Order to form a more perfect Union, establish Justice, insure domestic Tranquility, provide for the common defence, promote the general Welfare, and secure the Blessings of Liberty to ourselves and our Posterity, do ordain and establish this Constitution for the United States of America." The Constitution drafted in Philadelphia more than two hundred years ago still forms the basis for United States government today. Amended just twenty-seven times in that period (including the first set of ten amendments, or the Bill of Rights, which was passed immediately after the Constitution's ratification), the United States Constitution is the oldest functioning national constitution in the world. It serves as the blueprint for the unique form of

political democracy found in the United States. In this Key Assignment, students will examine two founding documents, the Declaration of Independence and the Constitution for water issues. Students will work in pairs to highlight any word that directly relates to water, any reference to water, or in the case of the Constitution, whether any of the Articles or Amendments can be applied to water. For example, the Declaration contains the phrase “among the powers of the earth.” Is water one of the powers of the earth? Later, written in the same document is the phrase “Life, Liberty and the pursuit of Happiness.” Is it possible to be happy without a safe reliable water supply? The Constitution clearly defines the rights and responsibilities of the three branches of government. Do any of the three branches exercise their power over water? Students will then display their highlighted documents and debate if they are correct in their assumptions.

The Declaration of Independence and The Constitution are provided in the Government Unit 1, Student Resources, Key Assignment 4 folder.

Government Unit 1 Final Project ? Students will work in teams to create a PowerPoint or other multimedia presentation documenting the key players (Romans, Greeks, Emperor Justinian, Jefferson) and concepts (public trust, democracy) to present to the class.

Unit 2: The Land

There can be no doubt that the United States is geographically rich beyond measure. At the time of its founding the United States had very few problems with invasion from neighbors due to the ocean “wall” along the eastern and western borders. The areas beyond its early northern and southern boundaries held relatively few people. This enabled the United States to develop relatively free from adversaries. The Native Americans did mount both small and large campaigns against the invaders of their homeland but, lacking major weapons of war, weakened by disease and without a central organizing government or leader, these were rebuffed and the Native Americans were overcome. This unit explores the geographical composition of the United States and the opportunities that were afforded to the settlers by the physical characteristics in their new homeland.

Assignments

Key Assignment 1 ? This Land is Your Land

The United States is the third largest country in the world, as measured by land mass. Countries that large have varying areas, geographic features, and populations. In this lesson, students will learn about the geography of the United States. The United States is located in the Northern Hemisphere, bordered on the west by the Pacific Ocean, the east by the Atlantic Ocean, the south by Mexico, and the north by Canada. All in, the United States is about 3.8 million square miles. Over 17% of that land is Alaska, the largest of the United States, and Rhode Island, with just 1,545 square miles, is the smallest state. The 3.8 million square miles that makes up the United States makes it the third largest country in the world, behind Russia and Canada. While Canada is just slightly larger than the United States in land mass, Russia is almost twice as large. The United States is divided into 50 states, plus the District of Columbia. Sometimes called the lower 48 states or the contiguous states, all of the states except Hawaii and Alaska adjoin each other.

Hawaii is an island state located in the Pacific Ocean and Alaska is located northwest of Canada. Population wise, the United States is also the third largest country behind China and India. Based on the CIA's 2014 Factbook, China's population was about 1.35 billion, barely ahead of India's 1.24 billion. Those two countries are really in a league of their own, as the United States comes up third with about 320 million.

Geographic Regions

For Census purposes, the United States is divided into four regions: the Northeast, Midwest, West, and South. In 2014, about 17% of the population lived in the Northeast, 21% in the Midwest, 24% in the West, and 38% in the South. That distribution has not always been the case. When the country was established, most of the population was in the Northeast and South. Because immigrants were primarily coming from European countries, the East Coast of

the U.S. was the closest destination in the U.S. The growth in the Midwest and West has largely occurred over the last 160 years. As the population increased, people wanted more room to live. Encouraged by things like the cross country railroad, the California Gold Rush, and the ability to farm the Midwest began a significant migration west. There are two major mountain ranges in the United States that run north-south and, in many ways, have contributed to the population distribution. The first is the Appalachian Mountains which run from the Northeast in Maine and south into Georgia. The second range is the Rocky Mountains, which begin in Canada and then go through Montana, Idaho, Wyoming, Colorado, Utah, New Mexico, and Arizona before continuing into Mexico. The major rivers are the Missouri, Mississippi, Colorado, Rio Grande and Columbia.

These videos will provide an overview of the United States geography and the bodies of water that lie within its borders.

<https://www.youtube.com/watch?v=WGKU8awk7Vg>

<https://www.youtube.com/watch?v=JgDPr1luj3Y>

In this Key Assignment, students will:

- ? Label major geographic features of the United States on a map
- ? Identify the nations that share a border with the U.S., along with U.S. border states
- ? Locate the U.S. capital and the capital of their home state
- ? Identify the five U.S. territories

A PowerPoint, teacher guide, students worksheets and maps are provided in the Government Unit 2, Teacher Resources, Key Assignment 1 folder.

Portions of this lesson are provided by www.icivics.org and www.study.com

Key Assignment 2 ? Westward Expansion ? What Rivers Came with the Louisiana Purchase?

Few things in American history have impacted our lives like the Louisiana Purchase. Why? The Louisiana Purchase tested Constitutional Principles and added thousands of square miles to the country. Contained within the 828,000 square mile purchase was an abundance of water ways and all of the things associated with them: water for farms and people, fish, wildlife, forests and the Port of New Orleans. Securing the port of New Orleans was a historic achievement that provided access to trade as it was the most significant port in North America at that time. Presidents exercise their powers in a variety of ways. In modern times, they often provide a vision that reflects their parties future for the United States. Another way is through the Executive Order which is a way for the President to make a law. It is important then to think about a President that simply buys territory from another country. In this case, President Jefferson purchased 827,000 square miles for the relatively paltry sum of \$15,000,000. A number of large rivers were part of the Louisiana Purchase including the Mississippi, the Ohio, and the Missouri. Many students in California may have never seen these rivers or any large river. To provide some background knowledge of river systems and their importance to trade and economics, students will watch the following three videos (two on rivers and one on the Port of New Orleans):

<https://www.youtube.com/watch?v=541tR66rdWM&t=97s>

<https://www.youtube.com/watch?v=?D7ZP?Uppsw>

https://www.youtube.com/watch?v=DShlsC98_j4

After watching the videos, students will complete the geography exercise and the teacher will lead a class discussion on student findings.

A student Geography worksheet is provided in the Government Unit 2, Key Assignment 2 Teacher Resources folder.

Portions of this lesson were provided by ICivics. More information is available at www.icivics.org

Key Assignment 3 ? Testing the Constitution; Was the Louisiana Purchase Constitutional?

Although the Louisiana Purchase was of incredible importance to the new nation, questions abounded about the Constitutionality of the land purchase. President Thomas Jefferson believed that the United States should be a nation of independent farmers. When France offered to sell the Louisiana Territory to the United States in 1803, Jefferson wanted to seize the opportunity to double the size of the nation and to provide future generations with a seemingly inexhaustible supply of new farmland. But Jefferson was a strict constructionist—he believed that the federal government had no powers other than those specifically listed in the Constitution—and the Constitution did not authorize the president to buy territory from foreign nations. The problem of Louisiana forced Jefferson to decide which principle was more important.

The teacher will divide students into groups and provide them with documents and relevant questions related to the Louisiana Purchase. Group members should analyze the documents, answer the questions, and prepare a presentation using one or more of the following activities: role playing, panel discussion, debate, or artistic (e.g. political cartoon) or theatrical interpretation.

All necessary materials and a PowerPoint that illustrates the geographical area of the Louisiana Purchase are provided in the Government Unit 2, Key Assignment 3, Teacher Resources folder. Portions of this lesson were provided by the Gilder Lehrman Institute of American History.

Key Assignment 4 ? A Brief History of U.S. Agriculture

Building upon Key Assignments 2 and 3, which dealt with the Louisiana Purchase, students will now investigate one of the primary benefits of it: expanded agricultural opportunities. The U.S. agriculture industry is a large part of our economy and government. Supplying food to our nation's residents as well as growing foods for export is a major factor in determining water?use and governmental policy. It is important for students to understand the role it has played in our country's past, present, and future.

In this Key Assignment, students will research and prepare a U.S. Agriculture History Major Dates Timeline that illustrates significant dates in the history of United States Agriculture. This timeline will help students put in to perspective the relevant dates and events that have shaped our American Agriculture and Government.

Timeline information can be accessed at <https://www.agclassroom.org/gan/timeline/index.htm> by category. Students are encouraged to select different decades and categories to plot their timeline on poster board to create a crosswalk between the two areas. This will result in a more detailed timeline. Additionally, students should research a few items from their timeline and include information and pictures of their finding. For example, in the historical timeline for the 17th?18th century, the notation in the Farm Economy, 17th Century, section is: Farmers near water transportation grow some cash crops for trade; farmers inland emphasize subsistence farming.

Students can look up agricultural items that were considered cash crops and include that in their timeline. When completed, students should present their timelines to their class and the teacher will lead a class discussion on the findings. Portions of this lesson were provided by Growing a Nation: The Story of American Agriculture. More information is available at <https://agclassroom.org>.

Government Unit 2 Final Project ? Students will create a board game that incorporates the geographical features of the United States including rivers, ports, mountain ranges, deserts, etc.

Unit 3 Government

Unit Overview: While water is generally managed at a local level, some water issues cross state borders. In these cases, when state governments cannot reach equitable agreements or when decisions are made at the federal level that significantly impact local water, the federal government often intervenes. Because of its necessity for residents and its impact on the economy and trade, it is not that uncommon for all three branches of government (executive, legislative, judicial) to weigh in on a matter. Concurrently, many water decisions are made at the state and local level giving residents a larger voice in regulations, the environment and other policy decisions. This unit explores some of these topics from the federal to the local level.

Assignments

Key Assignment 1 ? What in the World is WOTUS?

In this Key Assignment, students will learn how the different branches of government (Executive, Legislative, and Judicial) impact water for farms, people and the environment. Water management is ever changing and complicated. Many changes occur because of weather-related phenomena like floods and droughts but regulatory changes cause real issues at all levels of management as water agencies and their employees adapt to new rules. To be clear, many regulations benefit citizens and water personnel applaud these changes. After all, they are citizens too but adaptation to regulations requires time, effort, and money. These things can be in short supply and when there is an unclear policy, water agencies do not know how to plan for the future or act in the present. WOTUS is an example of a federal rule that has significant effects throughout the United States. It is hard to imagine a more significant rule in recent history, however, the change in the western states is more critical for reasons students will discover in this Key Assignment. WOTUS is, in effect, critical to all citizens as it attempts to define terminology from the Clean Water Rule. The Clean Water Rule, published under the Obama administration, is a 2015 regulation published by the U.S. Environmental Protection Agency (EPA) and the United States Army Corps of Engineers (USACE) to clarify water resource management in the United States under a provision of the Clean Water Act of 1972 . The EPA does have clear authority to create regulations but its primary authority rests in enforcement of regulations. The EPA is part of the Executive branch of the government and as such, the President, as head of the Executive branch, has the authority to adjust laws (presumably) and the enforcement of laws. The 2015 version of the regulation defined the scope of federal water protection in a more consistent manner, particularly over streams and wetlands which have a significant hydrological and ecological connection to traditional navigable waters, interstate waters, and territorial seas. It is also referred to as the Waters of the United States (WOTUS) rule, which defines all bodies of water that fall under U.S. federal jurisdiction. The rule was published in response to concerns about lack of clarity over its scope from legislators at multiple levels, industry members, researchers and other science professionals, activists, and citizens. In simpler language, the new regulation greatly affected what was defined as a WOTUS and this action restricted activities on and around more bodies of water. In particular, certain industries were impacted by the 2015 rule: industry, agriculture, mining, and manufacturing. This is important, particularly because of the Colorado River and its tributaries, which would be subject to WOTUS, and students have learned provides water to seven western states and Mexico. It cannot be overemphasised how critical the Colorado River is to these states. Many areas have no other water resource, hence, the quality of the water or freedom from pollutants is critical. This also becomes a cost issue because poor quality water is more difficult to treat to drinking water standards. It is highly unlikely that drinking water quality standards will be relaxed for any reason so the 2015 rule had the unintended consequence of improving incoming water to treatment plants making it easier for that water to be treated. This is important also because on a yearly basis water quality standards are typically improved meaning that treatment facilities must be improved to meet the new standard. This is a “win” for residents but it does cause expensive upgrades to treatment equipment. Any benefit from the 2015 rule that reduced pollutants in incoming water is a plus for water companies because it makes it easier and less expensive for water to be treated. The Obama (2015) version of the rule has been vigorously contested in court. It seems everyone was angry because the Obama rule affected states, counties, and cities. This was because the

rule included among other water bodies or potential water bodies: roads and roadside ditches, bridges, flood control channels, drainage conveyances and wastewater and stormwater systems. That is, it greatly expanded the scope of the Clean Water Rule. In 2017 the Trump administration announced its intent to review and rescind or revise the rule. This was consistent with campaign promises that President Trump made before his election in 2016 to remove regulations that he believed were bad for business and the economy. In February 2017, President Trump released Executive Order (EO) 13778: Restoring the Rule of Law, Federalism, and Economic Growth by Reviewing the “Waters of the U.S.” Rule, which instructed the EPA and the USACE to review and rewrite the 2015 WOTUS rule. The administration published a proposed rule on February 14, 2019 that would revise the WOTUS definition. Environmentalists and other groups were disappointed with this action. Again, this is the Executive branch exercising its authority over federal water bodies. To provide an overview of WOTUS, two videos are provided. The first video provides a history and overview of the significance of the act and the second additional information that will be helpful for the assignment.

https://www.youtube.com/watch?v=jsHsra_Nt7o

<https://www.youtube.com/watch?v=Hv?9jAznuRk>

Part 1 ? Executive Branch ? After viewing the videos and performing additional research on WOTUS, the teacher will divide the students into three groups: Proponents of the 2016 Obama administration version Proponents of the 2017 Trump administration roll back version Moderators

Students will debate the merits of each version. Possible questions for students are listed in the Government Unit 3, Student Resources, Key Assignment 1 folder.

Part 2 ? Judicial Branch ? The federal court system is structured to ensure that legal cases begin at the “bottom” and work their way, when necessary, to the highest court in the United States, the Supreme Court. Students probably do not have a thorough understanding of the courts and their effect on their lives, therefore, a short series of five videos is provided for review. Additionally, diagrams of the court system are provided in the Government Unit 3, Student Resources, Key Assignment 1 folder.

<https://www.youtube.com/watch?v=kLwYHSMJ8v4>

<https://www.youtube.com/watch?v=4tWRjUOQyw0>

<https://www.youtube.com/watch?v=isAR8JmGCsE>

<https://www.youtube.com/watch?v=uDAx0zMDJZs>

<https://www.youtube.com/watch?v=PYOSbd51XBM>

As stated, in the videos, most people do not have a concept of the effect that the court system has on their daily life. The WOTUS rule of 2015 and the potential change of that rule is an excellent example of how important the courts are in water cases. Students will begin by performing a simple google search of “WOTUS and U.S. courts.” Several court cases will appear but two stand out: *Rapanos v. United States*, 547 U.S. 715 (June 19, 2006) which challenged federal jurisdiction to regulate isolated wetlands under the Clean Water Act and the more recent *National Association*

of Manufacturers v. Department of Defense Et Al. (January 22, 2018) which clarified which court was the correct court for challenges to the CleanWater Rule. Students will divided into groups and research one of the two cases. Acting like Supreme Court Justices, students will prepare a poster of their main points and present these to the class. Additional information can be found at <https://www.epa.gov/wotus?rule>

Part 3 ? Legislative Branch ? Congress typically dislikes Executive Orders, particularly when their party is not in power. Utilising their legislative authority, members often write bills to nullify orders and the 2015 WOTUS rule is no exception. One example is H.R. 1105, sponsored by Representative Allen of Georgia introduced in 2017. This bill can be located at:

<https://www.congress.gov/bill/115th-congress/house-bill/1105>

Most bills do not become laws and this one “died” in the Subcommittee on Water Resources and Environment. Students will work in groups to write their own bill on one area of WOTUS. For example, a student may decide to write a bill to clarify the term “wetland” or on potential exceptions to the WOTUS rule. After writing their bill, students will work in groups and select the best individual bill in the group. Students will then argue the merits of their group bill (after revisions) to a panel of fellow students. The panel will choose the best five bills to move forward in Congress for a vote. The students who were in the audience will become members of Congress and each cast a vote on each bill. A template to write a bill is provided in the Government Unit 3, Key Assignment 1, Student Resources folder.

Key Assignment 2 ? California Water for Low Income Residents

Citizens have an ability to effect change at every level of government but most may find that State government is more accessible than they thought possible. This is certainly the case in California. One area that is gaining momentum is around water for low income residents and this has largely been moved forward by individuals. To date, California is the only state that has a right to safe drinking water as part of their state constitution. More information on this can be found at: https://www.waterboards.ca.gov/water_issues/programs/hr2w/. But this does not mean that all Californians actually have safe drinking water. Approximately 1 million people, primarily in the Central Valley lack drinking water due to high pollutant levels, primarily from

farming. In this Key Assignment, students will exercise their power as future voters by researching the Human Right to Water link (above) and contacting the State Water Resources Control Board chairman to express their opinion and learn how they can help. Students are encouraged to dive deep into the website data including utilizing the available maps to learn what areas are out of compliance with drinking water and why. It is important to note that all correspondence submitted to the Board is recorded so students should carefully think out their letters to make salient points and suggestions.

The State Water Resources Control Board is arguably the most important regulatory Board in California. They are not however, untouchable, and in order to be good citizens students must learn who to contact and in what way. The most important lesson is that they should participate in government whenever possible. The State Water Resource Control Board member page is

located at : https://www.waterboards.ca.gov/about_us/board_members/

Their contact information is available here: https://www.waterboards.ca.gov/about_us/contact_us/

Key Assignment 3 ? Who Makes Local Water Decisions?

It is important for students to understand what their role can and should be in local government and policy. Students will receive a lifelong benefit from understanding how local government is influenced, the role of political parties and interest groups, and what they can do as citizens to better their community. Additionally, students should learn the role that special interest groups and political parties have in their community and how it impacts their daily life. Decisions affecting water including rates, water quality, and infrastructure repair and replacement are often completed with very little citizen involvement. This is because water policies are largely made by different entities. This could be a public agency, a private company, a city government or a special district. Each of these entities has a Board that is responsible either to private shareholders (private water company) or the people (public water company).

Part 1 ? Students will research their own water purveyor and bring a water bill to class. After “blacking out” all personal information, students should visit their water agency’s website and answer the questions on the student worksheet. Using their answers, students can share this information in a class discussion. A Water Purveyor student worksheet is provided in the Government Unit 3, Student Resources, Key Assignment 3 folder.

Part 2 ? Students will interview a local government official and attend a city council or water board meeting. Ideally, groups of students can interview different Council/Board members for a variety of answers. Suggested questions are available in a student worksheet provided in the Government Unit 3, Student Resources, Key Assignment 3 folder.

Part 3 ? The final two questions on the Part 2 student worksheet (questions 7 and 8) asks the city council or board member to identify the most important problem(s) facing the water utility. The students will review, discuss and debate ways identified by the Council/Board member. Students are encouraged to identify their own solutions as well.

Government Unit 3 Final Project ? Students will volunteer at a local beach, river, or park clean up activity. The teacher will lead a discussion about the events.

Literary Texts

Title	Authors	Publisher	Edition	Website	Read in Entirety
Water 4.0: The Past, Present, and Future of the World's Most Vital Resource	David Sedlak	Yale University Press	2014	--	No
Your Water Footprint: The shocking Facts About How Much Water We Use	Stephen Leahy	FireFly Books	2014	--	No
Unquenchable: America's Water Crisis and What To Do About It	Robert Glennon	Island Press	2009	--	No
The Big Thirst: The Secret Life and Turbulent Future of Water	Charles Fishman	Free Press	2011	--	No

Career Technical Education

Construction Technology II

Grades: 10,11,12

Length: Full Year

Environment: Classroom-based

Honors: None

Subject: College-Preparatory Elective (G)

Discipline: Interdisciplinary

Institution: Murrieta Valley Unified School District

Course Overview

This course has been developed to integrate skills and concepts from the building and construction trades with applied mathematics. This course is the second in a pathway series, students must have completed Construction Technology I. As a natural progression, students will apply the craft skills required to design and build a variety of scaled structures that meet current code requirements. In addition, students will make real world connections between construction, and math using construction documents that include creating construction drawings, detailed project plans, and student-centered construction assignments. This course provides students the opportunity to apply academic knowledge and technical skills through a hands-on curriculum that meets pre-apprenticeship requirements for the National Building Trades Council.

The textbook chosen for this course is Construction Technology NCCER Trainee Guide 4th edition by Pearson Publishing. This allows students to utilize previously completed coursework as reference material. These textbooks cover career connections, stem connections, and current green construction practices. The course will provide necessary course nomenclature and real-world situations with examples and questions that test student's knowledge for understanding. Students will be able to apply for a "Concentrator Certificate" issued by NCCER. At the end of the course, students will research and evaluate apprenticeship, employment and secondary schooling opportunities in the building trades, engineering, and utilities employment.

Construction techniques will span the greatest length of the school year to keep skills developing in safety, math, teamwork, understanding the nature of construction and building products. Through these units, multiple projects will be constructed, used, reprised, or given to those needing the products; for example - build a shed-- school could use it as a storage facility. The construction programs provide many community service products, and these units will include these needed projects.

Orientation and Safety

Students practice the key concepts of general shop safety, learning the specific safety rules for the tooling that is applicable to the task at hand and acquiring the knowledge and skills required to work in and create a safe work environment. Shop safety procedures will include, transporting sharp woodworking tools to

prevent injury, shop etiquette as it applies to cleanliness and good housekeeping, safe and appropriate use of basic non-powered hand tools, including crosscut saws, rip saws, pull-saws, coping saws, hammers and chisels, hand planes, various grit sandpaper and its appropriate uses etc. Students will take a written safety test and practical hands-on demonstration proving they can recall how to use the tools for this class safely.

Assignments

Key Assignments: Safety and Workplace Behavior

- a. Assignment 1: Safety Presentation - Using what they have learned about safety in the shop, students will create a safety poster on a safety regulation directly related to the building and construction trades pathway. Students will need to research industry standard safety practices and how they relate to a classroom shop environment. Students will discuss their safety regulation in class with feedback provided by other students.
- b. Assignment 2: Safety Exam - Students will obtain OSHA industry safety standards knowledge of advanced safety procedures that will continue to be integrated through the rest of the course. Students must pass a safety exam based on all components of acceptable safety within the industry with a score of 100% to be able to operate classroom machinery. The safety exam will include multiple choice questions on classroom procedure questions. This exam will also include questions on the tools that are specific to this class level. Additionally, the student will be required to demonstrate safety procedures throughout the course.

Mathematical Review of Core Content

After instruction on tool safety, students will build a project based on a set of detailed plans to demonstrate mathematical reasoning and formulation of industry standard construction calculations. The students will be provided with a detailed construction drawing that they must interpret to build each project. Students will continue to demonstrate and build upon their understanding of applied math concepts, building sequences related to measurements, geometry and practical building applications that are related to the construction industry. Students will receive instruction in measurement and marking/layout, the fundamental skills which will be needed to complete all the applied mathematics, and construction math units and assignments that follow in this course. This will include, review of fractions, converting fractions to higher or lower terms, mixed numbers, common denominators and adding, subtracting, multiplying, and dividing with decimals and fractions; reading a ruler and tape measure while incorporating fractional measurements to $1/16^{\text{th}}$ of an inch in a building project; reading a tape measure to measure material of nominal thickness and board footage. Students also use geometry tools (i.e., protractor, compass, architectural ruler) to create shapes in the material. Ultimately the shapes need to match the provided construction drawings. While demonstrating, students should also continue to build upon their ability to communicate with the instructor, using the vocabulary of the construction trades (flush, plumb, square, level) and proving their understanding of how to properly use the tools as intended, with safety as a paramount goal.

Assignments

1. Key Assignments: Students will use construction plans, tape measures and the worksheets from Construction Math Manual.
 - a. Assignment 1: Units 1-6 from Construction Math Manual will be used for instruction

with the completion of activities and quizzes at the end of each unit for a review of checking for understanding math concepts.

- Unit 1 – Basic Calculating
 - Unit 2 – Rounding
 - Unit 3 – Symbols, Squares, Cubes, Equations and Formulas
 - Unit 4 – Units of Measurement
 - Unit 5 – Averages, Percents, Ratios and Proportions
 - Unit 6 – Calculating Area
- b. Assignment 2: Chalk It Out - Using some basic construction plans, students will measure out in chalk the lines and markings represented in the blueprints and have other students check the work. The next part of the assignment will be to chalk out twice the size of a blueprint room. Taking a plan for a 20 ft. room and making it a 40 ft. room. The chalk exercise will be held out in the yard of the construction classroom. The students will have to show the work of how they calculated the area for square footage.
- c. Assignment 3: 16th on Center – Each student will have to mark out a basic drawing, showing where the support beams and wall structures go using the 16th on center constructions file. This will have students using tape measures and calculating fractions in real time.

Measurement, Lay-Out Marking, Reading and Footage

Students will learn how to identify the elements and symbols commonly included in a set of plans. Students will also be able to demonstrate the use of scale, square footage, and linear measurement in architectural drawings. Students will design basic plans for a future project they would like to construct.

Assignments

Key Assignments:

- a. Assignment 1: Reading Plans – Students will continue to build upon previous blueprint reading knowledge to deepen their learning of building codes and specifications demonstrate their knowledge of the foundations of construction math by using appropriate vocabulary and tools to modify a blueprint for construction. Using scale drawings and plans, students demonstrate an understanding of the rules of similarity and proportions. Students calculate area and calculate the volume of excavation from materials and concrete. Students calculate framing materials needed from plans and prepare budgets. Students will be able to identify the commonly used elements in a full set of house plans including building codes, architectural drawing scale, and building specifications. Students will create the site plan to be used in the following units.
- b. Assignment 2: Create a Basic Scaled Plan Drawing – Students interpret and use blueprint dimensions and transfer scale drawings to full scale build. Create blueprints using standard mechanical techniques. Create a reference tool for unfamiliar symbols,

notes, and abbreviations for quick reference. Students will be able to identify the commonly used elements in a full set of house plans including building codes, architectural drawing scale, and building specifications. Students will be able, through the building, to scale, and building specifications. Students will be able, through the building, to interpret blueprint dimensions to a full-scale build. Students will show, through both hand drawing and computer use, how to build a basic blueprint. Students will create a blueprint of a single room structure like a shed, classroom, or woodshop from which they do mathematical calculations for linear foot/trim, square footage for a concrete foundation. They will also identify the appropriate architectural symbols for electrical, plumbing, and mechanical aspects of the plan.

- c. **Assignment 3:** Concrete, Framing, and Roofing – Students will learn and apply skills needed to properly measure and calculate concrete volume, measure board feet, and area for roofing material. Students will also learn basic skills necessary to form concrete pads and footings including laying rebar and finishing the concrete. The framing aspect will address the skills needed to properly frame a wall, door, window, and ceiling joists. The roofing section will cover the fundamental needs of roofing a residential home and applying flashing and a drip edge.
- d. **Assignment 4:** Develop the Plans – Students will create a scaled detailed set of drawings. Each set of drawings will be used to reinforce industry standard vocabulary construction math. All students will be required to complete mathematical processes in measurement, decimal conversions, fractions, geometry, and algebraic fundamentals when creating their plans. Students will create their own legend for the set of plans they are creating. Students will be required to research the different building codes that they will be required to build to. Students will be required to build the “trainer system” that they are designing. All drawings must include the scale legend as well as any notes and code requirements that must be included in the build. A detailed notes page and call outs page must be included in this set of plans.
- e. **Culminating Assignment:** Build from the Blueprint – Given a set of plans, students will frame a “Trainer System” with a door, window, and calculate rafters with a ridge board. One wall of the house will have metal studs and the remaining wooden 2 by 4's or 2 by 6's. The project will be graded on the accuracy of the layout, accuracy of cuts, and the overall completion of house project. A written method of completion with a sequence of steps taken will be included with the completed project. Students should be able to show their math and explain their rationale for the sequence of steps taken at the completion of the assignment.

Intermediate/Advanced Construction Techniques

In this unit students will explore numerous building and construction trades and discover their unique aptitudes and specific skill sets as they build wall sections using varied materials, (i.e.) dimension lumber products, steel studs etc. for use with by various trades including but not limited to, plumbing, electrical, HVAC, finish carpentry, lath plaster and drywall, framing, glazing, veneers, waterproofing, roofing, sheet metal, concrete etc. Students will use these skills to complete the capstone project. Math skills used will include applied geometry related to the angle of roof pitches, wall angles, finish trim etc. They will also understand the connection between fractions and decimals and how they relate to the construction process.

Assignments

Key Assignments:

- a. Assignment 1: Pony Walls - Using instructor provided construction drawings, students will construct interior/exterior pony wall sections to practice various trade skills by installing the necessary components of a structure including but not limited to; electrical circuits, simple plumbing systems, typical three-coat stucco finish, roofing applications, finish carpentry, rough framing, glazing/windows, HVAC, drywall, and paint. This work allows students to apply geometric concepts such as reading the angle necessary for pipe bending or the measuring and cutting of angles necessary for roof framing and finish carpentry. This work ultimately prepares students for the work of the culminating project in which they design and build a small structure. The completed project should be plumb, square, and level. Project quality is necessary for proper completion.

Continuing to develop their skills in design, students will create their own design plan that includes a material list, cost estimate, and project schedule. Students will read existing construction drawings (which includes interpreting lines, symbols, abbreviations etc.) to further understand how a construction document is “put together.” They then use architectural drafting software or hand tools for their own sustainable structure. Students will continue to expand their understanding of math concepts such as addition, subtraction, multiplication, division, place value, fractions, decimals, word problems, and measurement. As the student’s understanding of these concepts grows, the rigor increases. This work gives students a chance to apply geometric concepts to create the drawing such as the Pythagorean Theorem to design and eventually construct square walls and roof angles.

- b. Assignment 2: Create Construction Documents - Building on what they learned building pony walls, students create a set of construction documents for their animal housing structure that should include scaled dimensioned front view, side view, rear view, top view, material list and a written proposal (see below) that identifies the advantages of their design. The drawings must have dimensions in both standard and metric, calculated angles in an accurate and labeled scale, and any other pertinent information. Students should include a variety of geometric shapes to challenge their design and layout skills. The final project drawings should have detailed labels and dimensions, stressing the importance of accuracy in design and mathematical calculations. After the documents are approved by the instructor students can commence the construction process.
- c. Assignment 3: Written Proposal for Client/Instructor - The audience for the proposal should be a potential client. In the proposal, the students should highlight the advantages of their design and persuade the customer that their structure is going to meet the specific needs of the client’s animal. The document should include justification for the types of materials being used, a scope of work, completion date, and total cost.

Advanced Construction Techniques/Design

Students will design and build a scaled sustainable structure that encompasses the multiple facets of the building and construction trades. Examples of required projects may include a “tiny” home structure on a trailer, shed or office space. The interior of the sustainable structure could be a workspace or living habitat

with finished walls, flooring systems, and cabinetry. The sustainable structure requires that a wide variety of the building trades be represented and may include skills for rough framing, roofing, plumbing, electrical, finish carpentry, HVAC, drywall, painting, lath and plaster, veneers, glazing etc. Design parameters will meet current building codes and Title 24 requirements per the local municipality. Students will follow a "critical path" schedule for completion of the project and will maintain daily logs and workplace documentation.

Assignments

Key Assignments:

- a. **Assignment 1:** Design and Build a Scaled Structure - To begin, students will be assigned to work in small groups. Each group will answer various questions regarding the various parts of the structure they will build. A packet of construction drawings like what may be submitted before building permits are issued to all students. The construction drawings will include a floor plan, framing plan, roof framing plan, front, rear and side elevations, an electrical plan, window and door schedule, and a materials list. These will be completed by hand. After instructor approval, students can begin the construction process. The construction process will be constructed on a small-scale structure.

In both the design and build of the structure, students use applied geometry to determine square footages of buildings, rooms, lots, parcels etc. Estimation skills utilize multiplication, addition, subtraction, division etc. After instruction, students apply skills in determining quantities of cubic yards, square yards, cubic feet, volume etc. Conversion techniques are utilized in the creation of a plan for a constructed project when using dimensional measurements and when transferring plans and calculations to the physical project. One must also be able to calculate the area of triangles and quadrilaterals to ensure that everything is plumb, level, and square. The Pythagorean Theorem must be used in theory and application through the construction of woodworking projects, such as right-angle shelf supports. The students must also be able to use calculating concepts of measuring volume in woodworking and construction, such as when using the volumetric unit "board foot."

- b. **Assignment 2:** Technical Writing - Students will use their knowledge of safety requirements for the class to create a purposed list of materials, the estimated cost of materials, vendor lists, purchase orders and labor costs. They will also be responsible for researching and listing the components in a project package such as contract documents, payment schedules, scopes of work, material safety data sheets (MSDS) job safety procedure worksheets etc. All written components of the package must be written in technical industry standards, which stress clarity and organization. Students will present their group project to the class. Other students will provide feedback, and constructive criticism regarding the presented project.

Post High School Planning

This unit is designed to have students gain sustained information on how to continue their training or go into a specialized trade. Students will re-examine the employment documents developed in Construction I and make any additions or changes needed. The students will research construction firms to see what employment requirements are available and the required education and skill sets. Students will explore

apprenticeship programs. Students will research institutions for post-high school training, education for entrance requirements, types of degrees earned, and the cost of the program. This may include trade schools and 4-year programs.

Assignments

Key Assignments:

- a. Assignment 1: Required research on labor market on fastest growing jobs in the building trades, engineering, and utility companies for their local area. This research will be transferred into a slide presentation to share with the class. Each student will choose one of the leading jobs and refine the research to include skill set needed, education, and the pros and cons of such a job. Photos of the types of projects will be required.
- b. Assignment 2: Review and refine employment documents from Construction I, adding and changing needed information to be prepared to apply for the positions in building trades. A mock interview date will be set, and each student must go through a practice interview; providing employment portfolio, correct answers to questions and use the techniques from the MCA Job Search P program.
- c. Assignment 3: Students will research five post-high school learning and training intuitions. The research will be transferred to a slide presentation to present in the classroom to other students. The research and presentation must include cost, length of the program, if financial aid can be used, possible scholarships, application and entrance requirements for each institution. Programs will be described in detail as to if it is an architecture program, an engineering program, welding, etc. Students must also include certifications and degrees that can be earned.
- d. Assignment 4: Each student will choose a post high school training program or college and apply for entrance into the program. Students can apply to more than one. Documentation will be developed by the student on the process, what they learned, and the requirements that are needed to complete the application. This information will be shared in an oral discussion with instructor and fellow students. The notes and information from this assignment can be held in the employment portfolio.

Textbooks

Title	Authors	Publisher	Edition	Website	Is Primary
Construction Technology Trainee Guide	n/a	NCER	4th ed, 2017	--	Yes

NCCER Core

Grades: 10,11,12

Length: Full Year

Environment: Classroom-based

Honors: None

Subject: College-Preparatory Elective (G)

Discipline: Interdisciplinary

Institution: Fontana Unified School District

Course Overview

This course is designed to provide classroom and hands-on experience in construction and construction-related occupations. The NCCER Core Curriculum is a foundation and prerequisite to all other Level 1 craft curriculum. Modules cover topics such as basic safety, communication skills and introduction to construction drawings. Completing this curriculum gives the trainee the basic skills needed to continue education in any craft area he or she chooses. Upon successful completion of this course students will receive the OSHA 10 Hour Construction Industry Certification and NCCER Core Curriculum Certification.

I. Introduction & Orientation

Provide overview of Residential and Commercial Construction opportunities for students interested in preparing for careers in construction (framing, plumbing, electrical, and so forth). Familiarize student with expectations of both teacher and student.

Assignments

Complete workforce preparedness activity and assess ability to join work force with current experience and knowledge.

Complete career opportunity project.

Create portfolio of job related competencies that will be developed through course.

II. Basic Safety (Construction Site Orientation)

Module Two (00101-15) explains the importance of safety in the construction and industrial crafts. Trainees will learn how to identify and follow safe work practices and procedures and how to properly inspect and use safety equipment. Trainees will be able to describe the safety practices associated with elevated work; energy release; and various hazards encountered on job sites.

NOTE: The successful completion of this module will award a Construction Site Safety Orientation credential.

Assignments

OSHA Certification

Complete all modules in the Career Safe Online 10 Hour Construction Industry OSHA Safety Course.

Task 1

Properly set up and climb/descend an extension ladder, demonstrating proper three-point contact.

Task 2

Inspect the following PPE items and determine if they are safe to use:

- Eye protection
- Hearing protection
- Hard hat
- Gloves
- Fall arrest harnesses, lanyards, and connecting devices
- Approved footwear

Task 3

Properly don, fit, and remove the following PPE items:

- Eye protection
- Hearing protection
- Hard hat
- Gloves
- Fall arrest harness

Task 4

Inspect a typical power cord and GFCI to ensure their serviceability.

III. Construction Math and Measurement Systems

Module Three (00102-15) introduces trainees to basic math skills needed in the construction environment. The module reviews whole numbers and fractions; working with decimals; the four primary math operations; reading rulers and tape measures; the Imperial and metric units of measurement; basic geometric figures; and area and volume calculations for two-dimensional and three-dimensional objects.

Assignments

Demonstrate ability to properly read measuring tape.

Complete applied math group performance project.

Complete unit work sheets and tests.

Complete trade specific estimation of material worksheets and activities.

IV. Introduction to Hand Tools

Module Four (00103-15) instructs trainees in the identification, use, and care of hand tools.

Developing the knowledge to properly choose and safely use hand tools is an essential part of the construction industry.

Assignments

Task 1

Visually inspect a minimum of five of the following tools to determine if they are safe to use:

- Hammer or demolition tool
- Chisel or punch
- Screwdriver
- Adjustable or non-adjustable wrench
- Socket
- Torque wrench
- Pliers
- Wire cutters
- Measuring tool
- Layout tool
- Level
- Hand saw
- File
- Utility knife
- Shovel or other earth tool
- Chain fall or hoist
- Clamps

Task 2

Safely and properly use a minimum of three of the following tools:

- Hammer or demolition tool
- Chisel or punch
- Screwdriver
- Adjustable or non-adjustable wrench
- Socket

- Torque wrench
- Pliers
- Wire cutters
- Measuring tool
- Layout tool
- Level
- File
- Utility knife
- Shovel or other earth tool
- Chain fall or hoist
- Clamps

Task 3

Make a straight, square cut in framing lumber using a crosscut saw

V. Introduction to Power Tools

Module Five (00104-15) identifies and describes some of the power tools used by construction workers. The construction of each tool is discussed, along with information regarding the safe usage and typical maintenance requirements of power tools. NOTE: Trainees are required to successfully complete Module 00101-15, Basic Safety (Construction Site Safety Orientation) before studying this module.

Assignments

Task 1

Performance Safely and properly demonstrate the use of three of the following tools:

- Electric drill
- Hammer drill or rotary hammer
- Circular saw
- Reciprocating saw
- Portable band saw
- Miter or cutoff saw
- Portable or bench grinder
- Pneumatic nail gun
- Pavement breaker

Task 2

- Complete tool identification worksheet.
- Describe personal protective equipment needed with the use of each tool.

Complete tool identification quiz.

VI. Introduction to Construction Drawings

Module Six (00105-15) provides trainees with the information and skills needed to read and understand construction drawings. This module includes a set of four oversize drawings, which is included as an Appendix in the Trainee Guide.

Assignments

Task 1

- Using the floor plan supplied with this module:
- Locate the wall common to both interview rooms.
- Determine the overall width of the structure studio.
- Determine the distance from the outside east wall to the center of the beam in the structure studio.
- Determine the elevation of the slab.

Task 2

- Prepare section notes from lecture.
- Discuss section review questions in class discussion.
- Demonstrate use of blueprint cover sheet and legend to find information within plans.
- Create scaled plan of various classroom spaces using blueprint procedure checklist worksheet.
- Complete section quiz.

VII. Basic Communication Skills

Module Seven (00107-15) provides trainees with the information and skills needed to communicate effectively and clearly. Developing good communications skills enables the construction professional to become a confident, reliable asset to their craft.

Assignments

Task 1

Perform a given task after listening to oral instructions.

Task 2

Fill out a work-related form provided by your instructor.

Task 3

Read and interpret a set of instructions for properly donning a safety harness and then orally instruct another person on how to don the harness.

Task 4

- Prepare section notes from lecture.
- Create a jobsite web and describe each party's duty and proper communication line and protocol.
- Complete Communication vocabulary test.
- Demonstrate proper communication using various methods of written and oral communication.

VIII. Basic Employability Skills

Module Eight (00108-15) provides trainees with guidance related to finding and securing a position in the construction trades. In addition, guidance in the areas of problem-solving and effective interaction with others is offered to help ensure their success in the construction trades

Assignments

Prepare section notes from lecture.

Complete student competencies portfolio.

Develop resume and complete exit interview.

IX. Introduction to Material Handling

Module Nine (00109-15) provides safety guidelines for workers handling materials on the job site. It covers proper procedures and techniques to use when lifting, stacking, transporting, and unloading materials. It also introduces basic motorized and non-motorized material-handling equipment commonly found in the construction environment.

Assignments

Task 1

Demonstrate safe manual lifting techniques. Performance

Task 2

Demonstrate how to tie two of the following common knots:

- Square
- Bowline
- Half hitch

Clove hitch

Textbooks

Title	Authors	Publisher	Edition	Website	Is Primary
Core Curriculum: Introductory Craft Skills	N/A	Pearson	2016, Fifth Edition	https://www.pearsonschool.com/index.cfm?locator=PS31Db&PMDbProgramId=141581	Yes

Electives

Study Skills

Grades:	9,,,
Length:	Half Year
Environment:	Classroom-based
Honors:	None
Subject:	College-Preparatory Elective (G)
Discipline:	Interdisciplinary
Institution:	Orinda Academy

Course Overview

The Study Skills course is designed to teach 9th-grade students new tools and strategies for consistent academic success and help them transition from middle school to high school. Through this course, students will build a greater self-awareness of how they most effectively learn and how to articulate what they need to help them succeed. Students will participate in activities that will help them learn how to get organized, create effective study habits, use the best kind of planner for their organizational style, complete assignments, understand their learning style, communicate with teachers, prepare to co-facilitate a conference with parents and teachers, become a better note-taker, and prepare/study for their exams. After completing this course, students will be able to select and use strategies from a resource bank when encountering new academic issues. Additionally, students will be able to select and demonstrate various study and test-taking strategies and methods to meet the demands of their courses.

Your Skills and Strengths

In this unit, students will learn about their learning styles, values, and personality. Students will take quizzes and surveys as well as gather practical information about themselves that they can apply to their learning and plan for high school. They will also learn about improving their communication skills.

Assignments

Students will create a “Positive Thinking” vision board or a series of photos and images using their favorite software or app. Include such things as where they want to live, where they want to travel, the career they want, etc. They will share their vision board with their teacher, then display it where they can see it every day.

Time Management and Life Success Skills

Description: Students will learn about and test out techniques for time management, being more productive, what to do when overwhelmed, and visualization. They will also learn about time management, including prioritizing as well as time wasters, and will apply their knowledge to improve their study habits and quality of life.

Assignments

Students will keep track of their time for a week and then use that information to identify and write about their priorities as well as things that are time wasters for them. Then they will prepare and give an oral presentation of their findings.

Note Taking and Test Taking

Students will learn about the Cornell note taking system as well as other options for note taking. They will also learn about preparing for standardized, subjective, and objective tests including overcoming test anxiety and techniques for connecting ideas.

Assignments

Students will choose two different notetaking methods and use them to take notes on a teacher presentation or on a Ted Talk for teens or MasterClass lecture (at least 20 minutes) to listen to and take notes on. They will submit their notes to their teacher and discuss their process.

Success in High School

Students will learn about suggestions for handling the first 30 days of high school, including such things as balancing their time and participating in activities, as well as how to work effectively in groups, goal setting, and self-motivation.

Assignments

Complete a goal planning worksheet, including objectives toward those goals and deadline dates for those steps. Students will follow up with journaling weekly about their progress toward their goals and completing each objective along the way, and will share their findings with their teacher.

Stress Management, and More Life Success Skills

Students will learn about and try out meditation, yoga, mindfulness, and affirmation techniques, as well as the importance of gratitude. Students will also learn about having a growth mindset and seeing mistakes as opportunities.

Assignments

Students will make and keep a gratitude list for a week, and journal about how it affected their level of happiness. They will share their findings with their teacher.

Reading Skills

Students will learn about how to annotate a textbook or a novel, and learn techniques for being successful while using audiobooks.

Assignments

Students will use the techniques they learned about audiobooks to listen to at least 15 minutes of an audio book and take notes on it. From these notes they will create an electronic presentation (PowerPoint, Prezi, video, etc.) of a book summary and review, and submit it to their teacher

Writing Skills

Students will learn about writing for different purposes and audiences, including the components of an argumentative essay. They will also learn about conducting research and writing a research report. This unit will be conducted in cooperation with the 9th grade English classes.

Assignments

Given a rubric of expectations, students will follow the steps they learned about to write a research paper of 10-12 double spaced pages, and submit it to their teacher.

Service Learning

Students will learn about what service learning is, and how it is different than volunteering. Basically, in volunteering you join an already existing project while in service learning you design their own project. These projects can include anything from a fundraising drive to a public service announcement to thanking our first responders in an event. In addition, service learning includes reflection during and after the project. Students will gain the skills to do service learning now and in the future.

Assignments

Students will design a plan for completing their service learning requirement during high school. Students will research organizations of interest and create a four-year map of potential involvement and a statement of service that outlines their objectives in learning and service to the community.

Effective Self-Advocacy

Students will learn and understand the importance and skills involved to become an effective self-advocate in high school. Students will role play situations around email, in-person meetings, making requests of teachers, and how to co-facilitate a parent-student-teacher conference.

Assignments

Students will articulate an issue around their learning styles that needs to be communicated to a teacher, prepare notes for making a request, and role-play the request with their teacher.

Other Materials

Title	Authors	Date	Material Type	Website
Cornell Notes	--	--	note taking	http://lsc.cornell.edu/how-to-study/taking-notes/cornell-note-taking-system/
Organizational Planners	various	--	Planners	--

Architectural Design 1

Grades: 9,10,11,12

Length: Full Year

Environment: Classroom-based

Honors: None

Subject: Visual & Performing Arts (F)

Discipline: Visual Arts

Institution: Sage Creek High School

Course Overview

Architectural Design has been created for students interested in developing primary skills in the area of Architecture and Design. Students examine Architecture, its origins, as well as address the diverse forces that have shaped modern Architecture. Students will gain an understanding of the significance of Architecture and will also acquire skills to visually analyze structures. Architectural Design will provide entry level training in the principles of art, drafting conventions, techniques of building, and construction drawings. This course will also prepare students for positions as Architectural Designers, drafters, plan checkers, construction trades workers and in preparation of Autodesk Certified User exam.

Unit 1

This is an introductory unit focused on presentations and development of effective design teams. Using the Internet, text, and presentation software, students will document and deliver organized, oral presentations of work tailored to the type of audience and intended goals. Specific oral communication techniques are used to convey information and communicate with an audience. Effective design teams can improve the efficiency and effectiveness of the design process. Effective team members have good collaboration skills. In order to be an effective team member, one must demonstrate positive team behaviors and act according to accepted norms, contribute to group goals according to assigned roles, and use appropriate conflict resolution strategies.

Example presentation content requirements for History of Architecture include: A clear Map/explanation of the geographic area. Overview and summary of what you are going to present. List the most iconic structures of your assigned topic. Was there a Builder/Architect/Group of individuals which influenced the assigned topic? List the Architectural details of the assigned topic. Typical building materials, and variations. How the area of construction affected the design and/or building materials (If applicable). List the features your assigned topic which are still in use today (provide examples) Information is presented to a panel of peers. Students are reviewed by the panel immediately following their presentation. The presentation group also reviews each team

member within their own team.

Unit 2

This unit focuses on the factors which influence structures and structural integrity. An introduction to basic structural engineering and the legal ramifications of structural failure are discussed. Students will watch a film about the World Trade Center, further research and list the factors which may have influenced the structural failure of the towers. They will debate current conspiracy theories, and write an opinion based paper about the topic.

Unit 3

This unit focuses on design influences with an introduction to hand drawing and the principles of design: Students are presented with the principles of design, balance, unity, contrast, emphasis, pattern and movement or rhythm, line, shape, form, color, value, texture & space. Oblique, perspective, a number of Architectural details, vocabulary, and building styles are sketched and presented during the unit. Students keep an organized sketchbook with labeled elements relating to the current topic and must be able to identify the principals of design and housing styles based on form and finish at the end of the unit during a slide show based quiz.

Unit 4

This unit is an introduction to the tools required in designing a space or structure. This unit is taught throughout the course, with the specific tools used to complete assignments within other units. The basic layout, commands and tools are introduced for each of the Computer Aided Drafting (CAD) programs. Students turn in geometric shapes and patterns based on basic commands. They utilize, add to, modify and create libraries of design items to use throughout the course.

Unit 5

Is project based focusing on small structures/spaces with simple constraints. They will turn in a digital copy of their design solution.

Example assignment:

Designing a shipping container:

Students research shipping container designs online collecting and turning in their favorite examples. The container must have a bathroom, Kitchen, and sleeping area. Rough space plan sketches transition to CAD plans. Walls, doors, and windows are required for the AutoCAD portion, while furniture and finishes are completed in Sketchup. Final design should reflect ideas/inspiration from research selections turned in at the beginning of the assignment.

An abbreviated design rubric is as follows:

The design concept is clear.

Planning of space is well thought out and flows from area to area.

Materials are well thought out and support the concept as well as the color scheme

All objects are to scale and support the main concept of the designer.

The designer has gone above and beyond the minimum requirements

Unit 6

In this unit, students create Construction Documents. Construction Documents consist of scaled interior and exterior elevations, building sections, and architectural details. This is the product an Architect produces (Construction Documents) which can affect public safety and well-being. Therefore, Architects have a high level of responsibility to society and require adherence to high ethical standards. Working in Project groups, students select from Unit 5 projects which plans they choose to create Construction Documents with. An introduction to professional practice and how it relates to the documents as well as a review of Unit 2 (structural engineering) and the legal/financial aspects of the field are discussed. students will experience shared decision-making as they investigate different materials, design processes, and the short and long term impacts that their decision-making may have on society or potentially on the world. Construction Documents are plotted large scale similar to plans requirements at the city planning and building department and turn into the instructor.

Unit 7

Architectural site visits vary from year based on a variety of factors. A question and answer as well as a written reflection as guided by the visit and instructor.

Unit 8

This unit focuses on Architectural group projects with at least one preliminary plan based on the architectural site visit. Preliminary plans consist of Space plan, furniture layout, finishes, an architectural focal point. An abbreviated rubric is outlined in Unit 5. Students will utilize, AutoCAD Architecture, Sketchup, and Photoshop for their final preliminary plan. Students will learn Color Theory the blending of colors in a Kaleidoscopic color wheel and the psychological effects of color in perception. The difference between warm and cool colors and the knowledge to mix colors and put colors together in conjunction with materials in a way that is right for your Project. Between 1 and 3 preliminary plans will be assigned per instructor discretion based on size and scope of projects and time constraints.

Unit 9

Students choose one of the Preliminary plans utilize in Unit 8 to complete a hard copy design board including scaled elevations and building sections, 2 scaled models utilizing different materials, as well as a Design Narrative outlining the project program and requirements and how the design team successfully completed them. Students are encouraged to enter a variety of student competitions and showcases.

Unit 10

Students complete a resume, cover letter, and architectural portfolio containing samples of their work throughout the year. College and professional practice is discussed for a great variety of job descriptions within the field of architecture, engineering, and construction. The job search and interview process is outlined as well as social media and personal branding for both college and professional applications and searches. Students turn in a hard copy of their resume and cover letter, a digital copy of their portfolio.

Textbooks

Title	Authors	Publisher	Edition	Website	Is Primary
Building Construction Illustrated	Francis D. K. Ching	John Wiley & Sons	2014	--	No
A Visual Dictionary of Architecture	Francis D. K. Ching	John Wiley & Sons	2014	--	No
A Field Guide to American Houses	Virginia/ Savage/ McAlester	Knopf	2014	Virginia/ Savage/ McAlester	No

Websites

Title	Authors	Organization	Website
Lynda Tutorials	--	lynda.com	http://www.lynda.com/

Multimedia

Title	Authors	Director	Series	Date	Website	Medium
Frank Lloyd Wright	Ken Burns & Lynn Novick	--	--	1998	--	Film

Building Information Modeling

Grades:	10,11,12
Length:	Full Year
Environment:	Classroom-based
Honors:	None
Subject:	Visual & Performing Arts (F)
Discipline:	Visual Arts
Institution:	Clovis Unified School District

Course Overview

Building Information Modeling is designed as a single period art course for secondary students focusing on the drafting, design and building information modeling aspects of construction. The emphasis is on expressing creativity in a visual form by: (1) reviewing and applying the elements and principles of design and by (2) gaining a deeper insight into inspirations, theoretical elements and principles behind creative design. Additional emphasis will be placed on logical reasoning, visualization, and practical application using 1, 2, and 3-point perspective, color applications, Computer Aided Drafting and 3-D modeling. Students will follow the stages of the building information modeling process by completing a project from site analysis to a finished building design.

Unit 2.0: Building Information Modeling of Profession

Students explore the BIM profession focusing on several key areas to include educational requirements, industry demand and projected earnings.

Assignments

Research the BIM profession, interview a person working in the BIM field, and research educational programs leading to a career in BIM. Students will take their research findings and create a tri-fold brochure advertising for a career in BIM. (Advanced VPA 5.0)

Unit 3.0: Introduction to Construction Architecture

Students research architectural history and design.

Assignments

Research historical construction periods, write a report and prepare a multimedia presentation comparing and contrasting the elements of design, including references to social, political, cultural and religious values. (Advanced VPA 1.4, 2.6, 3.1, 3.3, 3.4)

Select a famous architect to research and write a report with a multimedia presentation analyzing, assessing, and deriving meaning from the architect's works according to the elements of art, the principles of design, aesthetic qualities and societal influences. (Advanced VPA 2.6, 4.1, 4.3)

Unit 5.0: Basic Construction Drawings

Students create varied construction drawings via both hand drawing and computer aided drawing.

Assignments

Study, analyze, report, and discuss using appropriate vocabulary the revolution of construction styles as determined by time, place, and culture and its influence on contemporary construction architecture. (Advanced VPA 3.1, 3.2, 3.3)

Unit 7.0: Building Information Renderings

Students combine previous knowledge to create complete and realistic building drawings.

Assignments

Create an original design based on specified design parameters demonstrating perceptual skills, ability to apply artistic processes and skills, and knowledge of principles of design. The creative design will reflect a personal style and advanced proficiency in communicating an idea, theme, visual metaphor or emotion. (Advanced VPA 1.1, 2.1, 2.4, 2.5)

Unit 8.0: Construction Models

Students build representative construction models utilizing a variety of building media.

Assignments

Construction model building. Critique, analyze, and compare the art-related theoretical perspectives and principles of design of student designed scale models. The original model

designs will demonstrate a personal style and advanced proficiency in communicating an idea, theme, visual metaphor or emotion. (Advanced VPA 2.4, 2.5, 4.4)

Analyze and articulate how society influences the interpretation and message of a work of art through the development of a design incorporating all stages of the design process from the site analysis to a finished original construction design applying various art-related theoretical perspectives, speculative advances in technology, and principles of design that reflect their feelings and points of view. The original design will demonstrate knowledge of technology skills, which reflect a personal style and advanced proficiency communicating an idea, theme, or emotion. (Advanced VPA 2.1, 2.2, 2.3, 2.4, 4.3, 4.4, 5.1, 5.2)

Unit 9.0: Careers in BIM and related Fields

Students explore educational pathways leading to a career in Building Information Modeling and Architectural Design.

Assignments

Develop a portfolio representing significant achievement in their original drawings, sketches, creative designs, critiques and historical research papers, which reflect art-related theoretical perspectives applied to their own works, and works which reflect changes due to speculative advances in technology. Students will reflect and write about their attempt to portray a particular idea in visual form, the significance and success of their design, and how their successes might be applied in future works. (Advanced VPA 4.6, 5.1, 5.3, 5.4)

Textbooks

Title	Authors	Publisher	Edition	Website	Is Primary
BIM Handbook	Rafael Sacks, Charles Eastman, Ghang Lee, and Paul Teicholz	John Wiley and Sons, Inc	3rd Edition/2018	--	Yes
ARCHITECTURE: Residential Drafting and Design	Clois E. Kicklighter, W. Scott Thomas, and Joan C. Kicklighter	The Goodheart-Wilcox Company	1st Edition/2018	--	Yes
Design Drawing	Francis D.K. Ching with Steven P. Juroszek	John Wiley and Sons, Inc	2nd Edition/2010	--	No
The Art of City Sketching	Michael C. Abrams	Routledge	1st Edition/2014	--	No

Computer Aided Drafting and Design for Engineering (H)

Grades: 10,11,12

Length: Full Year

Environment: Classroom-based

Honors: Honors

Subject: Visual & Performing Arts (F)

Discipline: Visual Arts

Institution: Oxnard Union High School District

Course Overview

This Course is modeled after ROP/CEC Ventura County's course.

The purpose of Advanced Computer Aided Drafting and Design is a project-based class for students to consider and solve problems of form, space, and function while understanding the environmental, social, and aesthetic impact of architectural design; develop critical thinking, planning, and spatial skills; employ the design process in their work; learn practical skills and gain general knowledge of residential construction techniques; and to present this information both verbally and graphically while utilizing the latest design software. The students will cultivate an awareness of and respond to design and architecture in a thoughtful, informed, responsible, and meaningful way. In addition, students will develop the technical skills of current industry methods, tools, and conventions as well as be exposed to career pathways in related architecture and design fields. They will have a well-rounded frame of reference with which to proceed to the next level of instruction and/or post secondary goals. This course also offers opportunities for scholarships and internships through various firms and organizations in the design/construction/architecture fields.

The Honors Computer Aided Drafting & Design class is designed to have students to the master concepts and skills required of engineers and designers working in a professional Computer Aided Design (CAD) environment. This course trains students to interpret and make Architectural, Mechanical, Electrical, and Industrial/Manufacturing working drawings, blueprints and plans utilizing Computer Aided Drafting software. Students planning careers in any of above-mentioned Engineering fields as well as Landscaping or Construction should complete this class.

This course is the third course in our new STEM pathway, and its purpose is to teach students Engineering and Engineering Technology. They will become proficient at using drafting standards

to create accurate multi-view drawings by using AutoCAD software. Students will be prepared to confidently matriculate into entry level positions as engineering technicians and/or enroll as freshmen in university college majors such as: Architectural Engineering as well as Mechanical and Industrial Engineering, Construction management or Interior Design.

This course is also articulated with the Ventura College, giving successful students the ability to receive college credit.

Unit 1: Introduction to AutoCAD Software and Resources

This unit will introduce the students to the hardware and software required for creating CAD drawings. Students will learn the requirements to operation of CAD software on today's hardware and the resources necessary to utilize these tools in multiple engineering fields. Review the current software versions of AutoCAD and other industry standard softwares. The orientation to Computer-Assisted Drafting involves introducing students to hardware and AutoCAD software, the System Operation and learning how to set up AutoCAD, and work with Functions Commands and Controls, Scaling Limits and Units, Arcs, Lines, Circles and Points.

Assignments

Students will complete the following activities in CAD

1. Basics

Review the basic AutoCAD controls.

2. Viewing

Pan and zoom in a drawing, and control the order of overlapping objects.

3. Geometry

Create basic geometric objects such as lines, circles, and hatched areas.

4. Precision

Ensure the precision required for your models.

5. Layers

Organize your drawing by assigning objects to layers.

6. Properties

You can assign properties such as color and linetype to individual objects, or as default properties assigned to layers.

7. Modifying

Perform editing operations such as erase, move, and trim on the objects in a drawing.

8. Blocks

Insert symbols and details into your drawings from commercial online sources or from your own designs.

9. Layouts

Display one or more scaled views of your design on a standard-size drawing sheet called a layout.

10. Notes and Labels

Create notes, labels, bubbles, and callouts. Save and restore style settings by name.

11. Dimensions

Create several types of dimensions and save dimension settings by name.

12. Printing

Output a drawing layout to a printer, a plotter, or a file. Save and restore the printer settings for each layout.

Unit 2: Drafting Standards Using AutoCAD Standards

This unit is an extensive overview of commands learned in previous introductory class with emphasis on drafting standards and how they are used in drawing creation.

<http://mickpeterson.org/2014design/Info/Drawings/NASA%20GSFC-X-673-64-1F.pdf>

Students will be guided in Saving and retrieving work. Students will explore multiple websites including <http://www.autodesk.com/products/inventor/overview>

Students will grasp the extensive amount of products are designed through Auto CAD programs.

Assignments

Students will have a series of Auto CAD drawings that are in no particular order. They will be reviewed by the student and they will have to identify the drawing to the architectural masterpiece they are associated with. Students will write a two to four page paper explaining why they can tell the CAD drawing and the architectural masterpiece are the same. They will denote the Arcs, Lines, Circles, Points and other geometric shapes that align.

Unit 3: Capturing Hand Drawings in AutoCAD

Students will learn to setup a new drawing by establishing units, drawing limits and decide about which format to use. Understanding scale factors in AutoCAD. Utilization of basic commands to draw Arcs, Lines, Circles, Points and other geometric shapes reinforcing the work they have done in mathematics. Students will create accurate, precise, detailed and clear drawings of existing objects, as well as their designed buildings using AutoCAD in reasonable time allocations.

The applied geometry and trigonometry unit provides students a solid foundation of mathematical knowledge necessary for interpreting engineering drawings. The unit begins with instruction on geometric concepts of parallel, perpendicular, and bisecting lines, and then moves to defining polygons and calculating perimeter, and then defining circles and calculating circumference, diameter, and radius. The unit then shifts focus into angles where students learn the meaning of complementary and supplementary angles and how to convert angle measurements between degree and radian measures. After learning about angles, students then proceed to learn about triangles where they identify right, equilateral, and isosceles triangles and apply the Pythagorean Theorem to find unknown lengths of right triangle sides. The unit concludes with a lesson on simple trigonometry of angles and right triangles. Students learn the meaning of sine, cosine, and tangent functions and apply these functions and the inverse of these functions to solve for unknown lengths and angles in right triangles. Finally, students learn about the unit circle, and how to recognize standard position angles, and how to find the coordinates of points along the unit

circle which occur at standard position angles. By building knowledge and skills in geometry and trigonometry, students are better prepared to interpret engineering drawings and perform calculations needed to find unknown dimensions, locations, or measurements.

Assignments

Students will be instructed pick out their favorite hand drawing and translate that into an Auto CAD Drawing. They will be evaluated by the precision of their deminsions from the Hand Drawing to an AutoCAD Drawing. They will denote the Arcs, Lines, Circles, Points and other geometric shapes that align.

Unit 4: Group and Project Collaboration

Student assignments will require working in student teams to demonstrate advanced level integration of all aspects of the design process, from research about the project to be designed and the problem to be addressed with that project, creation of generation of possible solutions, to creation of technical drawings and model of the project.

Model making will be used to reinforce the spatial skills, planning, blue print reading, and vocabulary. Students will use hands-on techniques to explore the different structural elements and spatial relationships involved in designing space. They will also consider the aesthetic values of their designs, which are explained/discussed in class-these include symmetrical/asymmetrical balance, composition, proportion, scale, shape, and form. They will understand the material properties of paper, foam core, and matte board, as they take 2D drawings and build them into 3D creations.

Assignments

Students will create patterns on the computer from their house design and translate that onto foam core to create a model of their design. They will follow the blue print instructions by using a scale and blade to cut and glue the framing members and then organize the elements into a complete structure.

Unit 5: Enhancing Drawings for Final Representation

Students will enrich their drawing by adding dimension, notes and titles using proper text heights. Drawings will be edited and enhanced with crosshatching, linetypes and linewidths. Students will create an intelligent drawing with attributes that can be extracted for spreadsheets and bill of materials. Printing specifications will be reviewed to assure the proper drawing output and rendering to printers, plotters or transfer of electronic files. As an extended part of this unit the students will be introduced to 3-D drawing.

Assignments

Orthographic view drawing: Students are provided a tangible three-dimensional model of an object featuring multiple surfaces, edges, steps, and holes. The students then determine which orientation to classify as the “front” view, and proceed to sketch it by hand along with the other five

orthographic projections. Students sketch the projected views following both ANSI third-angle and ISO first-angle standards. The drawings are checked for accuracy in relative scale and for proper representation of the part using geometry lines and hidden lines. The forward approach to drawing creation beginning with the 3D model assists students in developing the spatial skills needed to visualize a 3D component from its representation as 2D views when following the reverse approach of interpreting provided engineering drawings in later coursework.

Unit 6: Drafting Technologies, Trends, and Practices

Students will discuss computer technology and how it relates to today's engineering sector. Standard drafting and design practices will be introduced to the students as reflected in the industry's employment opportunities. They will be given the drawing intelligence, which is a process that includes getting acquainted with AutoCAD Software and the Help Resources Provided by Autodesk.<http://www.autodesk.com/products/inventor/overview>

Assignments

Students will complete a 3 page essay on a drafting career, and will complete a 5 minute presentation on this assignment to their classmates. Each student will be expected to do a different drafting career. Students will learn of all the different careers by listening to their classmates.

Textbooks

Title	Authors	Publisher	Edition	Website	Is Primary
Architecture-Residential Drafting and Design	Clois E. Kicklighter	The Goodheart-Wilcox Company, Inc., Tinley Park, Ill.	2008	--	Yes
Illustrated Dictionary of Historic Architecture	Edited by Cyril M. Harris	Dover Publications, Inc., New York	1983	--	No
Human Dimension & Interior Space	Julius Panero, AIA & Martin Zelnik, AIA	Whitney Library of Design, New York, NY.	1979	--	No

Periodicals

Title	Periodical	Authors	Date	Website
Engineering Drawing Manual	National Aeronautics and Space Administration	NASA	08/2014	http://mickpeterson.org/2014design/Info/Drawings/NASA%20GSFC-X-673-64-1F.pdf

Websites

Title	Authors	Organization	Website
Auto Desk	--	Auto Desk	http://www.autodesk.com/products/inventor/overview

Construction Arts a/b

Grades: 9,10,11,12

Length: Full Year

Environment: Classroom-based

Honors: None

Subject: Visual & Performing Arts (F)

Discipline: Interdisciplinary Arts

Institution: Healdsburg High School

Course Overview

Course Goals:

This course will teach comprehensive design skills and concepts based on the **elements and principles of design** (as described in the California Content Standards for Visual and Performing Arts <http://www.cde.ca.gov/be/st/ss/documents/vpastandards.pdf>) applied through construction media, using design and fabrication techniques that will have direct, relevant applications in the field. Students completing the course will have a familiarity with many of the basic job skills in the construction trades and will have applied them to creative problem solving in design projects. The physical products that the students produce will have the functionality of traditional shop projects, but will also demonstrate refined and diverse design concepts and applications. The course will be taught as AP 3-D Design: a project based, transdisciplinary course incorporating basic design skills, relevant job skills, and conceptual themes of the student's choosing. Whether or not students choose to combine Construction Arts and AP 3-D Design, each student will chose a Concentration (portfolio theme), and a Systemic Inquiry topic to guide their research and practice through the year.

Course Outcomes:

Construction Arts students will finish the course with a physical and digital portfolio of their projects, including conceptual design drawing and research components. These will demonstrate their familiarity and proficiency with basic building techniques as well as their facility for creative design. Students will gain an appreciation for transdisciplinary thinking in both skills and concept based learning that will lead to greater problem solving abilities.

Unit 1. Course Introduction (Elements and Principles of Design, basic building trades and related skills).

- . Topics:

Safety, Creative Discipline, Introductions to Creative Brainstorming, Introductions to Environmental Awareness. This unit will teach basic safety awareness in the studio and on job sites, and will qualify students to safely use a range of hand and power tools. Students will be introduced to the concepts of work ethics, creative discipline, unfettered brainstorming, and creative problem solving in different contexts. In addition to developing broader workplace awareness for safety reasons, students will also be introduced to ideas of environmental awareness, including local geology and soil typology, both for the contextual effectiveness and sustainability of their designs. Each unit will scaffold and build to a Key Assignment which will carry over to the next unit. Each unit will have referential components to previous and following units.

- . Key Assignments:

- 1.) Tool Safety Qualification:

Students will observe safe handling demonstrations by an interdisciplinary team of teachers following OSHA regulations. Students will also receive text and video instruction, and take written safety quizzes. At the end of this lesson students will have demonstrated their knowledge of hand and power tool safety for both art making and construction on paper, and then physically demonstrated safe handling and general proficiency with all hand and power tools used in the course.

- . Reading: Mabel McKay, Elsie Allen.

. Unit 2. Line.

- . Topics:

This unit will address *Line Quality*, the value and appropriate contexts for expressive and *precision lines*, Introduction to *design drafting, conceptual brainstorming sketches (thumbnails)*, and *precision cutting*. This unit will refer back to Unit 1 on *safety* and forward to Unit 3 on *value*.

- . Key Assignments:

1.) *Expressive Line Quality Practice.* Students will observe expressive line quality demonstrations with fine art materials and power tools. Students will then generate a variety of lines with different characteristics in their sketchbooks. They will then be asked to come up with a list of original adjectives and draw lines whose character corresponds to each word. At the end of this lesson students will understand power of line quality to convey meaning, and will have demonstrated their ability to generate original and expressive lines in their sketchbooks. They will understand the value of expressive lines in generating successful and appealing design sketches for visual and building projects.

3.) *Precision Line Cutting.* Students will observe precision line cutting with a variety of hand and power tools. Students will practice mat cutting with mat knives and straight edges on illustration board. Students will practice precision line cutting with hand saws, jigsaws, skill saws, and sawsalls on plywood and 2x4's. At the end of this lesson students will have learned the necessity of precision cutting for professional appearance and effective *joinery*. They will have produced

clean, measured illustration board and plywood frames in which they can display future projects.

5.) *Silhouette Cut-Out (Relief)*. Students will transfer their design drawing onto a thin sheet of 12"x12" plywood and cut it out using a jigsaw. They will finish their relief with rough and fine sanding. At the end of this lesson they will have demonstrated their ability to transfer images from one material to another, and will have demonstrated their increased proficiency at precision cutting. They will have produced a silhouette image in wood which will be carefully finished and stained during Unit 3.

Reading:

Walt Whitman, Hiroshi Sakaguchi.

Unit 3. Value.

. Topics:

This unit will teach the importance of *dark and light Value*, introduce *staining* and other material handling with *coverings, coatings, and washes*.

. Key Assignments:

1.) *Tone Grounds*. Students will continue to practice drawing objects from observation (begun in Unit 2) and will begin to add shading. These drawings will be covered with *middle-tone grounds* to transform them into finished paintings using dry rubs of dirt and clay. Students will demonstrate understanding of dark and light value by erasing away light areas in their compositions and adding darks with pencil and other art media such as charcoal and colored pencil.

2.) *Value Swatches*. In these exercises students will learn to do smooth *gradations* (blended *transitions* and *fades*) from dark to light using dry material such as dirt and charcoal. They will also learn *masking* using tape and eraser shields for clean edges. They will demonstrate their proficiency with gradations by generating a series of value strips in sketchbooks.

3.) *Stained Swatches*. Students will review safe handling of solvent based materials and will do a series of *value gradations* using stain and paint. They will be introduced to *rag-off* techniques and use *masking* and *painted resist coating* (masking fluid or acrylic gel) for clean edges. They will demonstrate proficiency with gradations using water based and solvent based stains and paints on wood panels.

4.) *Stained Silhouette*. Silhouette cut-outs from Unit 2 will be stained with design images and gradations.

5.) *Vinyl Print Silhouette*. Students will begin to use *design technology* such as TinkerCad and AutoCad to generate electronic files that can run a *vinyl printer*. They will use thumbnail sketches to design an image or *product logo*. and produce it on a t-shirt.

Unit 4. Composition, Form, and Framing.

. Topics:

Unit 4 will reinforce Unit 2 skills of precision cutting and will introduce *compositional planning* for 2-D and 3-D projects. Students will become familiar with the visual and practical elements of *spatial planning*. They will be introduced to basic *joinery*, *structural principles*, and *California Building Codes* that pertain to framing. Additionally students will begin using *digital design technology* such as *TinkerCad* and *AutoCad*. This unit will also introduce students to *permit processes* and the *soft skills* involved in application inquiries. Unit 4 will also begin the *Camper Bike Projects* which the students will work on in teams.

. Key Assignments:

1.) *Compositional Thumbnails*. Students will learn the basics of 2-D visual composition (the *rule of thirds, center, off-set, balanced, imbalanced, symmetrical, and “ideal.”*) They will discuss the characteristics of each and will demonstrate their understanding by drawing four original, *ideal compositions* in sketchbooks.

2.) *Introduction to Linear Perspective*. In this series of exercises students will become familiar with drawing in 1 point and 2 point perspective and will practice with a variety of geometric shapes in sketchbooks.

3.) *Introduction to Framing*. Students will do planning drawings for wooden framed cubes and rectangles in 2 point perspective. They will learn code requirements for framing of buildings and for concrete forms and will demonstrate their knowledge by correctly answering sample questions from *contractor licensing exams*. After producing hand generated images they will then render them on computers using *TinkerCad*. Students will review safety procedures and will build their wooden frames in preparation for the Unit 5 *Mini Monument Project* using 45 degree angle cuts with a chop saw. These frames will become the forms for pouring the concrete bases of the Mini Monuments.

4.) *Camper Bike Projects*. These are lightweight, two wheeled campers approximately 7'x 3.5' x 4.5' that are towable behind a bicycle. They will be designed and built by student teams using a variety of lightweight materials such as PVC, aluminum, coroplast, and fabric, as ongoing projects during the year. Finished campers will be publicly displayed and donated to Reach For Home, a local organization that provides services to the homeless population in Healdsburg.

<http://www.reachforhome.org/>

4a.) *Technology Integration*: Students will also begin exploring different *electric power assist* and *solar systems* for the camper bikes.

Reading:

Maria Klemperer-Johnson, Martin Heidegger, Frederic Jameson, Antonio Gaudi.

Unit 5. Texture.

. Topics:

Unit 5 will introduce a few aspects of basic *geology, soil typology, soil horizons, local building*

materials, cob construction, plaster casting, concrete and steel tying, plus an introduction to *foundations*. It will continue to develop *perspective drawing skills* along with digital design and modeling technologies such as TinkerCad and AutoCad.

Key Assignments:

- 1.) *Field trip to observe local soil horizons*, gathering local clay to begin collaborative projects with ceramics classes, sketching soil pedons.
 - 2.) *Textured Swatches*. Students will generate a variety of texture swatches using a range of materials such as dirt, clay, plaster, acrylic gel, and concrete.
 - 3.) *Thumbnail Sketches for the Mini Monument Project*.
 - 4.) *Mini-Monument Project*. These will be concrete sculptures approximately 14" tall which will follow all the steps that a large scale public sculpture would take. Students will design original sculptures using thumbnail sketches. The sculptures will be concrete objects and figures on bases that will be poured over tied steel *armatures* (miniaturizing the process that would be followed for an engineered public monument). After designing and rendering in sketchbooks students will render the designs in TinkerCad or AutoCad. They will have their designs approved by CASA Construction Tech and Engineering teachers, and will apply for permits through *Healdsburg City and County Planning Departments*. They will also learn the foundation requirements for public scale structures. The assessment of their knowledge will be in quizzes, and the approval of their permit applications.
- 4A.) *Introduction to Concrete*. Students will review safety procedures and will practice mixing, leveling, and texturing concrete.
- 4B.) *Introduction to Steel Tying*. Students will be introduced to general practice regarding rebar tying in concrete work and will bend and tie their sculptural armatures using pliers with baling and copper wire.
- 4C.) *Introduction to Plaster Casting*. Students will cast their sculptural objects in Plaster of Paris molds. They will then combine the plaster molds with their steel armatures and pour concrete into them. They will finish their monument sculptures with a variety of sanded and polished surfaces.

The sculptures will be mounted on the concrete bases and then will be stained during Unit 6 on Color.

Reading:

Jerilea Zempel, William Bryant Logan, Wendell Berry.

Unit 6. Color.

. Topics:

This unit will address *color theory*, *house painting*, and begin to introduce elements of *interior design*.

Key Assignments:

- 1.) *Introduction to Color Theory.* In this unit students will become familiar with the *color wheel* and will produce a painted color wheel by measuring and drawing a *dodecagon* in sketchbooks, then painting it with watercolor. Students will become familiar with the psychological and physiological effects of different colors and will demonstrate their knowledge of *warm and cool color balance* by painting their *ideal compositions* from Unit 4.
- 2.) *Introduction to Paints.* After a *safety review* of solvent based materials, students will become familiar with the different qualities of *water based* and *solvent based paints*. They will practice a variety of *brush techniques* and will review masking techniques from Unit 3. They will demonstrate their proficiency with painting techniques by generating sample swatches of *flat washes* and *gradations (blending and dry-brushing)* on wood and paper.
- 3.) *Introduction to house painting.* Students will practice *paint stripping* with a variety of techniques and will learn to use and maintain a *spray rig*.
- 4.) *Introduction to spray paint and stencils* Students will learn spray painting techniques. They will demonstrate their proficiency with spray paint by generating a design using thumbnails in sketchbooks, then cutting a stencil out of railroad or bristol board and spraying it with both hard and soft edges.
- 5.) *Introduction to Interior Design.* After a review of *spatial planning* from Unit 4 students will begin thumbnail sketch designs for the 2nd semester *House Design Project*. Students will learn and discuss the issues surrounding *urban development, sustainable housing, and smart houses*.

They will demonstrate their understanding of 21st century design considerations by incorporating them into their house plans.

Reading: joseph Itten.

Unit 7. Balance.

. Topics:

Unit 7 will reinforce *compositional balance* from Unit 4 as well as *balance of physical forms*. It will introduce basic *plumbing* principles and materials such as ceramic, steel, PVC, ABS, and copper. It will also introduce *irrigation systems* and *water catchment systems* (looked at through the lens of *hydrology* and concepts of *ecological balance*).

. Key Assignments:

- 1.) *Introduction to Plumbing.* Students will learn the basic applications and standards of *plumbing* through a variety of media and will demonstrate their knowledge on quizzes based on *California Contractor Licensing Exams*. They will review and demonstrate safe handling with *adhesives, solders, and hand torches*.
- 1a.) *Plumbing Plans.* Students will learn to read plumbing diagrams in architectural plans and will use correct terms and symbology in their project design drawings.

2.) *Introduction to Irrigation.* This lesson will familiarize students with basic applications and materials of *irrigation*. It will reinforce knowledge from Unit 5 of the *capillary action of soils*, and cover the *historical background* of irrigation and techniques such as *syphoning* and *Archimedes screws*. Students will demonstrate their knowledge of contemporary applications and materials in irrigation through quizzes, and will apply their knowledge during the Balance Unit in Semester 2.

2.) *Copper Sculpture Project.* Students will work in teams to design components of an assembled sculpture made from *sweated copper pipes and joints* such as an ornate wind or *water organ*. Sections will be designed using thumbnail sketches that will be assessed for visual appeal, and physical and visual balance. Teams will assemble and sweat their sections, then several will be combined into larger assemblages. These will be displayed and installed on campus or sold.

3.) *PVC Projects.* Students will design individual projects of their choosing using thumbnail sketches such as *water rockets*, or *pneumatic devices*. These will demonstrate their knowledge and proficiency with PVC gluing that can withstand high pressure. These projects will reinforce knowledge and proficiency with PVC design and gluing using in the Camper Bike Projects in Unit 4.

Reading: Rosalyn Deutsche, John W. Gardner.

Unit 8. Design Technology, Photography, Electronics.

- . Topics:

In Unit 8 students will expand their knowledge of TinkerCad and AutoCad in order to begin to apply them to the generation of physical work with *3-D printing* and *CNC routing*. They will review the *Elements and Principles of Design* through the lens of *basic photography* and will begin photographing their class work for their physical and *digital portfolios* using *lighting and staging*. In this unit they will also be introduced to *basic electronics* beginning with *radio technology* and simple *electric motors*.

- . Key Assignments:

1.) *Radio Design Thumbnails.* Students will use concept sketches to design working, sculpturized *foxhole radios*.

2.) *Radio CAD Drawing.* Students will use CAD to do their final radio sketch including an accurate wiring diagram.

3.) *Foxhole Radio.* Students will build a working, sculpturized foxhole radio using copper wire, safety pins, razor blades, pencil lead, and earphones.

3a.) *Basic Photography Exercises.* After reviewing the Elements and Principles of Design Students will stage and photograph their radios and begin to build their physical and digital portfolios using a variety of lighting techniques including *chiaroscuro* and *ambient light*.

4.) *Basic Electronics and Solar Exercises.* Students will expand their proficiency with drawing and reading architectural and engineering drawings by adding electrical schematics. Their knowledge will be assessed using quizzes, and will be applied by adding small *solar panels*, *LED lights*, and

switches to their camper bikes and other physical projects.

5.) Interior Wiring and Charging Stations for Camper Bikes.

Reading: Heddy Lamarr, Nikola Tesla, Guglielmo Marconi, Katherine Johnson.

Unit 9. Interior Design and Lighting.

- . Topics:

Unit 9 will reinforce the Elements and Principles of Design as covered in Units 1 through 8, applied to *residential design* and *interiors*. It will introduce the concepts of *environmental integration*, *low-impact design*, “*smart houses*,” *materials sourcing* research, and will reinforce the skills that students have acquired in navigating *permit application processes*. Additionally, it will reinforce and expand on what students have learned about electronics in Unit 8 by applying it to interior lighting concepts.

- . Key Assignments:

1.) *House Design Project*. Students will complete their exterior design sketches begun during Unit 6 and will begin generating *floor plan* drawings based on their designs using both sketchbooks and CAD.

1a.) Students will generate multi-page plans for their *residential designs* including separate pages for *cabinetry*, *plumbing*, and *electrical*. Plans will be reviewed by expert practitioners from the community. Student's plans will be revisited throughout Semester 2 and will be finalized during Unit 18.

2.) *Materials and Sourcing Exercises*. At the end of these lessons students will have demonstrated their knowledge of materials sourcing through discussions and quizzes, and will have become familiar with locally and sustainably sourced materials for both interior and exterior design.

3.) *Lighting Exercises*. In this unit students will expand their knowledge and proficiency with a variety of dramatic (chiaroscuro) and ambient lighting techniques.

Reading: Buckminster Fuller, Frederic Jameson, Georges Bataille, Dennis Hollier.

Unit 10. Environmental Design.

- . Topics:

Unit 10 will review and reinforce student's knowledge of *geology*, *soil typology*, *biomes*, and *ecosystems*. It will build on the concepts of *permaculture*, *biodynamics*, *bioswales*, *storm drain filtration*, expand on more advanced concepts of *landscaping*. It will reinforce and expand on the *green building techniques* that have been introduced in previous units.

- . Key Assignments:

1.) This unit will build on what students have learned about basic principles of environmental integration and sustainability. They will demonstrate their knowledge in the final, long-term project of a full house design complete with multi-page plans and an integrated landscape and garden plan which will be approved by a multidisciplinary faculty group.

Reading: Bill Mollison, David Holmgren, Rudolf Steiner.

Textbooks

Title	Authors	Publisher	Edition	Website	Is Primary
Fundamentals of Residential Construction (3rd Edition).	Allen, Edward. Thallen, rob	Wiley & Sons, Inc.	3rd Edition, 2011.	https://www.amazon.com/Fundamentals-Residential-Construction-Edward-Allen/dp/0470540834	Yes
Whole Earth Catalogue	Brand, Stewart (Editor)	Portola Institute, Doubleday, MIT Press	Excerpts 1-30, 1968-1998.	https://www.amazon.com/Original-Whole-Catalog-Special-Anniversary/dp/1892907054	No
Western Garden Book	Sunset Magazine	Sunset Magazine	9th Edition, 2012	http://www.sunset.com/garden/new-sunset-western-garden-book	No

Websites

Title	Authors	Organization	Website
Make Magazine	O'Reilly Publishers	O'Reilly Publishers	http://makezine.com/
MakerBot	MakerBot	MakerBot Industries/Stratsys.	https://www.makerbot.com/
TinkerCAD	Autodesk	Autodesk	https://www.tinkercad.com/

Construction Technology

Grades: 9,10,11,12

Length: Full Year

Environment: Classroom-based

Honors: None

Subject: Visual & Performing Arts (F)

Discipline: Visual Arts

Institution: Linden High School

Course Overview

This course introduces students to the basics of woodworking. Students will explore basic professions in the construction and woodworking industry before exploring the technical and aesthetic design elements and principles of working with wood. The technical aspects of the course will include basic drafting instruction and layout as well as safety and machine use. The students will explore this medium (wood) using additive and subtractive methods to combine both the utilitarian and aesthetic methods within the framework of the design elements and principles. Students will be instructed in learning various aspects of a shop and woodworking tools. The instruction will include basic rules and guidelines to insure safety, proper operational procedures, names and proper terminology used for each tool, and techniques necessary for quality production.

The purpose of this course is to introduce students to the construction industry and provide them an opportunity to develop a sound foundation in art and design elements through the woodworking process. The focus will be concentrated upon pattern/repetition, balance/symmetry, shape, color, space, and texture. The methods used for this application will be executed through design phases and woodworking techniques such as marquetry, lamination, layout, and finishing. Wood technology will also be emphasized while covering the topics of wood science, industry applications, and careers. Projects will include research into the historical and cultural connections of various woodworking and artistic processes. The goal is to expose the student to each of these areas of study while applying a method or technique through project based learning.

Course Concepts

Student observation will be monitored constantly ensuring that all students are meeting the objectives and goals of Construction Technologies. The course will include weekly safety meetings, and lessons on soft skills as requested by local employers. The following types of

assessment methods will include: Tests, Projects, Labs, Essays, Class assignments, and Quizzes.

Tests and quizzes will be used to meet the course goals by checking for understanding of the basic elements of art and design. These elements will include: color, space, shape and texture. The quarterly and semester exams will also evaluate the student's knowledge shape, size. Safety is also a very important element in my wood lab. The primary essence of each project is dictated by the application of each of the tools in the lab. Students will take a safety test on each tool. Students will also participate in an application test, by which students will demonstrate tool proficiency. Both of these assessments are implemented before a student is allowed to use a tool in the lab. These assignments allow students to process and analyze information through the development of language skills unique to our artistic field. These assignments will allow students to create multiple projects that will reflect their understanding of the standards through creative expression, Historical/Cultural Context, Aesthetic valuing and Connections, relations & Application.

Key Projects will be assigned to check for understanding of the principles of art and design. Students will complete drawings, sketches, products, essays, detailed list of procedures on completing a design-build project and a comprehensive list of materials. These projects provide students to develop critical thinking in analyzing interpreting works of art related to the project assigned. This project will meet one of the goals of creating a digital portfolio. During presentation of their projects students will focus on improving their communication skills. In depth projects like the shelf require critical thinking skills and the students need to be analytical and synthesize various materials needed in the construction of these projects.

Labs, essays and class activities will provide the students the opportunity to creatively express the elements of design and art through the development of drawings, sketches, and wood products. The daily assignments requiring reading and writing will reinforce the cognitive skills so students have the knowledge and comprehension necessary to compare and contrast visual representations in order to build and design projects in the millwork and cabinetry fields.

Informal assessments will involve checking for understanding, reflective questioning, homework and traditional lecture.

Daily grading of projects and hand drawings will assess how students are applying appropriate proportion, depth, and shape.

Student demonstration of their wood products will demonstrate their ability to communicate effectively and apply critical thinking skills applied during the drawing, design and construction phases.

Pair sharing will be utilized especially during reflection time to help students master and understand the procedures and methods used in creating a product.

Class discussions will determine the awareness of each student about the aesthetic, artistic and technical aspects of drawing and design as it relates to architectural features and manufacturing processes while they complete all the required assignments discussed in the course outline.

Design

Students will gain and appreciate the aesthetic value of the many styles of furniture, art, utilitarian design with the ability to use critical thinking. Students will increase their own awareness of aesthetic beauty by critically comparing many designs of their work to the community they live in and the world. Using aesthetic judgment and valuing, students will describe, analyze, interpret, and then judge their own artistic talent and work according to course standards and the fundamentals of art and design. These elements will be met by direct instruction, guided practice, written essays and professionally developed digital portfolio.

Students will learn to implement the fundamentals of Art and Design by creating projects exploring the use of the Elements and Principles of Design. Students will draw creative projects that will incorporate negative mass, width, and depth.

Students will express their creativity by developing projects with finishing techniques utilizing color and stock selection.

Students will demonstrate their creativity by using the fundamentals of art and design to produce original works utilizing texture, balance, object features, variety, unity and movement etc.

Students will design and build projects with tools to express their creative side and they will also use their artistic talent to present their project to the class for demonstration.

Collaboration

Our CTE Department is a collaborative partnership between industry, education and our Community that is unparalleled. Our classes are sequenced and articulated with introductory, concentrator and capstone courses in clearly defined career paths. The program was built to create a direct connection for our students to enter the work force right out of high school or matriculate to a technical school or college.

Our Construction Technologies is a foundation course for all of our woodworking and construction classes. This class prepares students for careers in fashion design, interior design, architecture, furniture design, construction, and drafting.

Students have the artistic ability and technical skills to transition directly from high school into high paying respectable careers such as: CNC operators, Drafters, designers and enter multiple careers fields in design.

Construction Technologies students will develop a digital portfolio preparing for admission to a four-year college or job applications.

A cornerstone of our curriculum is to prepare all of our students and make them aware of the multiple pathways they can pursue for a career related to construction, drafting, and design.

Historical Context

One of the main reasons for this type of class is to bring a wealth of relevance and context to the skills necessary to maintain the level of artistic expression. Within each of our projects we develop

a historical and cultural backstory which explains the reason for the projects we exhibit in our class. During the shelf project we discuss the history of Asian, Anglo Saxon, and Italian scroll work. We talk about as a class how these forms of artwork emerged during the Bronze Age, as early as 1800 BC. We also study the difference between Medieval and Renaissance Scroll work and the cultural influences that created that distinction.

Each project begins and ends with a deep analysis of both Historical and Cultural Context.

Projects

Students will be responsible for writing a daily journal documenting the work they contribute to each project. Preliminary sketches and designs must have the instructor's approval before actual construction can begin. This process is critical to the student for understanding how problem solving is critical to real world situations. It is also key to understanding a real-world artist's technique of sketching and modeling before building.

Cutting Board Project

Students will further develop their understanding of pattern and balance and apply principles of proportion and texture while constructing a cutting board. They will also experiment with different shapes and the ideas of balance and creating movement. Students will be working with shading techniques as they apply stains. Students will be expected to orally defend the artistic choices they made on this project.

Art History and Technique Project with Scroll Work (The Shelf)

This project is an essential design assignment that enables autonomous creativity and design. This project also incorporates drawing, sketching, applied technical skill, and understanding art and design elements (Pattern/Repetition, Balance/Symmetry, Shape). Through the drawing process students are to take upon the traditional form of a self and personalize their piece by incorporating symbols and designs, which are significant to themselves. The exposure to the various understandings of art and symbology is to help the student know that there are many inspirations that contribute to the development of a piece of furniture or woodworking products. While working on the shelf students will be using various hand and power tools.

The first phase of the project begins with "Originating" which consists of thinking, exploration, and inspiration. It's in this phase students "draw" their inspiration from themselves through being exposed to the art and design concepts through the artists they learn about. This phase usually ends when a preliminary "idea" emerges and the student decides to embark upon the project.

The second phase of the project is “Focus” which consists of how they define their project. The scope, features, purpose, and functionality of the shelf are taken into consideration during this phase.

The third phase of the project is “Design.” It’s in this phase the student applies the elements of design. I’m purposely having the students focus upon Pattern/Repetition, Balance/Symmetry, and Shape. All of these design elements are of course determined by the students inspiration, exploration, and upon what they developed during the “Focus” phase.

Once a drawing is created in the design phase the student then embarks upon the “Build” phase. It’s in this phase materials are selected and timetables are created. Self-reflection is very critical during this phase in case a change in method or technical skill is required. Tool demonstrations are implemented when necessary. At this time of the year students have been passed on most stationary power tools, so time management is essential during this project. Students are allowed to use the table saw to apply about rip-cuts or cross-cuts that are necessary for their shelf. When it comes to the personalized aspect of the project a scroll saw, router, and bandsaw are available for any type of technical work which is needed to achieve the artistic look the student is trying to achieve.

The last phase is “occupy.” This phase begins when the building of the shelf is completed and the shelf is reflected upon for various reasons. The reasons of reflection are functionality, quality, communication, and experience. The reflection of functionality is when the student observes if the project functions according to the purpose or intent, which emerges during the “Focus” phase. The reflection of quality is when the student evaluates if the project meets production quality standards such as sanding, cutting, applying finishes, and composition. The reflection of communication exhibits if the student is able to communicate clearly and precisely the procedures necessary to achieve the finished product. The final reflection of the “Occupy” phase is experience. It’s in this reflection the student conjures up and communicates all the elements of the project, which were new, learned, and applied. It’s through this occupy phase that the student judges the value of material or methods as they might be applied in their projects.

Aesthetic Valuing

Students will discuss visual and tactile perceptions of the designs of their projects, what is seen in the design of their project, what is seen in the grain and composition of the wood product used, and how the projects feel in relation to the types of finished they decided to use. They will also identify the colors and the grain pattern in their work. Naming and describing these objects by their color and relative size.

One of the activities is to describe the textures and colors of the environment (or space) where their Shelf (with scroll work) will be located. This then is used in the design portion of their drawing for their shelf. These drawings will consist of patterns and three-dimensional arrangements. Students will gain a deep understanding of proportion and balance, which is necessary for any woodworking design. They’ll also experiment with various colors through the use of a variety of stains and finishes. During the ?occupy? phase (as I’ve stated before) the student will discuss how his or her scrollwork relates to one of the artistic expressions that we studied in class. The

student will then express their reason for their inspiration and why they chose that art expression for their scroll piece. During this time they will be comparing and contrasting their own creative expression with the specific artistic expression they studied.

Strategies

The entire course outline is supported by the following pedagogy and strategies. Through various teaching applications the course outline will be presented to the students in structured environment centered around project based learning that will allow them to use the principles of design in developing their projects.

An active learning environment will allow students to ?talk and listen, read, write, and reflect as they approach course content through problem-solving exercises, informal small groups, case studies and other activities all of which require students to understand and apply the standards.? Completing rigorous assignments that incorporate understanding of historical contributions and cultural aspects of art will do this. The units of study in the Shelf Project with Scroll work consists with using elements of design which consist of reflection, in-depth focus, reasons for functionality, and solving design problems while in the Build phase. Experiencing these elements will provide the student with the cognitive skills required in college. Comprehension, application, analysis, synthesis and evaluation are integral components of the instructional strategies addressed in the course outline. All key assignments help to develop student?s cognitive skills using multiple behaviors. Students will define, describe, memorize, calculate, explain, apply, illustrate, analyze, contrast, create, and evaluate design projects in each unit of study.

Lectures, class discussions, group projects, videos, guided practice, guest speakers, demonstrations, essays, integrated technology and quizzes will accommodate all students learning styles. Each chapter will provide several of these instructional methods in preparing the students for creating, processing and analyzing information in developing the vocabulary and language skills unique to a given art such as design.

Textbooks

Title	Authors	Publisher	Edition	Website	Is Primary
Wood Technology and Processes	Mark D. Feirer and John L. Feirer	McGraw-Hill	2011	http://glencoe.mheducation.com/sites/007894094x/index.html	Yes

Foreign Language

a-g Spanish 1

Grades:	9,,,
Length:	Full Year
Environment:	Classroom-based
Honors:	None
Subject:	Language Other than English (E)
Discipline:	LOTE Level 1
Institution:	Connecting Waters Network

Course Overview

a-g Spanish I is an introductory course of the Spanish language. It consists of basic vocabulary and basic grammar in order to express ideas in the Spanish language. The emphases are the abilities to write in Spanish, speak in Spanish, read in Spanish, and understand spoken Spanish. Making the Spanish language relevant to the students is the priority. Lastly, students will complete 1 cultural project each quarter.

Lecci?n Preliminar

In this unit, the students learn how to pronounce words in the Spanish language. The students learn the numbers 0 through 10, the days of the week, and common questions and greetings. There are numerous activities to have them use numbers in simple addition and subtraction problems. There are numerous activities to have them find out each other's names. There are numerous activities to have students understand and respond to questions that are relevant to them, such as finding out how they are feeling.

Assignments

The students will learn how to say I like and I don't like in Spanish. Then, they will express themselves in Spanish which days of the week they like and which days of the week they dislike. They will say this information to the teacher. This activity will help them learn the days of the week better.

Unit I ? Estados Unidos, Un rato con los amigos

In this unit, the students learn about different activities that relatable to students, such as sports, food, and physical and personality traits. They learn the different verb forms of ser. They learn all of the verb forms of gustar. They learn the different definite articles. They learn the different indefinite articles. They learn how to express adjectives with nouns.

Assignments

The students will say 2 me gusta sentences and 2 no me gusta sentences as they relate to the vocabulary. The students will also describe their best friends. They will thus learn how to express likes, dislikes, and how to describe people.

Unit II ? M?xico, ?Vamos a la escuela!

The students learn the numbers 11 through 100. They also learn how to tell time. They also learn names of classes and what is done in classes. They also learn how to describe where things and places are. They learn the Present tense verb forms of tener and regular –ar verbs. They learn the Present tense verb forms of estar and how it is different from ser. They lastly learn the Present tense verb forms of ir.

Assignments

The students will select 10 Spanish words to write their ideas about them. They will also say Spanish sentences related to what times of the day they like. They lastly will say Spanish sentences related to what times of the day they don't like. They will thus be able to express different times of the day.

Cultural Projects:

The student must complete one cultural projects each quarter, choosing from the following:

1. Attend a specific Hispanic cultural event and write a one-page paper in English about the experience, focusing on a minimum of **five differences** in (1) dress, (2) music, (3) art, (4) foods/ingredients, (5) money, (6) transportation, (7) methods of shopping, (8) religion, (9) typical preferences, etc. Students are encouraged to create their own event by shopping at a Mexican market, then comparing it to their favorite American market, eating at a Mexican taquería and comparing it to a typical American fast-food restaurant, etc. May also attend the Mexican Museum (Fort Mason Center Building D, San Francisco, CA 94123; Telephone: 415-202-9700). Admission is free. Write a paper including date of attendance and a description of five items of interest at the museum.

2. Research and prepare a Power Point presentation in English on one of the following:
 1. Select a Spanish-speaking country, showing pictures and a summary of (1) their flag, (2) traditional dress, (3) typical food, (4) typical methods of transportation, and (5) money -- and

the exchange rate with the dollar.

1. Research famous places of interest, works of art, item of interest, or famous person in Spanish-speaking country or countries, and prepare a Power Point showing pictures and a brief description on a minimum of **five slides showing points of interest**.

3. Research a Latin American country and prepare a two-page typewritten report in English, focusing on a minimum of **five points of interest** from the following: (1) population, (2) number of languages spoken -- and what they are, (3) gross domestic product, (4) system of government, (5) interesting historical facts, (6) dominant religion, (7) currency and current value, (8) famous landmarks, (9) exported goods, and (10) national motto or anthem.

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4. Interview a Spanish-speaking person who is not a native of the U.S. Ask about the differences in (1) how they grew up, (2) attitudes, (3) culture, (4) dress, (5) music, (6) art, (7) foods, (8) finances, (9) transportation, (10) religion, etc., then write a one-page paper in English on your findings, bringing out a minimum of **five differences** on your findings.

5. Take pictures of at least **five different billboards or public notices** in your area displaying only Spanish advertising. Download onto Power Point with (1) a description of where the picture was taken, (2) a translation into English, and (3) a description in English of what the message is trying to convey.

6. Research, prepare, and present a food or drink from a Spanish speaking culture. If there is a

cultural significance related to the food or the drink, that needs to be shared with the class.

Unit III ? Puerto Rico, Comer en familia

The students learn some basic Spanish words related to food and the meals of the day. They learn the numbers 200 through 1,000,000. They learn the months of the year. They learn to identify different family members. They learn the Present tense verb forms of regular –er and –ir verbs. They learn short possessive adjectives. They lastly learn comparative words.

Assignments

The students say some Spanish sentences related to which months of the year they like. The students also say some Spanish sentences related to which months of the year they dislike. They thus will be able to feel more comfortable to express their ideas about different months of the year.

Cultural Projects:

The student must complete one cultural projects each quarter, choosing from the following:

1. Attend a specific Hispanic cultural event and write a one-page paper in English about the experience, focusing on a minimum of **five differences** in (1) dress, (2) music, (3) art, (4) foods/ingredients, (5) money, (6) transportation, (7) methods of shopping, (8) religion, (9) typical preferences, etc. Students are encouraged to create their own event by shopping at a Mexican market, then comparing it to their favorite American market, eating at a Mexican taquería and comparing it to a typical American fast-food restaurant, etc. May also attend the Mexican Museum (Fort Mason Center Building D, San Francisco, CA 94123; Telephone: 415-202-9700). Admission is free. Write a paper including date of attendance and a description of five items of interest at the museum.

2. Research and prepare a Power Point presentation in English on one of the following:
 1. Select a Spanish-speaking country, showing pictures and a summary of (1) their flag, (2) traditional dress, (3) typical food, (4) typical methods of transportation, and (5) money -- and the exchange rate with the dollar.

 1. Research famous places of interest, works of art, item of interest, or famous person in

Spanish-speaking country or countries, and prepare a Power Point showing pictures and a brief description on a minimum of **five slides showing points of interest**.

3. Research a Latin American country and prepare a two-page typewritten report in English, focusing on a minimum of **five points of interest** from the following: (1) population, (2) number of languages spoken -- and what they are, (3) gross domestic product, (4) system of government, (5) interesting historical facts, (6) dominant religion, (7) currency and current value, (8) famous landmarks, (9) exported goods, and (10) national motto or anthem.

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4. Interview a Spanish-speaking person who is not a native of the U.S. Ask about the differences in (1) how they grew up, (2) attitudes, (3) culture, (4) dress, (5) music, (6) art, (7) foods, (8) finances, (9) transportation, (10) religion, etc., then write a one-page paper in English on your findings, bringing out a minimum of **five differences** on your findings.
5. Take pictures of at least **five different billboards or public notices** in your area displaying only Spanish advertising. Download onto Power Point with (1) a description of where the picture was taken, (2) a translation into English, and (3) a description in English of what the message is trying to convey.
6. Research, prepare, and present a food or drink from a Spanish speaking culture. If there is a cultural significance related to the food or the drink, that needs to be shared with the class.

Unit IV ? Espa?a, En el centro

The students learn basic Spanish words related to shopping and articles of clothing. They learn how to identify different places in towns and in cities in Spanish. They learn some irregular verbs in the Present tense, such as querer and preferir. They learn the direct object pronouns and how to use them in Spanish sentences. They learn some irregular verbs in the Present tense, such as poder and servir.

Assignments

The students will write 3 Spanish sentences beginning with yo quiero. They will also write 3 Spanish sentences beginning with yo prefiero. They will thus have a better command how to use irregular verb forms in the Present tense.

COMPREHENSIVE SEMESTER FINAL EXAM

Unit V ? Ecuador, ?Bienvenido a nuestra casa!

The students learn the different parts of the home. They learn how to express the different chores and responsibilities related to the house. They learn the ordinal numbers. They learn the Present tense verb forms of irregular verbs, such as decir, venir, and traer. They lastly learn how to express positive familiar singular commands.

Assignments

The students will say some Spanish sentences with some of the irregular verbs learned. They also will say some positive familiar singular commands. They will feel more comfortable about expressing their ideas with irregular verb forms in the Present tense and how to express positive familiar singular commands.

Cultural Projects:

The student must complete one cultural projects each quarter, choosing from the following:

1. Attend a specific Hispanic cultural event and write a one-page paper in English about the experience, focusing on a minimum of **five differences** in (1) dress, (2) music, (3) art, (4) foods/ingredients, (5) money, (6) transportation, (7) methods of shopping, (8) religion, (9) typical preferences, etc. Students are encouraged to create their own event by shopping at a Mexican market, then comparing it to their favorite American market, eating at a Mexican taquería and comparing it to a typical American fast-food restaurant, etc. May also attend the Mexican Museum (Fort Mason Center Building D, San Francisco, CA 94123; Telephone: 415-202-9700). Admission is free. Write a paper including date of attendance and a

description of five items of interest at the museum.

2. Research and prepare a Power Point presentation in English on one of the following:

1. Select a Spanish-speaking country, showing pictures and a summary of (1) their flag, (2) traditional dress, (3) typical food, (4) typical methods of transportation, and (5) money -- and the exchange rate with the dollar.
1. Research famous places of interest, works of art, item of interest, or famous person in Spanish-speaking country or countries, and prepare a Power Point showing pictures and a brief description on a minimum of **five slides showing points of interest**.
3. Research a Latin American country and prepare a two-page typewritten report in English, focusing on a minimum of **five points of interest** from the following: (1) population, (2) number of languages spoken -- and what they are, (3) gross domestic product, (4) system of government, (5) interesting historical facts, (6) dominant religion, (7) currency and current value, (8) famous landmarks, (9) exported goods, and (10) national motto or anthem.

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4. Interview a Spanish-speaking person who is not a native of the U.S. Ask about the differences in (1) how they grew up, (2) attitudes, (3) culture, (4) dress, (5) music, (6) art, (7) foods, (8) finances, (9) transportation, (10) religion, etc., then write a one-page paper in English on your findings, bringing out a minimum of **five differences** on your findings.

5. Take pictures of at least **five different billboards or public notices** in your area displaying only Spanish advertising. Download onto Power Point with (1) a description of where the picture was taken, (2) a translation into English, and (3) a description in English of what the message is trying to convey.

6. Research, prepare, and present a food or drink from a Spanish speaking culture. If there is a cultural significance related to the food or the drink, that needs to be shared with the class.

Unit VI ? Rep?blica Dominicana, Mantener un cuerpo sano

The students will learn sports related words in Spanish. They will learn how to identify the different parts of the body in Spanish. They will learn the Present tense verb forms of jugar and how to use a with games and sports. They will learn the Present tense verb forms of saber. They will learn the Present tense verb forms of conocer. They will learn how to use the Personal a. They will learn the regular Preterit tense verb forms for –ar verbs. They lastly will learn some irregular Preterit tense verb forms, such as for buscar and almorzar.

Assignments

The students will write 10 Spanish sentences with yo sé. They will also write 10 Spanish sentences with yo conozco a. They will thus be able to distinguish when to use the different verb forms of saber and conocer.

Unit VII ? Argentina, ?Una semana fenomenal!

The students will learn words related to technology in Spanish. They will learn the regular different verb forms in the Preterit tense for –er and for –ir verbs. They will learn the affirmative and the negative words and how they are used in Spanish sentences. They will learn the irregular different verb forms in the Preterit tense of ser, ir, and hacer. They will lastly learn the pronouns after prepositions.

Assignments

The students will write 5 Spanish sentences in the Preterit tense using regular –er and –ir verbs, expressing what they did during the last week. They will write a 35 to 50 Spanish word paragraph about going to an amusement park. They thus will be able to feel comfortable expressing their ideas in the Preterit tense. They will also be able to feel comfortable expressing the fun they have in amusement parks.

Cultural Projects:

The student must complete one cultural projects each quarter, choosing from the following:

1. Attend a specific Hispanic cultural event and write a one-page paper in English about the experience, focusing on a minimum of **five differences** in (1) dress, (2) music, (3) art, (4) foods/ingredients, (5) money, (6) transportation, (7) methods of shopping, (8) religion, (9) typical preferences, etc. Students are encouraged to create their own event by shopping at a Mexican market, then comparing it to their favorite American market, eating at a Mexican taquería and comparing it to a typical American fast-food restaurant, etc. May also attend the Mexican Museum (Fort Mason Center Building D, San Francisco, CA 94123; Telephone: 415-202-9700). Admission is free. Write a paper including date of attendance and a description of five items of interest at the museum.

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 1. Research famous places of interest, works of art, item of interest, or famous person in Spanish-speaking country or countries, and prepare a Power Point showing pictures and a brief description on a minimum of **five slides showing points of interest**.

 3. Research a Latin American country and prepare a two-page typewritten report in English, focusing on a minimum of **five points of interest** from the following: (1) population, (2) number of languages spoken -- and what they are, (3) gross domestic product, (4) system of government, (5) interesting historical facts, (6) dominant religion, (7) currency and current value, (8) famous landmarks, (9) exported goods, and (10) national motto or anthem.

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4. Interview a Spanish-speaking person who is not a native of the U.S. Ask about the differences in (1) how they grew up, (2) attitudes, (3) culture, (4) dress, (5) music, (6) art, (7) foods, (8) finances, (9) transportation, (10) religion, etc., then write a one-page paper in English on your findings, bringing out a minimum of **five differences** on your findings.

5. Take pictures of at least **five different billboards or public notices** in your area displaying only Spanish advertising. Download onto Power Point with (1) a description of where the picture was taken, (2) a translation into English, and (3) a description in English of what the message is trying to convey.

6. Research, prepare, and present a food or drink from a Spanish speaking culture. If there is a cultural significance related to the food or the drink, that needs to be shared with the class.

Unit VIII ? Costa Rica, Una rutina diferente

The students will learn words related to daily routines. They will learn words related to vacation activities. They will learn about reflexive verbs. They will learn the regular and the irregular Present Progressive tense verb forms. They will learn the indirect object pronouns and how they are used in Spanish sentences. They lastly will learn the demonstrative adjectives.

Assignments

The students will also write 10 Spanish sentences related to the new vocabulary. They will say 5 Spanish sentences using reflexive verbs related to what their daily routines are like. They will thus be able to relate to the new Spanish words. They will also feel more comfortable using reflexive verbs in sentences.

COMPREHENSIVE FINAL EXAM

Textbooks

Title	Authors	Publisher	Edition	Website	Is Primary
?Avancemos! Level 1 (Or any California level 1 state adopted curriculum https://www.cde.ca.gov/ci/fl/im/documents/sbefladptprg.pdf)	McDougal Littell	McDougal Littell	ISBN/ISBN 10: Student Edition 978-0-554-02531- 5	--	Yes

Other Materials

Title	Authors	Date	Material Type	Website
?Avancemos! Level 1 Cuaderno (or any California state adopted Level 1 workbook)	McDougal Littel	--	workbook	--
Rosetta Stone (used as determined by the credentialed Teacher authorized to teach the course)	--	--	Supplemental	--

a-g Spanish 2

Grades:	9,10,,
Length:	Full Year
Environment:	Classroom-based
Honors:	None
Subject:	Language Other than English (E)
Discipline:	LOTE Level 2
Institution:	Connecting Waters East Bay Charter School

Course Overview

a-g Spanish 2 consists of intermediate vocabulary and intermediate grammar in order to express more detailed ideas in the Spanish language. The emphases are the abilities to write in Spanish, speak in Spanish, read in Spanish, and understand spoken Spanish. Making the Spanish language relevant to the students is the priority. Lastly, students will complete 1 cultural project each quarter.

Lecci?n Preliminar:

In this unit, the students will review basic vocabulary that they had learned in Spanish I. dealing with basic adjectives, activities, places, emotions, and food. They will review definite and indefinite articles. They will review how to make adjectives agree with nouns. They will review the regular and the irregular verb forms in the Present tense. They will review the verb forms and the uses of ser and estar in the Present tense. The purpose is to reacquaint them with the learned material as well as focus on how to creatively use their knowledge in Spanish.

Assignments

The students will write a Spanish paragraph of 25 to 35 words on their best friend. They will also write a Spanish paragraph on 25 to 35 words describing what they do have and what they want to have.

Unit I ? Costa Rica, ?A conocer nuevos lugares!

In this unit, the students learn words related to traveling and gifts. They will review the forms and the placement of direct object pronouns. They will review the forms and the placement of indirect object pronouns. They will review the regular –ar verbs in the Preterit tense. They will review of the irregular verbs in the Preterit tense, such as ir, ser, hacer, ver, and dar.

Assignments

The students will write 10 Spanish sentences related to the new vocabulary. They will write a 25 to 35 Spanish word paragraph on their best vacation they ever experienced and why. The purpose of these assignments is to reacquaint them with the learned grammar as well as to incorporate new Spanish words at the same time.

Unit II ? Argentina, ?Somos saludables!

The students will learn words related to sports, health, daily routines, and the parts of the body. They will review the regular –er and –ir verbs in the Preterit tense. They will review the demonstrative adjectives. They will review how to conjugate reflexive verbs. They will review the Present Progressive tense.

Assignments

The students will speak Spanish sentences related to the new vocabulary. They will write a 35 to 50 Spanish word paragraph on their typical day incorporating reflexive verbs. They will thus feel more comfortable about expressing their ideas in Spanish, seeing that they can relate to what they typically do each day.

Cultural Projects:

The student must complete one cultural project each quarter, choosing from the following:

1. Attend a specific Hispanic cultural event and write a one-page paper in English about the experience, focusing on a minimum of **five differences** in (1) dress, (2) music, (3) art, (4) foods/ingredients, (5) money, (6) transportation, (7) methods of shopping, (8) religion, (9) typical preferences, etc. Students are encouraged to create their own event by shopping at a Mexican market, then comparing it to their favorite American market, eating at a Mexican taquería and comparing it to a typical American fast-food restaurant, etc. May also attend the Mexican Museum (Fort Mason Center Building D, San Francisco, CA 94123; Telephone: 415-202-9700). Admission is free. Write a paper including date of attendance and a description of five items of interest at the museum.

2. Research and prepare a Power Point presentation in English on one of the following:
 1. Select a Spanish-speaking country, showing pictures and a summary of (1) their flag, (2) traditional dress, (3) typical food, (4) typical methods of transportation, and (5) money -- and

the exchange rate with the dollar.

1. Research famous places of interest, works of art, item of interest, or famous person in Spanish-speaking country or countries, and prepare a Power Point showing pictures and a brief description on a minimum of **five slides showing points of interest**.

3. Research a Latin American country and prepare a two-page typewritten report in English, focusing on a minimum of **five points of interest** from the following: (1) population, (2) number of languages spoken -- and what they are, (3) gross domestic product, (4) system of government, (5) interesting historical facts, (6) dominant religion, (7) currency and current value, (8) famous landmarks, (9) exported goods, and (10) national motto or anthem.

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4. Interview a Spanish-speaking person who is not a native of the U.S. Ask about the differences in (1) how they grew up, (2) attitudes, (3) culture, (4) dress, (5) music, (6) art, (7) foods, (8) finances, (9) transportation, (10) religion, etc., then write a one-page paper in English on your findings, bringing out a minimum of **five differences** on your findings.

5. Take pictures of at least **five different billboards or public notices** in your area displaying only Spanish advertising. Download onto Power Point with (1) a description of where the picture was taken, (2) a translation into English, and (3) a description in English of what the message is trying to convey.
6. Research, prepare, and present a food or drink from a Spanish speaking culture. If there is a cultural significance related to the food or the drink, that needs to be shared with the class.

Unit III Puerto Rico, ?Vamos de compras!

The students will learn new Spanish words related to clothing and jewelry. They will learn where to shop for these items. They will review the irregular verbs in the Present tense, such as for hacer, conocer, saber, and decir. They will review how to use pronouns after prepositions. They will review some irregular Preterit verbs, such as estar, saber, pedir, and dormir.

Assignments

The students will describe 10 Spanish words in Spanish. They will write a 35 to 50 Spanish word paragraph about what happened 5 years ago. The purpose of these assignments is to help them be able to creatively use what they have learned, especially if and when they are in situations in which they need to describe something or someone and what is relevant to them in their past.

Cultural Projects:

The student must complete one cultural project each quarter, choosing from the following:

1. Attend a specific Hispanic cultural event and write a one-page paper in English about the experience, focusing on a minimum of **five differences** in (1) dress, (2) music, (3) art, (4) foods/ingredients, (5) money, (6) transportation, (7) methods of shopping, (8) religion, (9) typical preferences, etc. Students are encouraged to create their own event by shopping at a Mexican market, then comparing it to their favorite American market, eating at a Mexican taquería and comparing it to a typical American fast-food restaurant, etc. May also attend the Mexican Museum (Fort Mason Center Building D, San Francisco, CA 94123; Telephone: 415-202-9700). Admission is free. Write a paper including date of attendance and a description of five items of interest at the museum.

2. Research and prepare a Power Point presentation in English on one of the following:
 1. Select a Spanish-speaking country, showing pictures and a summary of (1) their flag, (2) traditional dress, (3) typical food, (4) typical methods of transportation, and (5) money -- and the exchange rate with the dollar.

 1. Research famous places of interest, works of art, item of interest, or famous person in Spanish-speaking country or countries, and prepare a Power Point showing pictures and a brief description on a minimum of **five slides showing points of interest**.

3. Research a Latin American country and prepare a two-page typewritten report in English, focusing on a minimum of **five points of interest** from the following: (1) population, (2) number of languages spoken -- and what they are, (3) gross domestic product, (4) system of government, (5) interesting historical facts, (6) dominant religion, (7) currency and current value, (8) famous landmarks, (9) exported goods, and (10) national motto or anthem.

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4. Interview a Spanish-speaking person who is not a native of the U.S. Ask about the differences in (1) how they grew up, (2) attitudes, (3) culture, (4) dress, (5) music, (6) art, (7) foods, (8) finances, (9) transportation, (10) religion, etc., then write a one-page paper in English on your findings, bringing out a minimum of **five differences** on your findings.
5. Take pictures of at least **five different billboards or public notices** in your area displaying only Spanish advertising. Download onto Power Point with (1) a description of where the picture was taken, (2) a translation into English, and (3) a description in English of what the message is trying to convey.
6. Research, prepare, and present a food or drink from a Spanish speaking culture. If there is a cultural significance related to the food or the drink, that needs to be shared with the class.

Unit IV ? M?xico, Cultura Antigua, ciudad moderna

The students will learn new Spanish words related to legends as well as ancient and modern civilizations. They will review the regular and the irregular verb forms of the Imperfect tense. They will review specific circumstances in which the Imperfect tense is used. They will review specific circumstances in which the Preterit tense is used. They will review specific circumstances in which both the Imperfect and the Preterit tenses can be used in the same sentence. They will review the

irregular verb forms in the Preterit tense of buscar, pagar, empezar, querer, and traer.

Assignments

The students will write a 35 to 50 Spanish word paragraph describing their city. They will write a 35 to 50 Spanish word paragraph on what they were like using the Imperfect tense. The purpose of these assignments is to be able to relate their Spanish knowledge in order to express their city where they live and what they used to do in the past.

COMPREHENSIVE SEMESTER FINAL EXAM

Unit V ?Espa?a, ?A comer!

The students will learn Spanish words related to food in general and restaurant dishes. They will review the positive and the negative formal singular and plural commands. They will review the positive words such as alguien and the negative words such as nadie. They will review how to use such negative words correctly in Spanish sentences. They will review how to use and to place both indirect object pronouns and direct object pronouns in Spanish sentences.

Assignments

The students will say 5 Spanish sentences describing their favorite place to eat. They will say 10 Spanish commands to a younger sibling. The purpose of these assignments is to allow them to think about their favorite dining places while expressing themselves in Spanish along with being able to feel more comfortable using commands in Spanish.

Cultural Projects:

The student must complete one cultural project each quarter, choosing from the following:

1. Attend a specific Hispanic cultural event and write a one-page paper in English about the experience, focusing on a minimum of **five differences** in (1) dress, (2) music, (3) art, (4) foods/ingredients, (5) money, (6) transportation, (7) methods of shopping, (8) religion, (9) typical preferences, etc. Students are encouraged to create their own event by shopping at a Mexican market, then comparing it to their favorite American market, eating at a Mexican taquería and comparing it to a typical American fast-food restaurant, etc. May also attend the Mexican Museum (Fort Mason Center Building D, San Francisco, CA 94123; Telephone: 415-202-9700). Admission is free. Write a paper including date of attendance and a description of five items of interest at the museum.

2. Research and prepare a Power Point presentation in English on one of the following:

1. Select a Spanish-speaking country, showing pictures and a summary of (1) their flag, (2) traditional dress, (3) typical food, (4) typical methods of transportation, and (5) money -- and the exchange rate with the dollar.

1. Research famous places of interest, works of art, item of interest, or famous person in Spanish-speaking country or countries, and prepare a Power Point showing pictures and a brief description on a minimum of **five slides showing points of interest**.

3. Research a Latin American country and prepare a two-page typewritten report in English, focusing on a minimum of **five points of interest** from the following: (1) population, (2) number of languages spoken -- and what they are, (3) gross domestic product, (4) system of government, (5) interesting historical facts, (6) dominant religion, (7) currency and current value, (8) famous landmarks, (9) exported goods, and (10) national motto or anthem.

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5. Take pictures of at least **five different billboards or public notices** in your area displaying only Spanish advertising. Download onto Power Point with (1) a description of where the

- picture was taken, (2) a translation into English, and (3) a description in English of what the message is trying to convey.
6. Research, prepare, and present a food or drink from a Spanish speaking culture. If there is a cultural significance related to the food or the drink, that needs to be shared with the class.

Unit VI Estados Unidos, ?Te gusta el cine?

The students will learn words related to filmmaking and the different kinds of movies. They will learn Spanish words related to making invitations for people and how to respond to invitations. They will review the regular and the irregular positive and negative commands. They will learn the regular and some of the irregular verb forms of the Present Subjunctive. They will begin to learn how to use the Present Subjunctive in Spanish sentences.

Assignments

The students will write 10 Spanish sentences related to the new words. They will say 10 ojalá Spanish sentences. The purpose of these assignments is to have them feel more comfortable with the new vocabulary as well as how to express what they wish to see happen in the future using the Present Subjunctive.

Unit VII ? Rep?blica Dominicana, Soy periodista

The students will learn words related to family members, newspaper words, and how to express their ideas with impersonal expressions. They will learn how to use impersonal expressions with the Present Subjunctive. They will learn the appropriate uses of por in Spanish sentences. They will learn the appropriate uses of para in Spanish sentences. They will review how to formulate comparatives. They will review how to formulate superlatives as well.

Assignments

The students will write 10 Spanish sentences related to the new Spanish vocabulary. They will say 5 impersonal expression sentences with the Present Subjunctive. The purpose of these assignments is to have them feel more comfortable and to relate to the new Spanish words as well as to express their ideas as to how they perceive their lives and society in general.

Cultural Projects:

The student must complete one cultural project each quarter, choosing from the following:

1. Attend a specific Hispanic cultural event and write a one-page paper in English about the

experience, focusing on a minimum of **five differences** in (1) dress, (2) music, (3) art, (4) foods/ingredients, (5) money, (6) transportation, (7) methods of shopping, (8) religion, (9) typical preferences, etc. Students are encouraged to create their own event by shopping at a Mexican market, then comparing it to their favorite American market, eating at a Mexican taquería and comparing it to a typical American fast-food restaurant, etc. May also attend the Mexican Museum (Fort Mason Center Building D, San Francisco, CA 94123; Telephone: 415-202-9700). Admission is free. Write a paper including date of attendance and a description of five items of interest at the museum.

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1. Select a Spanish-speaking country, showing pictures and a summary of (1) their flag, (2) traditional dress, (3) typical food, (4) typical methods of transportation, and (5) money -- and the exchange rate with the dollar.

1. Research famous places of interest, works of art, item of interest, or famous person in Spanish-speaking country or countries, and prepare a Power Point showing pictures and a brief description on a minimum of **five slides showing points of interest**.

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4. Interview a Spanish-speaking person who is not a native of the U.S. Ask about the differences in (1) how they grew up, (2) attitudes, (3) culture, (4) dress, (5) music, (6) art, (7) foods, (8) finances, (9) transportation, (10) religion, etc., then write a one-page paper in English on your findings, bringing out a minimum of **five differences** on your findings.

5. Take pictures of at least **five different billboards or public notices** in your area displaying only Spanish advertising. Download onto Power Point with (1) a description of where the picture was taken, (2) a translation into English, and (3) a description in English of what the message is trying to convey.
6. Research, prepare, and present a food or drink from a Spanish speaking culture. If there is a cultural significance related to the food or the drink, that needs to be shared with the class.

Unit VIII ? Ecuador, Nuestro futuro

The students will learn words related to nature. They will also learn words related to recycling. They will also learn words related to professions. They will learn the regular and the irregular Future tense verb forms in Spanish. They will review the reflexive object pronouns. They will review the indirect object pronouns. They will review the direct object pronouns.

Assignments

The students will write a 50 to 75 Spanish word paragraph on how they wish to protect the environment. They will also write a 50 to 75 Spanish word paragraph on how they perceive the world is going to look like in the future. The purpose of these assignments is to allow them to critically think about how to improve our world and how they perceive the future is going to be.

COMPREHENSIVE FINAL EXAM

Textbooks

Title	Authors	Publisher	Edition	Website	Is Primary
?Avancemos! Level 2 (Or any California state adopted textbook that follows the Level 1 series https://www.cde.ca.gov/ci/fl/im/documents/sbefladptprg.pdf)	McDougal Littell	McDougal Littell		ISBN/ISBN 10: Student Edition 978-0- -- 547-87193-6	Yes

Other Materials

Title	Authors	Date	Material Type	Website
?Avancemos! Level 2 Cuaderno (or any California state adopted workbook that follows the Level 1 series)	McDougal Littell	--	workbook	ISBN/ISBN 10: Student Edition 978-0- 618-76594-2
Rosetta Stone (used as determined by the credentialed Teacher authorized to teach the course)	--	--	Supplemental	--

a-g Spanish 3

Grades: 9,10,11,12

Length: Full Year

Environment: Classroom-based

Honors: None

Subject: Language Other than English (E)

Discipline: LOTE Level 3

Institution: River Oaks Academy Charter School

Course Overview

This a-g Spanish 3 course continues to build upon students' previous Spanish course learning in regard to listening, speaking, reading, and writing skills. Students in this course will expand their vocabulary, using it in appropriate conversation settings. Students will use a variety of verb tenses. All three modes of communication (interpersonal, interpretive, and presentational) defined in the Standards for Foreign Language Learning in the 21st Century are addressed. The goal is to meet the World Language Content Standards for California Public Schools.

Preliminary Unit

The preliminary unit serves as a general review of previously learned concepts. In this unit, students will review the following concepts: describing their daily routine; and, talking about people and places they already know. They will also review how to talk about things they already know how to do; talk about themselves and their friends, and making comparisons. Students will also review present tense - regular, irregular, stem-changing, reflexive verbs, "ser," "estar," "decir," "tener," "venir," "saber," and "conocer."

Assignments

Each student will write a description of their daily routine. It should include all activities, from the moment they wake up to the time they go to bed. They should use regular, irregular, stem-changing, and reflexive verbs, and read it to the teacher. Students will review the present tense - regular, irregular, stem-changing and reflexive verbs; and, learn these new important verbs: "ser," "estar," "decir," "tener," "venir," "saber," and "conocer."

Unit 1

The main theme of this unit is "Being Outdoors." Activities at the beach, going camping, and nature are sub-themes. This unit also focuses on family relationships. Grammar related items

include the preterite of both regular and irregular verbs. It also emphasizes the imperfect tense, and use of the preterite vs. the imperfect tense.

Assignments

Working in teams of two, students will pretend they recently went camping with their family. They will describe their weekend activities in a computerized presentation in front of the class, using both the preterite and the imperfect tense. Students will learn grammar related items, include the preterite of both regular and irregular verbs, imperfect tense, and the use of the preterite vs. the imperfect tense.

Unit 2

Unit 2 focuses on community projects and volunteer activities; media and the community; and, making requests and giving recommendations. Grammar items include "tú" and other command forms. This unit also concentrates on using pronouns with commands, and impersonal expressions plus the infinitive.

Assignments

Researching online, students will find an NGO (non-governmental organization) with volunteer programs abroad. Working as a group, students will thoroughly describe what the selected NGO does, stating their opinion about it, and reasons why they chose it. Students will learn the following: how to discuss community projects, volunteer activities, media and the community; make requests and give recommendations; grammar items including "tú" and other command forms; using pronouns with commands; and, impersonal expressions, plus the infinitive.

Unit 3

This unit focuses on the future of our planet; environmental concerns; raising social awareness; and, presenting and supporting opinions. Grammar items include the future tense, "por" and "para"; present subjunctive of regular verbs, and more subjunctive verb forms.

Assignments

Students will research an endangered animal. They will share reasons why it is endangered, and things that collectively can be done to prevent its extinction. Students will learn how to use the future tense, "por" and "para"; and, the present subjunctive of regular verbs, along with more subjunctive verb forms.

Unit 4

This unit emphasizes heroes and people that inspire or motivate the population. Professions and describing others are some of the key elements. Supporting opinions, and learning how to express

positive and negative emotions are included. Like in the previous unit, grammar focuses on the future tense. It also covers the subjunctive in a variety of ways: with verbs of influence, with doubt, and with emotion.

Assignments

Working in pairs, students will choose a local hero or a person they admire. It will have to be somebody not very well known. Students will write three paragraphs telling why they chose that person. Students will learn to support opinions, and how to express positive and negative emotions. Students will review the future tense, and learn how to use the subjunctive in a variety of ways: with verbs of influence, with doubt, and with emotion.

Unit 5

This unit focuses on a variety of subjects: travel preparations, travel requirements, leisure activities, and participating in a group discussion. Students will learn the following concepts: conditional verb tense; subjunctive in more depth: (with conjunctions), and subjunctive with the unknown.

Assignments

Using the subjunctive, students will write a list of recommendations about things they should do at home before a trip. It should also include several things they shouldn't do while traveling. Students will produce an in-class presentation of their trip information. Students will learn to discuss travel preparations, travel requirements, leisure activities, and how to participate in a group discussion. They will also learn the conditional verb tense, subjunctive in more depth: (with conjunctions), and subjunctive with the unknown.

Unit 6

This unit concentrates on two main topics: life in the city, and going on a short-trip. It starts with an apartment in the city, and around the neighborhood. It describes a cultural excursion, and traveling by train. Students will learn how to use the past participle as an adjective; past perfect tense; and ends with the future perfect tense.

Assignments

Students will imagine they are in a semester abroad program in Madrid, Spain. After completing their Internet research on Madrid and the semester abroad program, they will "travel" for a weekend to a smaller city of their choosing. They will write an article for their college newspaper in the United States, describing the town they visited and its history. Students will learn how to use a variety of verb tenses, including past perfect; past participle as an adjective; past perfect tense; and future perfect tense.

Unit 7

This unit focuses on the past and the future. It starts with planning for the future, then moves on to school activities and events, along with part-time jobs. It also focuses on pursuing a career. Grammar items include “si” clauses, and the sequence of tenses. It continues presenting more subjunctive varieties. This time, it is the imperfect subjunctive, and the subjunctive of perfect tenses.

Assignments

Students work independently to research different universities in the Spanish-speaking world. They will write a letter to a friend, expressing different possibilities about a minimum of three different universities. To express the pros and cons of each place, they will use the imperfect subjunctive, along with a variety of different verb tenses. The letter needs to have at least three paragraphs. Students learn the following grammatical concepts: “si” clauses; sequence of tenses; more subjunctive varieties: imperfect subjunctive; and, the subjunctive of perfect tenses.

Unit 8

This unit’s theme is “Talking About Literature.” Students will discuss and critique literature; and, read and interpret plays. They will also learn the following grammatical concepts: past progressive and conjunctions; the use of “se” for unintentional occurrences; and the uses of the subjunctive.

Assignments

Students will read a short novel or play on their own, from a list provided by the teacher. Afterward, they will discuss and critique what they read, in writing. The last portion of this assignment is for the student to read their letter in front of the class. They will also learn the following grammatical concepts: past progressive and conjunctions; the use of “se” for unintentional occurrences; and the uses of the subjunctive.

Textbooks

Title	Authors	Publisher	Edition	Website
Realidades 3 (Spanish) Student Edition	Peggy Boyles, Myriam Met, Richard S. Sayers	Palo Pearson - Prentice Hall	2011	https://www.amazon.com/Realidades-3-Peggy-Palo-Boyles/dp/0133691756/ref=pd_lpo_sbs_14_img_0?_encoding=UTF8&s=books&qid=1540800000&sr=1-1
Realidades 3 Teacher's Edition: Digital Edition (Spanish) Hardcover ? 2016	Peggy Boyes, Myriam Met, and Richard S. Sayers	Palo Pearson - Prentice Hall	2016	https://www.amazon.com/Realidades-Teachers-Peggy-Palo-Boyes/dp/0133302970/ref=sr_1_5?keywords=Realidades+3+teachers+edition+digital+edition+hardcover+2016&qid=1540800000&sr=1-5
REALIDADES Petition Appendices	Prentice Appendices	Prentice	2009	https://www.amazon.com/PRENTICE-REALIDADES-VOCABULARY-WORKBOOK-APPENDICES/dp/0133302970/ref=sr_1_5?keywords=Realidades+3+teachers+edition+digital+edition+hardcover+2016&qid=1540800000&sr=1-5

Title	Authors	Publisher	Edition	Website
LEVELED VOCABULARY AND GRMR WORKBOOK (CORE & GUIDED PRACTICE) LEVEL 3	Hall	Hall		COPYRIGHT/dp/B00N4EICOA/ref=sr_1_fkmr2_1?keywords=REALIDADES+LEVELED+VOCABULARY+AND+GRM 1-fkmr2
Realidades 3 Teacher's Resource Book	Prentice Hall	Prentice Hall	2005	https://www.amazon.com/Realidades-3-Teachers-Resource-Book/dp/0130360228/ref=pd_rhf_se_s_pd_crcd_0_5/133a970762926&pd_rd_w=kazLh&pd_rd_wg=ZA0ZD&pf_rd_p=36c62ed8-9692-4b91-aa9a-c4b3b85cc759&pf_rd_r=M
Realidades 3 : Assessment Program	Prentice Hall	Prentice Hall	Unknown	https://www.amazon.com/Realidades-3-Assessment-Program/dp/0130360171/ref=pd_sbs_14_13?encoding=UTF8&03efec45caec&pd_rd_w=j5ypu&pd_rd_wg=zooKL&pf_rd_p=588939de-d3f8-42f1-a3d8-d556eae5797d&pf_rd_r=234

Websites

Title	Authors	Organization	Website
Spanish Proficiency Exercises (Beginning, Intermediate, Advanced and Superior levels)	Orlando R. Kelm	University of Texas at Austin	http://www.laits.utexas.edu/spe/index.html
Conjuguemos (Online workbook with practice activities in Spanish)	Houghton Mifflin Harcourt	Conjuguemos Inc.	www.conjuguemos.com
BBC Mundo (Current news from around the world in Spanish)	BBC Mundo	BBC	http://www.bbc.com/mundo
El Conjugador (Spanish Verb Conjugation)	Unknown	El Conjugador Inc.	http://www.elconjugador.com
Onoma (Spanish Verb Conjugation)	Molino de Ideas	Molino de Ideas	http://www.onoma.es/conjuga-verbo.html
Audiria (Website with podcasts in Spanish)	Audiria.com	Audiria	www.audiria.com
Spanish Listening (Spanish videos from a variety of regional accents including exercises)	Unknown	Spanish Listening	http://www.spanishlistening.org

APPENDIX J

Capital College & Career Academy Portfolio Interview Rubric

	Below Standard	Approaching Standard	At Standard	Above Standard ✓
Explanation of Ideas & Information	<ul style="list-style-type: none"> uses too few, inappropriate, or irrelevant descriptions, facts, details, or examples to support ideas of pillars when answering questions. presentation does not adequately reflect time spent at CCCA 	<ul style="list-style-type: none"> uses some descriptions, facts, details, and examples that support ideas of pillars, subjects areas, and years spent at CCCA, but there may not be enough, or some are irrelevant 	<ul style="list-style-type: none"> uses relevant, well-chosen descriptions, facts, details, and examples from all subject areas/years at CCCA to support ideas about all pillars. presentation reflects a balanced view of time spent at CCCA. 	
Organization	<ul style="list-style-type: none"> does not include important parts required in the portfolio interview does not have a main idea or presents ideas in an order that does not make sense does not have an introduction and/or conclusion uses time poorly; the whole presentation, or a part of it, is too short or too long 	<ul style="list-style-type: none"> includes at least 10 pieces of evidence from a variety of subject areas and grade levels. moves from one idea to the next, but main idea may not be clear or some ideas may be in the wrong order has an introduction and conclusion, but they are not effective generally times presentation well, but may spend too much or too little time on a topic, a/v aid, or idea 	<ul style="list-style-type: none"> includes at least 10 pieces of evidence from a variety of subject areas and grade levels. states main idea and moves from one idea to the next in a logical order, emphasizing main points in a focused, coherent manner has an effective introduction and conclusion organizes time well; no part of the presentation is rushed, too short or too long 	
Eyes, Body, & Voice	<ul style="list-style-type: none"> does not look at audience; reads notes or reads directly from eportfolio lacks poise and confidence (fidgets, slouches, appears nervous) wears clothing inappropriate for the occasion mumbles or speaks too quickly or slowly frequently uses "filler" words ("uh, um, so, and, like, etc.") 	<ul style="list-style-type: none"> makes infrequent eye contact; reads notes or reads directly from eportfolio most of the time shows some poise and confidence (only a little fidgeting or nervous movement) makes some attempt to wear clothing appropriate for the occasion speaks clearly most of the time; sometimes too quickly or slowly occasionally uses filler words 	<ul style="list-style-type: none"> keeps eye contact with audience most of the time; only glances at notes or eportfolio looks poised and confident wears clothing appropriate for the occasion speaks clearly; not too quickly or slowly speaks loudly enough for everyone to hear; changes tone to maintain interest rarely uses filler words 	
Presentation Aids	<ul style="list-style-type: none"> does not use eportfolio attempts to use one or a few audio/visual aids or media but they distract from or do not add to the presentation 	<ul style="list-style-type: none"> uses eportfolio, but the portfolio sometimes distracts from or does not add to the presentation 	<ul style="list-style-type: none"> uses well-produced eportfolio to clarify information, emphasize important points, strengthen arguments, and add interest 	
Response to Audience Questions	<ul style="list-style-type: none"> does not address audience questions (goes off topic or misunderstands without seeking clarification) 	<ul style="list-style-type: none"> answers some audience questions, but not always clearly or completely 	<ul style="list-style-type: none"> answers audience questions clearly and completely seeks clarification when interviewer questions are unclear 	

Capital College & Career Academy Portfolio Interview Rubric

	Below Standard	Approaching Standard	At Standard	Above Standard ✓
Cover Letter	<p>Writer needs more practice to improve Ideas and Content, Voice, Word Choice, Sentence Fluency and Conventions.</p> <p>(AUTOMATIC NO PASS IF COVER LETTER IS NOT PRESENT)</p>	<p>Ideas and Content – The development is still basic or general. Minimally addresses high school readiness in academics, arts and citizenship</p> <p>Voice – The writing seems sincere but the writer does not clearly convey their interest or passion resulting in an essay is not compelling</p> <p>Word Choice – The language is functional, even if it lacks much energy. It is easy to figure out the writer's meaning on general level.</p> <p>Sentence Fluency – Although sentences may not seem artfully crafted, they get the job done in a routine fashion. Some sentence variety is attempted.</p> <p>Conventions – Writer shows reasonable control over a limited range of standard writing conventions (e.g. spelling, punctuation, capitalization, paragraphing, formatting). Errors may impair readability.</p>	<p>Ideas and Content – The paragraphs are clear and focused. It holds the reader's attention. Relevant anecdotes and details enrich beyond the obvious to prove achievements in academics, arts and citizenship.</p> <p>Voice – The writing is individual, compelling and engaging. The writer crafts the piece with an awareness and respect for the audience and purpose.</p> <p>Word Choice – Words convey the intended message in a precise, interesting and natural way. The words are powerful and engaging.</p> <p>Sentence Fluency – The writing has an easy flow and rhythm. Sentences are well built with strong and varied structure.</p> <p>Conventions – The writer demonstrates a strong grasp of standard writing conventions (e.g. spelling, punctuation, capitalization, paragraphing, formatting) and uses them to enhance readability with few, if any errors.</p>	

Panel team notes: _____

APPENDIX K



December 8, 2021

To Whom It May Concern:

As the largest of the four community colleges affiliated with the Los Rios Community College District, American River College proudly offers students located within the greater Sacramento region the opportunity to complete a myriad of associate degrees and certificates, qualifying them for employment opportunities and/or transfer to other colleges and universities for further studies.

Within the auspices of our dual enrollment programming, our mission is hyper-focused on helping historically underserved populations in our local communities to develop the requisite skills needed to access and experience success at post-secondary studies necessary to secure and maintain gainful employment and/or transfer within our region and beyond.

Given our shared interest in prioritizing opportunities to actively engage with our community partners as a means of developing and expanding viable dual enrollment opportunities, we have worked with a number of local charter schools to do the same. To this end, we look forward to the establishment of the **Capital College and Career Academy**.

Pending the Academy's projected enrollments, we anticipate working with them to explore how best to establish additional General Education CCAP agreements intended to create and expand dual enrollment opportunities for our region's students by way of leveraging service and support via our local community constituents.

Sincerely,

Kate Jaques
Associate Vice President
Curriculum, Catalog, and GE Dual Enrollment



AMERICAN RIVER COLLEGE

LOS RIOS COMMUNITY COLLEGE DISTRICT

April 8, 2021

To Whom It May Concern:

American River College is one of the colleges in the Los Rios Community College District. The college has serving the Sacramento area since 1965 under that name but our history of serving the community dates back to 1942 when we were Grant Union Junior College. We offer associate degrees and certificates transfer students to other colleges and universities. We help people upgrade their skills and get gainful employment. ARC has had a long history of successful educational partnerships. At ARC, we are committed to transforming the lives of all students and make it our mission to place our students first. We look forward to the establishment of the Capital College and Career Academy.

We work with our feeder school districts to develop dual enrollment opportunities and have worked with some charter schools to do the same. We look forward to the Capital College and Career Academy establishing itself in our service area and having accurate projected enrollment. Once we have that, then we will work with them to examine how best to setup a CCAP agreement for dual enrollment opportunities to assist.

Best Regards,

Derrick W. Booth, Ph.D.

Derrick W. Booth, Ph.D.
Interim Associate Vice President of Workforce Development



Dr. Frank Lilly, Professor of Graduate and Professional Studies in Education
Director of Accelerated College Entrance (ACE) Dual Enrollment Program
California State University, Sacramento
6000 J Street • ALP 221 • Sacramento, CA 95819-6079
(916) 278-4120 • frlilly@csus.edu
• <https://www.csus.edu/undergraduate-studies/accelerated-college-entrance/>

May, 2021

To Whom It May Concern:

Created in 1985, the Accelerated College Entrance (ACE) program is a unique program at California State University, Sacramento that allows qualified high school students to enroll in university-level courses while completing regular high school studies. The CSU system mandate underlying ACE is: "...to assist high schools in meeting the needs of gifted and talented students, as well as to expand CSU efforts to encourage more able students from underrepresented groups to participate in university studies." This stems from the CSU Chancellor - Executive Order 461, *CSU - Step to College* (1984).

Capital College and Career Academy (CCCA) is setting out to be a rigorous college-infused high school where students no longer have to choose between college or a career. Students have a heavy emphasis on experiential learning using the construction trades as an avenue into a career. Students participate in a career exploration phase, then actively interning at their partner company while working towards tangible certifications and credentials that will prepare them for a job and/or a four-year university immediately after graduation.

CCCA aspires to be the kind of high school ACE is actively seeking to support in the endeavor to enrich student opportunity and experience regarding education and career pathways. ACE will welcome their success and collaborate toward dual enrollment opportunities encouraging these pathways.

Sincerely,

A handwritten signature in blue ink that reads "Frank R. Lilly".

Frank R. Lilly, PhD
Professor, College of Education
Department of Graduate and Professional Studies in Education
Director: Accelerated College Entrance
Sacramento State University
6000 J. Street
Sacramento, CA 95819-6079
frlilly@csus.edu
<https://www.csus.edu/undergraduate-studies/accelerated-college-entrance/>

APPENDIX L

DRAFT

Capital College and Career Academy

Workforce Experience Program Handbook

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APPENDIX M



Capital College & Career Academy

Academic Calendar

2023-2024

Semester 1							Holidays and Non Student Days							Semester 2						
July 2023							July							January 2024						
Su	M	T	W	Th	F	S		4th	Independence Day		Su	M	T	W	Th	F	S			
								1	31st	Staff Development Day										
2	3	4	5	6	7	8			August			1	2	3	4	5	6			
9	10	11	12	13	14	15		1st- 2nd	Staff Development Days		7	8	9	10	11	12	13			
16	17	18	19	20	21	22		3rd	First day of instruction		14	15	16	17	18	19	20			
23	24	25	26	27	28	29			September		21	22	23	24	25	26	27			
30	31							1st	Staff Development Day		28	29	30	31			16/110			
								4th	Labor Day											
									October											
August 2023								6th	Minimum Day		February 2024									
Su	M	T	W	Th	F	S		30th	Minimum Day		Su	M	T	W	Th	F	S			
		1	2	3	4	5			November						1	2	3			
6	7	8	9	10	11	12		10th	Veteran's Day (Observed)		4	5	6	7	8	9	10			
13	14	15	16	17	18	19		20th- 24th	Thanksgiving Break		11	12	13	14	15	16	17			
20	21	22	23	24	25	26			December		18	19	20	21	22	23	24			
27	28	29	30	31		21/21		25th- 29th	Winter Break		25	26	27	28	29		20/130			
									January											
								1st- 5th	Winter Break											
September 2023								15th	M. L. King Jr. Day		March 2024									
Su	M	T	W	Th	F	S		16th	Staff Development Day		Su	M	T	W	Th	F	S			
					1	2			February						1	2				
3	4	5	6	7	8	9		19th	Presidents Day		3	4	5	6	7	8	9			
10	11	12	13	14	15	16			March		10	11	12	13	14	15	16			
17	18	19	20	21	22	23		22nd	Minimum Day		17	18	19	20	21	22	23			
24	25	26	27	28	29	30		25th- 29th	Spring Break		24	25	26	27	28	29	30			
						19/40			April		31							15/145		
								1st-2nd	Spring Break											
								29th	Minimum Day											
October 2023								May			April 2024									
Su	M	T	W	Th	F	S		27th	Memorial Day		Su	M	T	W	Th	F	S			
1	2	3	4	5	6	7			June			1	2	3	4	5	6			
8	9	10	11	12	13	14		3rd	Last Day of Instruction		7	8	9	10	11	12	13			
15	16	17	18	19	20	21			Important Parent Dates		14	15	16	17	18	19	20			
22	23	24	25	26	27	28			Welcome to CCCA Parent Night TBD		21	22	23	24	25	26	27			
29	30	31				22/62			Dual Enrollment FAQ TBD		28	29	30					20/165		
									Parent Committee Meeting TBD											
									Coffee with Director TBD											
November 2023								Parent Committee Meeting TBD			May 2024									
Su	M	T	W	Th	F	S		Lunch with the Counselor TBD			Su	M	T	W	Th	F	S			
			1	2	3	4			Parent Committee Meeting TBD					1	2	3	4			
5	6	7	8	9	10	11			Spring College Night TBD		5	6	7	8	9	10	11			
12	13	14	15	16	17	18			Important Student Dates		12	13	14	15	16	17	18			
19	20	21	22	23	24	25			CCCA Fall Job Exploration Fair TBD		19	20	21	22	23	24	25			
26	27	28	29	30		16/78			CCCA Spring Job Exploration Fair TBD		26	27	28	29	30	31		22/187		
								1st day of ARC Instruction for Fall Semester August 19th												
								Last day of ARC Instruction for Fall Semester December 14th												
December 2023								1st day of ARC Instruction for Spring Semester January 13th			June 2024									
Su	M	T	W	Th	F	S		Last day of ARC Instruction for Fall Semester May 22nd			Su	M	T	W	Th	F	S			
					1	2			First Interession 12 days									1		
3	4	5	6	7	8	9			First Quarter Ends - 9/29/23 40 days		2	3	4	5	6	7	8			
10	11	12	13	14	15	16			First Semester Ends - 12/6/23 82 days		9	10	11	12	13	14	15			
17	18	19	20	21	22	23			Third Quarter Ends - 3/8/24 42 days		16	17	18	19	20	21	22			
24	25	26	27	28	29	30			Second Semester Ends - 5/15/24 82 days		23	24	25	26	27	28	29			
31						16/94			Second Interession 12 days		30							1/188		
									Semester 1 Finals: 12/1- 12/6											
									Semester 2 Finals: 5/10- 5/15											

APPENDIX N

CCCA Instructional (Counselors, Librarian, SPED Support) Goal Setting Document

Capital College & Career Academy

Name:	Directions for Use
Evaluator(s):	Directions: <i>This document contains both employee and evaluator (supervisor sections). The timeline below describes how the document should be used during a full academic year. Mutually-agreed upon adjustments may be made for employees hired mid-school year.</i>
Position:	
Department:	<ul style="list-style-type: none">• <u>August 31:</u> Employee completes Part 1.• <u>October 6:</u> The employee discusses the self-rating and self-reflection areas with their supervisor and uses this information to establish goals (Part 2) for the school year in consultation with their supervisor.• <u>November 30:</u> Employee completes First Reflection and reviews with supervisor.• <u>February 29:</u> Employee completes Second Reflection and reviews with supervisor.• <u>May 15:</u> Employee completes Final Reflection and reviews with supervisor.• <u>June 3:</u> Evaluator completes the Summary Evaluation document (separate) and reviews it with the employee.• <u>June 30:</u> Evaluator files paper copy of Summary Evaluation
School Year:	

Please email /share this completed form to your supervisor prior to your goal setting meeting.

Part 1 - Reflection on Standards

Use the level descriptors below to help you determine your areas of strengths and areas for growth in whatever professional standards listed below best fit your role. This self assessment will give you information about your teaching practice that will assist you in developing your goals this year.

- Level 1-Emerging/Exploring-I am beginning to gain knowledge and ideas in this area to support teaching and learning and I have implemented some elements of this area. This is an area that is developing for me.
 - Level 2-Application-I am implementing elements of this area frequently with increased understanding. This is an area in which I have some confidence.
 - Level 3- Integration-I have an expanded understanding and I regularly implement elements of this area. This is an area in which I am moving towards becoming an expert.
 - Level 4-Inspiration-I have a significant understanding and experience in the implementation of this strategy. This is an area of professional strength for me.
-

- [CASC Standards](#) for school counselors (standards start on pg 19)
- [CA Library Standards](#)
- [Traits of the NCS Professional](#)
- Or other appropriate professional standards

NOTE: Summary Evaluation will be based on Traits of the NCS Professional

Part 2 - Setting Specific Goals

Use your reflection above, in conjunction with the goal setting tips below, to set two specific goals for the year. Share this document with your supervisor before your meeting.

Ask yourself these following questions:

- What do I want to change about my practices that will effectively impact student learning? (The decision should be grounded in evidence)
- What is my rationale for this goal?
- How can I develop a plan of action to address my professional learning? (The plan should include new learning and how you will apply it)
- How will I know if I accomplished my objective? (Be able to show evidence of growth to prove change in practice has occurred)
- How will my goals be reflective of goals set in my most recent mid-level or portfolio review?

A **specific goal that can be measured** has a much greater chance of being accomplished than a general goal. Be sure your measurable goal you set is very specific and clear. You can use this table to help you develop your measurable goal (optional)

Guiding Questions	Sample
1. What is your specific and measurable goal?	<i>90% of 5th grade students will write a basic 3-4 paragraph summary of expository text</i>
2. What is your baseline data? Answers WHY you possibly chose this goal.	<i>60% of the students were unable to write a basic summary</i>
3. What is your target date for meeting this goal (timeline)?	<i>By the end of the unit (check progress midway)- <u>specific date (March 2019)</u></i>
4. How will you know whether you have met your goal (evidence)?	<i>Completed summaries evaluated using rubric-introductory paragraph, 2 paragraphs related to important information, concluding paragraph</i>
5. What specific instructional/advising strategies and materials will you consider/use/adapt (strategies)?	<i>Direct instruction about summaries and related rubric, think-aloud modeling, scaffolding, peer conferencing, teacher conferencing</i>

Example:

Goal-I will teach my students to write a summary with multiple paragraphs.

REVISED Measurable Goal: 90% of 5th grade students will write a basic 3-4 paragraph summary of expository text by May 2019. I will use a variety of teaching strategies to obtain this goal such as direct instruction about summaries and related rubric, think-aloud modeling, scaffolding, peer conferencing, and teacher conferencing.

GOAL #1: Professional Goal --From the California Standards for the Teaching Profession
(Use the samples above to generate your goal)

What is one goal related to the California Standards for the Teaching Profession you want to focus on for this school year?

Why did you choose this goal?

What support and resources do you need in order to meet this goal?

What professional learning will you engage in that will support your progress towards your goal?

What are your next action steps with a specific timeline in reaching your goal?

GOAL #2: Programmatic/Department Goal--Curriculum, Advising, Caseload Management, etc.
(Use the samples above to generate your goal)

What is your measurable goal related to your Academy Program for this school year?

Why did you choose this goal?

What support and resources do you need in order to meet this goal?

What professional learning will you engage in that will support your progress towards your goal?

What are your next action steps with a specific timeline in reaching your goal?

Reflection #1

Reflection #2

Final Reflection

CCCA Instructional (Teacher, Advisor, Ed. Specialist) Goal Setting Document

Capital College & Career Academy

Name:	Directions for Use
Evaluator(s):	Directions: <i>This document contains both employee and evaluator (supervisor sections). The timeline below describes how the document should be used during a full academic year. Mutually-agreed upon adjustments may be made for employees hired mid-school year.</i>
Position:	
Department:	
School Year:	<ul style="list-style-type: none">• <u>August 31</u>: Employee completes Part I.• <u>October 6</u>: The employee discusses the self-rating and self-reflection areas with their supervisor and uses this information to establish goals (Part 2) for the school year in consultation with their supervisor.• <u>November 30</u>: Employee completes First Reflection and reviews with supervisor.• <u>February 29</u>: Employee completes Second Reflection and reviews with supervisor.• <u>May 15</u>: Employee completes Final Reflection and reviews with supervisor.• <u>June 3</u>: Evaluator completes the Summary Evaluation document (separate) and reviews it with the employee.• <u>June 30</u>: Evaluator files paper copy of Summary Evaluation

Please email /share this completed form to your supervisor prior to your goal setting meeting.

Part 1 - Reflection on Standards

Use the level descriptors below to help you determine your areas of strengths and areas for growth in the six California Standards of the Teaching Profession listed here. This self assessment will give you information about your teaching practice that will assist you in developing your goals this year. Complete the CSTPs rating yourself from level 1 to level 4. This process should help you identify areas to focus on for the year ahead.

- Level 1-Emerging/Exploring-I am beginning to gain knowledge and ideas in this area to support teaching and learning and I have implemented some elements of this area. This is an area that is developing for me.
 - Level 2-Application-I am implementing elements of this area frequently with increased understanding. This is an area in which I have some confidence.
 - Level 3- Integration-I have an expanded understanding and I regularly implement elements of this area. This is an area in which I am moving towards becoming an expert.
 - Level 4-Inspiration-I have a significant understanding and experience in the implementation of this strategy. This is an area of professional strength for me.
-

CALIFORNIA STANDARDS FOR THE TEACHING PROFESSION

Engaging and Supporting All Students in Learning

- ___ Connecting prior knowledge, life experience, and interests
- ___ Using a variety of instructional strategies and resources
- ___ Facilitating learning experiences-autonomy, interaction & choice
- ___ Engaging students in problem solving, critical thinking & skills
- ___ Promoting self-directed, reflective learning for all students

Creating and Maintaining an Effective Environment for All

- ___ Organizing the physical environment
- ___ Planning and implementing procedures and routines
- ___ Establishing a climate of fairness and respect
- ___ Promoting social development and responsibility
- ___ Establishing and maintaining standards for student behavior
- ___ Using instructional time effectively

Understanding & Organizing Subject Matter Knowledge

- ___ Demonstrating knowledge of subject matter content
- ___ Organizing curriculum to support student understanding
- ___ Integrating ideas and information
- ___ Developing student understanding-instructional strategies
- ___ Using materials, resources, and technologies

Planning Instruction and Designing Learning Experiences for All

- ___ Drawing on students' background, interests & developmental learning needs
- ___ Establishing goals for student learning
- ___ Developing and sequencing instructional activities
- ___ Modifying for student needs
- ___ Designing long and short-term plans

Assessing Student Learning

- ___ Establishing learning goals for all students
- ___ Using multiple sources of information to assess
- ___ Involving & guiding students assessing their own learning
- ___ Using the results of assessments to guide instruction
- ___ Communicating with students and families about student progress

Development As A Professional Educator

- ___ Reflecting on teaching and learning
- ___ Engaging families in student learning
- ___ Using community resources to support student learning
- ___ Working with colleagues to improve teaching and learning
- ___ Pursuing opportunities to contribute and grow professionally
- ___ Balancing professional responsibilities

Part 2 - Setting Specific Goals

Use your reflection above, in conjunction with the goal setting tips below, to set two specific goals for the year. Share this document with your supervisor before your meeting.

Ask yourself these following questions:

- What do I want to change about my practices that will effectively impact student learning? (The decision should be grounded in evidence)
- What is my rationale for this goal?
- How can I develop a plan of action to address my professional learning? (The plan should include new learning and how you will apply it)
- How will I know if I accomplished my objective? (Be able to show evidence of growth to prove change in practice has occurred)
- How will my goals be reflective of goals set in my most recent mid-level or portfolio review?

A **specific goal that can be measured** has a much greater chance of being accomplished than a general goal. Be sure your measurable goal you set is very specific and clear. You can use this table to help you develop your measurable goal (optional)

Guiding Questions	Sample
1. What is your specific and measurable goal?	<i>90% of 5th grade students will write a basic 3-4 paragraph summary of expository text</i>
2. What is your baseline data? Answers WHY you possibly chose this goal.	<i>60% of the students were unable to write a basic summary</i>
3. What is your target date for meeting this goal (timeline)?	<i>By the end of the unit (check progress midway)- <u>specific date (March 2019)</u></i>
4. How will you know whether you have met your goal (evidence)?	<i>Completed summaries evaluated using rubric-introductory paragraph, 2 paragraphs related to important information, concluding paragraph</i>
5. What specific instructional/advising strategies and materials will you consider/use/adapt (strategies)?	<i>Direct instruction about summaries and related rubric, think-aloud modeling, scaffolding, peer conferencing, teacher conferencing</i>

Example:

Goal-I will teach my students to write a summary with multiple paragraphs.

REVISED Measurable Goal: 90% of 5th grade students will write a basic 3-4 paragraph summary of expository text by May 2019. I will use a variety of teaching strategies to obtain this goal such as direct instruction about summaries and related rubric, think-aloud modeling, scaffolding, peer conferencing, and teacher conferencing.

GOAL #1: Professional Goal --From the California Standards for the Teaching Profession
(Use the samples above to generate your goal)

What is one goal related to the California Standards for the Teaching Profession you want to focus on for this school year?

Why did you choose this goal?

What support and resources do you need in order to meet this goal?

What professional learning will you engage in that will support your progress towards your goal?

What are your next action steps with a specific timeline in reaching your goal?

GOAL #2: Programmatic/Department Goal--Curriculum, Advising, Caseload Management, etc.
(Use the samples above to generate your goal)

What is your measurable goal related to your department for this school year?

Why did you choose this goal?

What support and resources do you need in order to meet this goal?

What professional learning will you engage in that will support your progress towards your goal?

What are your next action steps with a specific timeline in reaching your goal?

Reflection #1

Reflection #2

Final Reflection

APPENDIX O



STUDENT SUCCESS TEAM (SST)

Student: _____ Date: _____ GPA: _____

Academic Progress: A student will be placed on Academic Probation if he/she earns an average academic GPA below 2.0 or receives any Fs in any semester of a school year. Students being placed on academic probation will have until the end of the concurrent semester to raise his/her grades to a 2.0 GPA and raise their "F's to at least "D"s. A student placed on Academic Probation may be excluded from extracurricular activities. This includes Game Masters, non curricular related field trips, and dances.

Parent Signature

Administrator Signature

Academic Advisor

Student

Context for the Meeting	Student Strengths	Student Concerns	Current Interventions (see below for a summary of teacher contact/behavior interventions)	Actions Moving Forward	Responsibility (Who and When?)
•	•	•	•	•	•

Attach Grade Sheet Below:

APPENDIX P



September 16, 2021

Kevin Dobson,
Executive Director
Capital College and Career Academy
501 Arden Way
Sacramento, CA 95815

To whom it may concern,

Capital College and Career Academy has initiated the process to join the El Dorado Charter SELPA effective for the 2022-23 school year.

Please reach out to me if you have any questions or concerns.

Sincerely,

Ginese Quann
Executive Director



EL DORADO CHARTER SELPA NEW PARTNER APPLICATION TIMELINE FOR 2022-23 APPLICATIONS

COHORT 2

Date	Activity
February 11, 2022	In Person Orientation Meeting – Location TBD
February 15, 2022	Application portal opens
February 25, 2022 at Noon	Stage 1 Deadline
February 28, 2022 – March 4, 2022	Stage 1 Review Period
March 7, 2022	Stage 2 Opens
April 1, 2022 at Noon	Stage 2 Deadline
April 4, 2022 – April 22, 2022	Stage 2 Review Period
May 4, 2022	Capacity Interviews
May 11, 2022	Selection Committee Meeting
May 25, 2022 at Noon	New Partner Induction Meeting – San Diego, CA.
June 30, 2022	Submission of 2022-23 Local Plan Revision 2 to CDE



AGREEMENT FOR PARTICIPATION

EL DORADO CHARTER SELPA

This Agreement for Participation ("Agreement") is entered into by and between the El Dorado Charter SELPA ("SELPA"), the El Dorado County Office of Education ("EDCOE"), and Capital College & Career Academy _____ ("LEA"), a California public charter school, collectively referred to as the "Parties."

RECITALS

WHEREAS, each special educational local plan area is required to administer local plans submitted pursuant to Education Code section 56205 et seq., administer the allocation of funds pursuant to Education Code section 56836 et seq., and ensure that it has in effect policies, procedures, and programs that are consistent with state laws, regulations, and policies governing certain aspects of special education;

WHEREAS, a charter school that is deemed a local educational agency for purposes of special education is required to participate in an approved local plan pursuant to Education Code section 56195.1(f);

WHEREAS, LEA is a charter school that is deemed a local educational agency for purposes of special education pursuant to Education Code section 47641 and is responsible for complying with all provisions of the Individuals with Disabilities Education Act (20 U.S.C. 1400 et seq.) and implementing regulations as they relate to local educational agencies;

WHEREAS, the SELPA as authorized by the California State Board of Education serves as the special educational local plan area for California charter schools deemed local educational agencies pursuant to Education Code section 47641 that have successfully completed the SELPA membership process and have signed this Agreement for Participation ("Agreement");

WHEREAS, EDCOE is designated in the local plan as the "responsible local agency" for the SELPA, which means the administrative entity, the duties of which shall include, but are not limited to, receiving and distributing state and federal special education funds pursuant to the allocation plan, providing administrative support, and coordinating implementation of the plan;

WHEREAS, the actions and decisions of the parties are guided by the values of:

1. Commitment – maintaining high standards for performance in student achievement, operations, governance and finance;
2. Integrity – adherence to moral and ethical principles in all aspects of the work;
3. Fairness – impartial and just treatment of all stakeholders;
4. Partnership – collaborative decision making and accountability;
5. Knowledge – understanding of charter school law and practice; and
6. Transparency- access to the information, decisions, and actions of the organization;

WHEREAS, the purpose of this agreement is to set forth the various responsibilities of LEA, EDCOE, and SELPA to ensure that all charter pupils with exceptional needs within the SELPA Appropriate appropriate special education programs.



NOW, THEREFORE, IT IS HEREBY AGREED between the parties hereto as follows:

1. SHARED COMMITMENTS

- 1.1. Resource Allocation. Parties shall demonstrate commitment to the promises set forth in this Agreement by allocating appropriate resources.
- 1.2. Standard of Conduct. Parties, at all times, shall conduct themselves in such a manner as to act in the best interests of all other SELPA members. The LEA shall not engage in any activity or enterprise which would tend to injure or expose the SELPA or any of its members to any significant risk of harm or injury of any kind.
- 1.3. Compliance. All parties to this agreement shall identify and comply with applicable laws, regulations, policies, procedures and generally accepted standards. Each party will address any identified compliance gaps in a responsible and timely fashion.
- 1.4. Continual Improvement. Parties are expected to continually improve by setting performance objectives, executing plans and taking necessary corrective actions for deficiencies identified by any and all internal and/or external assessments.
- 1.5. Accuracy of Business Records. Parties shall ensure that any and all financial books and records conform to generally accepted accounting principles and state reporting requirements. Records must be accurate in all material respects. Records must be legible, transparent, and reflect actual transactions and payments and be open to inspection by the other party upon a reasonable request.
- 1.6. Accuracy of Student Records. Parties shall ensure that any and all student records conform to prescribed formats. Records must be legible, transparent, reflect actual transactions and payments, and be accurate in all material respects. Records must be open to inspection and review by other parties with legitimate educational interest upon a request.
- 1.7. Documentation. Parties shall maintain documentation necessary to demonstrate compliance with this Agreement and compliance with applicable state and federal statutes and regulations.
- 1.8. Local and Allocation Plans. Parties agree to the provisions of the Local and Allocation Plans as updated and approved by the CEO Council.
- 1.9. Provision of Free and Appropriate Public Education. The LEA is solely responsible for the provision of special education programs and services to eligible students enrolled in the LEA. The Parties understand and agree that the SELPA or EDCOE shall have no responsibility for the operation of any direct educational program or service of any kind, that the SELPA has no duty or authority to provide FAPE to individual students, and that the SELPA has no duty or authority to make decisions regarding the educational programming of students enrolled in the LEA.



2. LEA/ORGANIZATIONAL PARTNER RESPONSIBILITIES

- 2.1 **Programs and Services.** The LEA is solely and exclusively responsible for the following mandated activities in order to operate its special education programs and services for students enrolled in the LEA. As such, the LEA shall:
- 2.1.1. Select, employ, compensate, and determine the duties of, or establish appropriate contracts for the provision of, special education teachers, instructional aides, and other personnel as required to conduct the program specified in the Local Plan, and in compliance with state and federal mandates.
 - 2.1.2. Conduct and/or contract those programs operated by the LEA in conformance with the Local Plan and the state and federal mandates.
 - 2.1.3. Organize and administer the activities of the IEP teams, including the selection of the LEA staff and who will serve as members of the IEP team in conformance with Education Code Section 56341 and in compliance with the Local Plan.
 - 2.1.4. Develop and implement program objectives and the evaluation of the program's effectiveness.
 - 2.1.5. Communicate with the parents and/or legal guardians of students in conformance with laws, regulations, and the provisions of the Local Plan.
 - 2.1.6. Provide for the documentation and reporting of assessment procedures used for the placement of individuals and the security thereof.
 - 2.1.7. Provide for the continuous review of placements and the assessment procedures employed to ensure their effectiveness and applicability, and ensure the continued implementation and compliance with eligibility criteria.
 - 2.1.8. Provide for the integration of students with disabilities into the general education school programs and provide for evaluating the results of such integration according to specifications of the Local Plan.
 - 2.1.9. Conduct the review of individual placements requested by the parents and/or legal guardians of the student in accordance with the Local Plan.
 - 2.1.10. Prepare and submit all required reports, including reports on student enrollment, program expenditures, and program evaluation.
- 2.2. **Fiscal Responsibilities.** Receive and expend special education funding in accordance with the Charter SELPA Allocation Plan. Organizational Partners affirm that any financial claim made by the SELPA against an LEA that is part of the Organizational Partner's network of LEAs will be honored by the Organization Partner.
- 2.3. **Restricted Funds.** As a condition of membership and participation in the SELPA, LEA warrants and represents that at no time during the term of this Agreement



and LEA's membership and participation in the SELPA shall the LEA, directly or indirectly, provide special education funding for the benefit of a for-profit entity. Unless altered by law, all funding provided through the Charter SELPA shall be treated as a restricted funding source to be expended only for special education or special education services. Nothing contained herein shall be interpreted as prohibiting any LEA from expending funds to contract with a state-certified nonpublic agency/school for the benefit of children served, in accordance with the approved master contract and individual services agreements as provided for in federal and state law.

- 2.4. Audit Report. Annually provide the SELPA with the LEA's annual, independent financial audit report, on or before December 20th each year, unless an extension has been granted by the State Controller's Office, in which case an extension will be granted to the charter as well. LEA further agrees to provide SELPA copies of any and all State Controller's Office communications regarding audit report corrective actions and a corrected audit report, if applicable. Should an LEA be the subject of an investigation by any federal, state, or local agency, including but not limited to the Fiscal Crisis Management and Assistance Team ("FCMAT") arising out of or related to allegations of fiscal mismanagement, failure to meet generally accepted accounting principles, or any violation of a provision of law, the LEA shall immediately notify SELPA and provide the SELPA with a copy of any written correspondence related thereto.
- 2.5. Membership Responsibilities. Adhere to governance structure within SELPA Local Plan and Policies, including designating appropriate representatives to serve on required councils and committees; ensure appropriate LEA representatives attend and participate in SELPA governance meetings as set forth in the Local Plan, Policies and Procedures.
- 2.6. Management Decisions. Consistent with this Agreement, LEA shall have full and exclusive authority and responsibility for classifying employment positions within their LEA. The managerial prerogatives of any participating LEA member shall not be infringed upon by any other participating LEA member except upon mutual consent of an affected LEA member(s), or unless as otherwise set forth. LEA shall not undertake to independently act on behalf of the SELPA or any of its members without express written authorization of the SELPA.
- 2.7. Participation. Ensure appropriate LEA representatives attend and participate in SELPA governance meetings and committees as set forth in the Local Plan, Policies and Procedures.
- 2.8. Reporting Requirements. Submit all required federal, state and SELPA reports and data requests in the prescribed format and at the specified due date. Upon written request by the SELPA, LEA shall provide any requested information, documents, writings, or information of any sort without delay, except as otherwise prohibited by law.
- 2.9. Indemnification and Hold Harmless. To the fullest extent allowed by law, LEA agrees to defend, indemnify, and hold harmless the SELPA and its individual other



members, EDCOE, the El Dorado County Superintendent of Schools, and each of their respective directors, officers, agents, employees, and volunteers (the Indemnified Parties), from any claim or demand, damages, losses or expenses (including, without limitation, reasonable attorney fees) that arise in any manner from an actual or alleged failure by LEA to fulfill one or more of the LEA member's obligations except to the extent that such suit arises from the SELPA, EDCOE, or the El Dorado County Superintendent of Schools' negligence.

3. SELPA DUTIES AND RESPONSIBILITIES

3.1 Services. In order to accomplish the goals set forth in the Local Plan, SELPA shall provide the following services and activities for the LEA:

- 3.1.1. Receive, compile, and submit required enrollment reports and compute all special education apportionments; receive data from LEA to compile and submit budgets for the programs and monitor the fiscal aspects of the program conducted, and receive the special education apportionments as authorized by applicable law.
- 3.1.2. Maintain SELPA policies and procedures for referring and placing individuals with exceptional needs who are enrolled in the LEA, including the methods and procedures for communication with the parents and/or guardians of the students according to SELPA Local Plan, Policies and Procedures.
- 3.1.3. Coordinate the organization and maintenance of the Special Education Community Advisory Committee ("CAC") to coordinate the implementation of the Local Plan and provide for the attendance of designated members of the SELPA's staff at all regularly scheduled CAC meetings as required by law.
- 3.1.4. Coordinate community resources with those provided by LEA and SELPA, including providing such contractual agreements as may be required.
- 3.1.5. Coordinate state Special Education Accountability Processes.
- 3.1.6. Provide alternative dispute resolution supports and services.
- 3.1.7. Develop interagency referral and placement procedures.
- 3.1.8. Provide regular personnel development training sessions for LEA staff responsible for administering or delivering special education programs and services.
- 3.1.9. Provide the method and forms to enable the LEA to report to the SELPA on student enrollment and program expenditures. Establish and maintain a pupil information system.
- 3.1.10. Provide reasonable and appropriate technical assistance and information to the LEA upon request from LEA administration, including but not limited to:
 1. Evidenced Based Practices;
 2. Program Development and Improvement;



3. Individual cases;
 4. State complaints;
 5. Requests for due process mediation and hearing; and
 6. Appropriate programs and services for specific pupils.
- 3.1.11. Perform other services reasonable and necessary to the administration and coordination of the Local Plan.
- 3.2. **Governance.** Organize and maintain the governance structure of the Local Plan, including various committees and councils to monitor the operations of the SELPA and make recommendations for necessary revisions, including, but not limited to, the Local Plan, Allocation Plan and Policies.
 - 3.3. **Data Reporting.** Establish and maintain methods, timelines and forms to submit required federal, state and SELPA reports.
 - 3.4. **Public Meetings.** Schedule public meetings for purposes of governance activities and adopting the Annual Service Plan and Budget Plan.
 - 3.5. **Fiscal Responsibilities.** Receive, distribute, and oversee the expenditure of special education funds in accordance with federal and state regulations and the SELPA Allocation Plan.
 - 3.6. **Indemnification and Hold Harmless.** The SELPA shall be held harmless and indemnify EDCOE and the El Dorado County Superintendent of Schools for any costs of any kind or nature arising out of or related to this agreement other than as specifically contemplated herein, except to the extent that such cost arises from EDCOE and the El Dorado County Superintendent of Schools' negligence.

4. EDCOE DUTIES AND RESPONSIBILITIES

- 4.1. The Parties understand that EDCOE is designated in the Local Plan as the "responsible local agency" for the SELPA. EDCOE shall receive and distribute state and federal special education funds pursuant to the Allocation Plan, provide administrative support, and coordinate implementation of the Local Plan in accordance with state and federal law.
- 4.2. EDCOE shall not be responsible for any LEA or SELPA obligations or duties of any kind or nature except as explicitly set forth in this agreement.

5. TERMINATION OF THIS AGREEMENT AND PARTICIPATION IN SELPA

- 5.1. LEA may terminate this Agreement and participation in the SELPA in its sole discretion at the end of the fiscal year next occurring after having provided prior written notice to the SELPA, as follows:
 - 5.1.1. Prior initial written notice of intended termination to the SELPA at least twelve (12) months and one (1) day in advance of date of termination; and
 - 5.1.2. Final written notice of termination to the SELPA no more than six (6) months after the LEA's initial notice of intended termination.
- 5.2. The SELPA may initiate and complete termination of this Agreement and LEA's participation in the SELPA in its sole discretion in accordance with the process and



standards in SELPA Policies. The SELPA will provide prior written notice to the LEA at least twelve (12) months as follows:

- 5.2.1. Prior initial written notice of intended termination to the LEA at least twelve (12) months and one (1) day in advance of date of termination, and
- 5.2.2. Final written notice of termination to the LEA no more than six (6) months after the SELPA's initial notice of intended termination.
- 5.3. Specifically the timeline and process above does not preclude the SELPA from initiating and completing the termination process in less than 12 months or by June 30 of the year immediately preceding the summary termination, if the member demonstrates:
 - 5.3.1. Egregious disregard of state and federal requirements to provide services to students; and/or
 - 5.3.2. Demonstrated systemic and material issues that would cause the SELPA to make a finding of "going concern" based on leadership, programmatic and/or fiscal solvency that would cause SELPA to reasonably believe the SELPA may be harmed by the continued membership of the LEA.

The standards and timeline as determined by the SELPA shall, at a minimum, provide the LEA a reasonable opportunity for prior written notice and an opportunity to be heard by the Membership Appeals Committee.

6. DISPUTE RESOLUTION

Should a dispute arise relating to the responsibility for service provision, governance activities, the distribution of funding, if a party believes that an action taken by the CEO Council will create an undue hardship, or that the action taken exceeds the authority granted to the CEO Council within the Local Plan and/or state or federal statute, the aggrieved party may request a review of the action with the appropriate governing body or CDE as appropriate.

7. MUTUAL REPRESENTATIONS

- 7.1. **Authority and Capacity.** The Parties have the authority and capacity to enter into this agreement.
- 7.2. **Full Disclosure.** All information heretofore furnished by the Parties for purposes of or in connection with this Agreement or any transaction contemplated hereby or thereby is true and accurate in all material respects on the date as of which such information is stated.
- 7.3. **No Conflicts.** Neither party is under any restriction or obligation that may affect the performance of its obligations under this agreement.
- 7.4. **Enforceability.** This Agreement constitutes a legal, valid, and binding obligation, enforceable against the Parties according to its terms.



8. RESERVATION OF RIGHTS

The Parties hereto agree that nothing contained in this Agreement or otherwise shall be deemed to have waived or modified any of their rights or remedies under the law.

This agreement is entered into for the 2022-23 year and, absent a new agreement or termination, continues each year thereafter.

Executed on this 18 day of October, 2021.

In accordance with SELPA policy, Capital College & Career Academy,

[INSERT Charter LEA Name]

certifies that this agreement has been approved by the appropriate local board(s).

LEA

10/18/2021

Date

Kevin Dobson

Signature of CEO of Charter LEA

Kevin Dobson, Founder/ Executive Director

[PRINT CEO Name, Title]

EL DORADO COUNTY OFFICE OF EDUCATION

Date

Ed Manansala, Ed.D., Superintendent

El Dorado County Office of Education

Date

Ginese Quann, Executive Director

SELPA Programs

El Dorado County Office of Education

APPENDIX Q

CAPITAL COLLEGE & CAREER ACADEMY

CONFLICT OF INTEREST CODE

I. ADOPTION

In compliance with the Political Reform Act of 1974, California Government Code Section 87100, *et seq.*, Capital College & Career Academy hereby adopts this Conflict of Interest Code (“Code”), which shall apply to all governing board members and all other designated employees of Capital College & Career Academy (“Charter School”), as specifically required by California Government Code Section 87300.

II. DEFINITION OF TERMS

As applicable to a California public charter school, the definitions contained in the Political Reform Act of 1974, the regulations of the Fair Political Practices Commission, specifically California Code of Regulations Section 18730, and any amendments or modifications to the Act and regulations are incorporated by reference to this Code.

III. DESIGNATED EMPLOYEES

Employees of this Charter School, including governing board members, who hold positions that involve the making or participation in the making, of decisions that may foreseeably have a material effect on any financial interest, shall be “designated employees.” The designated positions are listed in “Exhibit A” attached to this policy and incorporated by reference herein.

IV. STATEMENT OF ECONOMIC INTERESTS: FILING

Each designated employee, including governing board members, shall file a Statement of Economic Interest (“Statement”) at the time and manner prescribed by California Code of Regulations, title 2, section 18730, disclosing reportable investments, interests in real property, business positions, and income required to be reported under the category or categories to which the employee’s position is assigned in “Exhibit A.”

An investment, interest in real property or income shall be reportable, if the business entity in which the investment is held, the interest in real property, the business position, or source of income may foreseeably be affected materially by a decision made or participated in by the designated employee by virtue of his or her position. The specific disclosure responsibilities assigned to each position are set forth in “Exhibit B.”

Statements Filed With the Charter School. All Statements shall be supplied by the Charter School. All Statements shall be filed with the Charter School. The Charter School’s filing official shall make and retain a copy of the Statement and forward the original to the County Board of Supervisors.

V. DISQUALIFICATION

No designated employee shall make, participate in making, or try to use his/her official position to influence any Charter School decision which he/she knows or has reason to know will have a reasonably foreseeable material financial effect, distinguishable from its effect on the public generally, on the official or a member of his or her immediate family.

VI. MANNER OF DISQUALIFICATION

A. Non-Governing Board Member Designated Employees

When a non-Governing Board member designated employee determines that he/she should not make a decision because of a disqualifying interest, he/she should submit a written disclosure of the disqualifying interest to his/her immediate supervisor. The supervisor shall immediately reassign the matter to another employee and shall forward the disclosure notice to the Executive Director, who shall record the employee's disqualification. In the case of a designated employee who is head of an agency, this determination and disclosure shall be made in writing to his/her appointing authority.

B. Governing Board Member Designated Employees

The Corporation shall not enter into a contract or transaction in which a director directly or indirectly has a material financial interest (nor shall the Corporation enter into any contract or transaction with any other corporation, firm, association, or other entity in which one or more of the Corporation's directors are directors and have a material financial interest).

EXHIBIT A

Designated Positions

<u>Designated Position</u>	<u>Assigned Disclosure Category</u>
Members of the Governing Board	1, 2
Executive Director	1, 2
Principal	1, 2
Chief Financial Officer	1, 2
Consultants/New Positions	*

*Consultants/New Positions shall be included in the list of designated positions and shall disclose pursuant to the broadest disclosure category in the code, subject to the following limitation:

The Executive Director may determine in writing that a particular consultant or new position, although a “designated position,” is hired to perform a range of duties that is limited in scope and thus is not required to fully comply with the disclosure requirements in this section. Such written determination shall include a description of the consultant’s or new position’s duties and, based upon that description, a statement of the extent of disclosure requirements. The Executive Director’s determination is a public record and shall be retained for public inspection in the same manner and location as this conflict of interest code (Government Code § 81008).

EXHIBIT B

Disclosure Categories

Category 1

Designated positions assigned to this category must report:

- a) Interests in real property that are located in whole or in part within a two-mile radius:
 - of any school district that has authorized a Capital College & Career Academy charter school, or
 - of any facility utilized by Capital College & Career Academy charter schools, or
 - of a proposed site for a Capital College & Career Academy facility.

- b) Investments and business positions in business entities, and sources of income (including gifts, loans, and travel payments) of the type that engage in the purchase or sale of real property or are engaged in building construction or design.

Category 2

Designated positions assigned to this category must report:

- a. Investments and business positions in business entities and sources of income (including receipt of gifts, loans, and travel payments) that are contractors engaged in the performance of work or services, or sources that manufacture, sell, repair, rent or distribute school supplies, books, materials, school furnishings or equipment of the type to be utilized by Capital College & Career Academy.

Category 3

Designated positions assigned to this category must report:

- a. Investments and business positions in business entities and sources of income (including receipt of gifts, loans, and travel payments) that are contractors engaged in the performance of work or services, or sources that manufacture, sell, repair, rent or distribute school supplies, books, materials, school furnishings or equipment of the type to be utilized by the designated position's department.

APPENDIX R

**ARTICLES OF INCORPORATION
OF
CAPITAL COLLEGE & CAREER ACADEMY**

I.

The name of the Corporation shall be Capital College & Career Academy.

II.

The Corporation is a nonprofit public benefit corporation and is not organized for the private gain of any person. It is organized under the Nonprofit Public Benefit Corporation Law for public and charitable purposes. The specific purposes for which this Corporation is organized are to manage, operate, guide, direct and promote one or more California public charter schools.

The Corporation is organized and operated exclusively for educational and charitable purposes pursuant to and within the meaning of Section 501(c)(3) of the Internal Revenue Code or the corresponding provision of any future United States Internal Revenue Law. Notwithstanding any other provision of these articles, the Corporation shall not, except to an insubstantial degree, engage in any other activities or exercise of power that do not further the purposes of the Corporation. The Corporation shall not carry on any other activities not permitted to be carried on by: (a) a corporation exempt from federal income tax under Section 501(c)(3) of the Internal Revenue Code, or the corresponding section of any future federal tax code; or (b) by a corporation, contributions to which are deductible under Section 170(c)(2) of the Internal Revenue Code, or the corresponding section of any future federal tax code.

III.

The name and address in the State of California of this Corporation's initial agent for service of process is:

Kevin Dobson
114 Santiago Avenue
Sacramento California, 95815

IV.

All corporate property is irrevocably dedicated to the purposes set forth in the second article above. No part of the net earnings of the Corporation shall inure to the benefit of, or be distributable to any of its directors, members, trustees, officers or other private persons except that the Corporation shall be authorized and empowered to pay reasonable compensation for services rendered, and to make payments and distributions in furtherance of the purposes set forth in Article II.

No substantial part of the activities of the Corporation shall consist of the carrying on of propaganda, or otherwise attempting to influence legislation, and the Corporation shall not participate in, or intervene in (including the publishing or distribution of statements) any political campaign on behalf of or in opposition to any candidate for public office.

Subject to the provisions of the nonprofit public benefit provisions of the Nonprofit Corporation Law of the State of California, and any limitations in the articles or bylaws relating to action to be approved by the members or by a majority of all members, if any, the activities

and affairs of this Corporation shall be conducted and all the powers shall be exercised by or under the direction of the board of directors.

The number of directors shall be as provided for in the bylaws. The bylaws shall prescribe the qualifications, mode of election, and term of office of directors.

V.

The authorized number and qualifications of members of the corporation, if any, the different classes of membership, the property, voting and other rights and privileges of members, and their liability for dues and assessments and the method of collection thereof, shall be set forth in the bylaws.

VI.

Upon the dissolution or winding up of the Corporation, its assets remaining after payment of all debts and liabilities of the Corporation, shall be distributed to a nonprofit fund, foundation, corporation or association which is organized and operated exclusively for educational, public or charitable purposes and which has established its tax exempt status under Section 501(c)(3) of the Internal Revenue Code, or the corresponding section of any future federal tax code, or shall be distributed to the federal government, or to a state or local government, for a public purpose.

Any such assets not so disposed of shall be disposed of by a court of competent jurisdiction of the county in which the principal office of the Corporation is then located, exclusively for such purposes or to such organization or organizations, as said court shall determine which are organized and operated exclusively for such purposes.

VII.

The initial street address and initial mailing address of the Corporation is:

114 Santiago Avenue, Sacramento California, 95815

Dated: 4/24/2019



Kevin Dobson, Incorporator

APPENDIX S



Board of Directors
Handbook

Initially Approved: *November 18, 2019*
Updated: June 28, 2021

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PREFACE

Board Governance Team

Stephanie Hannah

Chairperson

Tim Murphy

Vice-chair

Jacobe Caditz

Treasurer/ Secretary

John Belperio

Member

Timothy Blood

Member

Dan Dumke

Member

Ben Fell

Member

Ian McQuoid

Member

James Moore

Member

Mich Kiwan Gomez

Member

Ramon Hopkins

Member

Ken Wenham

Member

Deborah Wilder

Member

Executive Director

Kevin Dobson

STRATEGIC PLAN GOALS

- Students build depth of understanding in core concepts through hands-on, real-world learning
- The school environment cultivates students who are innovative, responsible, collaborative, critical thinkers, and leaders
- Our work culture promotes the continuous growth and learning of teachers, staff, and administrators.
- Parents are valued partners who strengthen our schools and programs.
- Our organization, in collaboration with community and business partners, enriches the learning experience for all students.

MEETING NORMS

- Clear expectations with the agenda being provided no later than 72 hours in advance.
- For action items requiring more depth and discussion the executive director will make every effort to provide an overview at least one week prior to the scheduled meeting.
- Mutual respect and holding one another accountable to ensure a productive meeting.
- Robert's Rules of voting will be used during meetings.
- Make sure each member's voice is heard.
- Turn off cell phones or put on vibrate.
- For meetings, be present and be prepared.
- Confidential items will remain confidential.
- The team operates with trust.
- The executive team and board puts aside personal issues.
- All meetings are student centered.

Capital College & Career Academy Code of Ethics

As a member of the board you are a tangible bridge between the community and our curriculum. As such, our board members should embody the core competencies expected of all CCCA students.

Innovation

1. I will continuously seek out opportunities for CCCA to be innovative
2. I will seek out opportunities for new and fresh perspectives
3. I will be receptive to new ideas and listen with an open mind
4. I will seek continuing educational opportunities to enhance my ability to lead effectively

Responsibility

1. I will be aware of my role as a public official and will consistently make decisions with integrity
2. I recognize that my role is to be responsive to the community CCCA serves
3. I will make no personal promises or take private action that may compromise my role and responsibilities
4. I will act in accordance with the CCCA bylaws and policies; including the Conflict of Interest Policy
5. I will base my decisions on fact rather than supposition, opinion, or public favor
6. I will not disclose confidential information
7. I will come to board meetings prepared

Collaboration

1. I will seek understanding and as a result make decisions that are fair and equitable
2. I will treat others with the respect I wish for myself
3. I will be accountable to the boards opinions not my own
4. I will share my views while consistently working for consensus
5. I will respect the majority decision of the board
6. I will refuse to surrender judgement to any individual or group at the expense of CCCA as a whole

Critical Thinking

1. I will focus on the Board's responsibilities of strategic planning, policymaking, and evaluation
2. I will work tirelessly to ensure my decisions are guided by what is best and equitable for all students
3. I will align my actions to always serve in the best interest of our students and families

Leadership

1. I will be accountable to the public by accurately representing progress accurately
2. I will work to ensure prudent, equitable, and accountable use of CCCA resources
3. I will tell the truth
4. I will uphold all applicable laws, rules, policies, and governance procedure

About

1. About

1.1. Definitions: As used in this Board of Directors Handbook, the terms set forth below shall have the following meanings:

- “CCCA” or “school” shall mean Capital College & Career Academy
- “Member” shall mean a person who is a member of CCCA as set forth in the CCCA bylaws
- “Board” shall mean the board of directors of CCCA
- “Administration” shall mean school personnel who participate in the day-to-day management of school operations (such as the Principal or Executive Director)
- “Faculty” shall mean instructional personnel (such as teachers and educational assistants)
- “Staff” shall mean school personnel who are not members of the board, administration, or faculty.

1.2 FAQ- Adapted from resources *provided by Procopio, Cory, Hargreaves & Savitch LLP*

➤ **Can a board member participate in a meeting via cell phone?**

Yes, under certain circumstances. Assuming your bylaws accommodate telephonic participation, a board member may participate from a fixed, publicly accessible location. The meeting notice must describe the telephonic participation and identify the location, including a full address and room number, as may be applicable. The location must have technology, such as a speakerphone, to enable the public to participate, and the agenda must allow public participation from that location. A quorum must be physically present within the school’s jurisdiction (i.e., the State of California).

➤ **Can the board add an additional agenda item after the meeting notice deadline?**

Yes, under certain circumstances. If two-thirds of the members present (or all members if less than two-thirds are present) make a factual finding that there is need for immediate action and the need “came to the attention of the local agency subsequent to the agenda being posted.” This exception requires urgency. The board should not consider the additional item if the board or the staff knew about the urgency before the agenda was posted.

TIP: If no urgency (e.g., the matter was inadvertently not noticed), you could notice the item as a separate special meeting at same date, time

and place, so long as you comply with the 24-hour notice period for a special meeting.

➤ **Do we have to post Board agenda on our school website?**

Yes, if you have one. If the charter school has an internet website, board agendas must be posted on it in addition to the publicly accessible location(s) where you already post agendas.

➤ **Some of our board members are designated as “non-voting”. Is that OK?**

No. You’re either a board member or you’re not. Other persons who are staff to the board, such as principals or business officials, may participate in board meetings, but they are not “board members” if they do not have a right to vote. You may need to revise your bylaws and conduct your meetings accordingly.

➤ **Are board committees subject to the Brown Act?**

Usually, decision making and advisory committees are subject to the Brown Act when created by the board, charter, or bylaws, except for non-standing advisory only committees composed solely of less than a quorum of board members.

TIP: An advisory committee formed or called by the principal or executive director (i.e., not the board) is generally not subject to Brown Act.

The School

2. The School

2.1. Vision and Mission Statements

- **Mission:** All students will be enrolled in a post-secondary institution or employed within six months of graduation
- **Vision:** Our vision is to create an educational environment where students are college accelerated and job prepared. Students will transition into adulthood with the skills and experience required to make a living wage. The curriculum at CCCA will provide a life-changing opportunity for students who, upon graduation will have the real-world experience and the tangible skills that will allow them to succeed not just today but for years down the road.

2.2. School Legal Status

- CCCA is seeking to be a California Charter School. Articles of Incorporation were filed with the California Secretary of State's office on April 26, 2019. The Internal Revenue Service issued a determination letter recognizing CCCA's tax exempt status under Section 501(c)(3) of the Internal Revenue Code 1986. Under the Charter Schools Act, CCCA is a public school within the District, and its status, as a nonprofit corporation does not affect its status as a public school. However, for governance and administrative purposes, CCCA operates as a California nonprofit corporation

2.3. Nondiscrimination

- CCCA affirms that no person shall, on the basis of race, creed, color, age, national origin, religion, gender, disability marital status, or sexual orientation be excluded from participation in, be denied the benefit of, or be subjected to discrimination under any educational program or activity, including, but not limited to, employment or enrollment.

2.4. Articles of Incorporation

- The CCCA Articles of Incorporation are attached as appendix "A" and shall guide the structure and governance of CCCA

2.5. Bylaws

- The CCCA Bylaws are attached as appendix "B." The board shall make policies that are reflective of and consistent with the Bylaws.

2.6. Annual Meetings

- All meetings of the Board of Directors and its committees shall be called, noticed, and held in compliance with the provisions of the Brown Act. The Board of Directors shall meet annually for the purpose of organization, appointment of officers, and the transaction of such other business as may properly be brought before the meeting. The meeting shall be held at a time, date, and place as noticed by the Board of Directors in accordance with the Brown Act.

The Board

3. The Board

3.1. Board Code of Ethics

- As a member of the board of directors each director has a responsibility to promote the best interests of Capital College & Career Academy and to that end, shall adhere to the code of ethics included in the preface of this Board of Directors Handbook

3.2. Decision Making

- Two principles underlie all decisions made by the board, administration, faculty, and staff:
 - CCCA's charter belongs to the Community; and
 - All actions shall fall within the parameters and uphold the principles of the vision and mission statements.
- Accordingly, in making any decision the board, administration, faculty, and staff shall consider the decision in the context of CCCA's vision and mission statements and from the members' perspective, always keeping in mind that parents should have a meaningful voice in their child's education.

3.3. Board Position Description

- Board officers are elected at the annual meeting
- No Director may serve more than three consecutive terms.
- Board Chair
 - The board chair assumes responsibility for the overall functioning of the board. He/she facilitates board meetings, oversees the work of the committees, and works most closely with the school leader. Often, the board chair also has special authority and is the point of contact for the school's authorizer (this would take effect after the charter petition is approved).
 - The board chair also plays an extremely important role on the interpersonal side of the board. He/she must be responsive to other board members' views, maintain a collegial atmosphere, manage different personalities and perspectives, and work hard to foster a trusting yet candid relationship with the school leader.

Ultimately, the board chair must monitor and nurture positive dynamics by creating an environment in which board members feel engaged, included, respected, and able to make a positive contribution.

➤ Vice-Chair

- In the event that the board chair is absent, temporarily unable to perform his/her responsibilities, or permanently unable to continue in the position, the vice-chair acts as the board chair.
- Under normal circumstances, the vice-chair assists with the overall functioning of the board and serves as an advisor and deputy to the chair.

➤ Secretary

- Overall, the secretary is responsible for ensuring that accurate documentation exists to meet legal requirements and for the authorizer “to determine when, how, and by whom the board's business was conducted.

➤ Treasurer

- The treasurer of a charter school board oversees all matters related to the school's finances, property, and budget. Board members who serve as treasurer typically chair the finance committee, although not always. Ideally, the treasurer has a strong working relationship with the school's Executive Director. He or she also oversees the school's leadership in the areas of money management and compliance.

3.4. Public Attendance at Board Meetings

- The board serves at the pleasure of, and represents, the members. Therefore, the board desires to provide opportunities for any member to express interest in and concern for the school. Accordingly, all members, as well as members of the community, are cordially invited to attend all open meetings of the board. A time for public comment shall be a part of every regular board meeting.
- Regular Meetings of the Board of Directors, including annual meetings, shall be held at such times and places as may from time to time be fixed by the Board of Directors. At least 72 hours before a regular meeting, the

Board of Directors, or its designee shall post an agenda containing a brief general description of each item of business to be transacted or discussed at the meeting

- Special Meetings of the Board of Directors for any purpose may be called at any time by the Chairman of the Board of Directors, if there is such an officer, or a majority of the Board of Directors. If a Chairman of the Board has not been elected then the Executive Director is authorized to call a special meeting in place of the Chairman of the Board. The party calling a special meeting shall determine the place, date, and time thereof.
- If a person requests the board take a particular action, the specific action being requested should be in the written document submitted to the board by the person.
- If so requested by any director, the person may present additional information or provide clarification when the agenda item is discussed.

3.5. Board Election Procedures

- The board shall determine any authority or responsibilities of the Board Election Committee (BEC) in addition to those stated within this policy annually upon commission.
 - The BEC shall consist of the following members: Executive Director, Vice Chair, non-board member, and one director at large
 - The BEC will meet at least annually to evaluate the continuation of existing board members and review new applications
 - The Vice Chair will be the chairperson of the committee.
 - No board candidate, spouse of a board candidate, or director running for reelection other than the vice chair, shall be a member of the BEC.
 - The BEC will conduct a formal interview of potential candidates and make their recommendations to the board
- Candidacy shall be by self-nomination.
 - Interested candidates must submit a written letter of interest to the Executive Director no less than 30 days prior to nominations with a formal resume
 - Nominations will occur during the fiscal year, prior to June 30

- If a director is elected to a position outside of the July meeting the end of their term will still end at the conclusion of the second fiscal year of their service.
 - If a director is stepping down the newly elected director's term may coincide with the original director's term
 - Any member, who is not employed by CCCA and meets the qualifications outlined in the "Capital College & Career Academy Board of Directors Handbook," may seek election as a director.
 - All candidates must commit to sign the "Capital College & Career Academy Board of Directors Handbook" upon nomination.
 - The BEC may choose to meet with all candidates whether they are new or have prior board service
- Vacancies. The board may choose to, but need not, accept a director's resignation for it to become effective. A director may be removed in accordance with the Bylaws
- Except as provided below, any director may resign by giving written notice to the Chairman of the Board, if any, or to the Executive Director, or the Secretary, or to the Board. The resignation shall be effective when the notice is given unless the notice specifies a later time for the resignation to become effective. If a director's resignation is effective at a later time, the Board of Directors may elect a successor to take office as of the date when the resignation becomes effective.
 - Director may not resign if no director remains except on notice to the California Attorney General.

3.6. Policy Making

- The board shall be solely responsible for adopting, revising, and repealing policies for CCCA. Policy action by the board shall be accomplished as set forth in the bylaws and as described below. Any policy action approved by the board may be reversed by a majority vote of the board at a regular or special meeting.
- Only a director may motion the board to adopt, revise, or repeal a CCCA policy ("policy change"). Recommendations for a policy change may be made by any member, member of the administration, faculty, or staff, or member of the community may be made to the board by submitting said recommendation through the Executive Director

3.7. Director Conflict of Interest

- A director may not serve simultaneously on the board and as a member of the administration, faculty, or staff of the school.
- Any contract with the school involving a director or a director's family member shall be approved by the full board with the conflicted member abstaining.
- Each director is responsible to disclose to the board any circumstances that could involve a potential conflict of interest.
- Each director must complete Form 700 in compliance with state law.

3.8. Board Review of Administrative Procedures

- Administrative policies and regulations need not be reviewed or approved by the board in advance of issuance except as required by law. However, when there is a potential for strong member, student, faculty, or staff reaction, the policy or regulation should be approved by the board in advance.
- Administrative policies should reference existing board policies.
- The board reserves the right to review administrative policies at its discretion. However, the board shall not substitute its judgment for that of the Principal and shall require the Principal to revise or withdraw any administrative policies proposed or issued only when, in the board's judgment, such policies are inconsistent with the board's policies, District's policies, or applicable law.

3.9. Board Committees and Advisory Committees

- Meetings and actions of committees of the Board of Directors shall be governed by, held, and taken under the provisions of the bylaws concerning meetings, other Board of Directors' actions, and the Brown Act, if applicable, except that the time for general meetings of such committees and the calling of special meetings of such committees may be set either by Board of Directors' resolution or, if none by resolution of the committee.

- Minutes of each meeting shall be kept and shall be filed with the corporate records.
 - The Board of Directors may adopt rules for the governance of any committee as long as the rules are consistent with the CCCA bylaws.
- The board may commission advisory committees to the board. The advisory committees shall meet at such times as the board shall determine or within their own requirements if given the authority to so designate when commissioned.
- The advisory committee shall consider, advise upon, and make recommendations to the board with respect to policies of CCCA or to pursue goals, goods, or services for CCCA in accordance with the vision and mission statements.
 - At least one director shall serve on each advisory committee, but need not serve as the chairperson of the advisory committee. Additional members or members to fill vacancies may be appointed at any regular or special meeting of the board or in such a manner as determined by the board upon the commissioning of the advisory committee.

3.10. Removal of a Board Member

- Without prejudice to the rights of any officer under an employment contract, the Board of Directors may remove any officer with or without cause.

3.11. Board Communication Plan

- Board of Directors Website
- The Board of Directors section of the CCAA website shall be the primary means of distribution of information. The website shall contain announcements of upcoming regular meetings as well as all public documents from the Board in accordance with the existing policies, bylaws and the Brown Act.
- Board Meeting Minutes
- Prior to the next regularly scheduled board meeting, the secretary, or their designee, shall provide signed, written minutes of the meeting for electronic distribution.

- Board of Directors Packet
 - Prior to each regular meeting of the Board, an agenda and any written reports shall be made available in electronic format not less than 7 calendar days prior to the scheduled meeting.

Appendix

4. Appendix

4.1. Articles of Incorporation

ARTICLES OF INCORPORATION
OF
CAPITAL COLLEGE & CAREER ACADEMY

Emr
FILED
Secretary of State
State of California

APR 26 2019

1cc

The name of the Corporation shall be Capital College & Career Academy.

I.

II.

The Corporation is a nonprofit public benefit corporation and is not organized for the private gain of any person. It is organized under the Nonprofit Public Benefit Corporation Law for public and charitable purposes. The specific purposes for which this Corporation is organized are to manage, operate, guide, direct and promote one or more California public charter schools.

The Corporation is organized and operated exclusively for educational and charitable purposes pursuant to and within the meaning of Section 501(c)(3) of the Internal Revenue Code or the corresponding provision of any future United States Internal Revenue Law. Notwithstanding any other provision of these articles, the Corporation shall not, except to an insubstantial degree, engage in any other activities or exercise of power that do not further the purposes of the Corporation. The Corporation shall not carry on any other activities not permitted to be carried on by: (a) a corporation exempt from federal income tax under Section 501(c)(3) of the Internal Revenue Code, or the corresponding section of any future federal tax code; or (b) by a corporation, contributions to which are deductible under Section 170(c)(2) of the Internal Revenue Code, or the corresponding section of any future federal tax code.

III.

The name and address in the State of California of this Corporation's initial agent for service of process is:

Kevin Dobson
114 Santiago Avenue
Sacramento California, 95815

IV.

All corporate property is irrevocably dedicated to the purposes set forth in the second article above. No part of the net earnings of the Corporation shall inure to the benefit of, or be distributable to any of its directors, members, trustees, officers or other private persons except that the Corporation shall be authorized and empowered to pay reasonable compensation for services rendered, and to make payments and distributions in furtherance of the purposes set forth in Article II.

No substantial part of the activities of the Corporation shall consist of the carrying on of propaganda, or otherwise attempting to influence legislation, and the Corporation shall not participate in, or intervene in (including the publishing or distribution of statements) any political campaign on behalf of or in opposition to any candidate for public office.

Subject to the provisions of the nonprofit public benefit provisions of the Nonprofit Corporation Law of the State of California, and any limitations in the articles or bylaws relating to action to be approved by the members or by a majority of all members, if any, the activities

and affairs of this Corporation shall be conducted and all the powers shall be exercised by or under the direction of the board of directors.

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The number of directors shall be as provided for in the bylaws. The bylaws shall prescribe the qualifications, mode of election, and term of office of directors.

V.

The authorized number and qualifications of members of the corporation, if any, the different classes of membership, the property, voting and other rights and privileges of members, and their liability for dues and assessments and the method of collection thereof, shall be set forth in the bylaws.

VI.

Upon the dissolution or winding up of the Corporation, its assets remaining after payment of all debts and liabilities of the Corporation, shall be distributed to a nonprofit fund, foundation, corporation or association which is organized and operated exclusively for educational, public or charitable purposes and which has established its tax exempt status under Section 501(c)(3) of the Internal Revenue Code, or the corresponding section of any future federal tax code, or shall be distributed to the federal government, or to a state or local government, for a public purpose. Any such assets not so disposed of shall be disposed of by a court of competent jurisdiction of the county in which the principal office of the Corporation is then located, exclusively for such purposes or to such organization or organizations, as said court shall determine which are organized and operated exclusively for such purposes.

VII.

The initial street address and initial mailing address of the Corporation is:

114 Santiago Avenue, Sacramento California, 95815

Dated: 4/24/2019



Kevin Dobson, Incorporator

RECORDED IN THE OFFICE OF THE CLERK
OF THE CITY AND COUNTY OF SACRAMENTO
ON APRIL 24, 2019
AT 11:45 AM
BY KEVIN DOBSON
FOR CAPITAL COLLEGE & CAREER ACADEMY
114 SANTIAGO AVENUE
SACRAMENTO, CALIFORNIA 95815



I hereby certify that the foregoing
transcript of 2 page(s)
is a full, true and correct copy of the
original record in the custody of the
California Secretary of State's office.

MAY 06 2019

Date:

A handwritten signature in blue ink that appears to read "Alex Padilla".

ALEX PADILLA, Secretary of State

4.2. Bylaws

BYLAWS
OF
CAPITAL COLLEGE & CAREER ACADEMY
(A California Nonprofit Public Benefit Corporation)

ARTICLE I
NAME

Section 1. NAME. The name of this Corporation is Capital College & Career Academy.

ARTICLE II
PRINCIPAL OFFICE OF THE CORPORATION

Section 1. PRINCIPAL OFFICE OF THE CORPORATION. The principal office for the transaction of the activities and affairs of the Corporation is 114 Santiago Avenue, Sacramento, State of California. The Board of Directors may change the location of the principal office. Any such change of location must be noted by the Secretary on these bylaws opposite this Section; alternatively, this Section may be amended to state the new location.

Section 2. OTHER OFFICES OF THE CORPORATION. The Board of Directors may at any time establish branch or subordinate offices at any place or places where the Corporation is qualified to conduct its activities.

ARTICLE III
GENERAL AND SPECIFIC PURPOSES; LIMITATIONS

Section 1. GENERAL AND SPECIFIC PURPOSES. The purpose of the Corporation is to manage, operate, guide, direct and promote the Capital College & Career Academy ("Charter School"), a California public charter school. Also in the context of these purposes, the Corporation shall not, except to an insubstantial degree, engage in any other activities or exercise of power that do not further the purposes of the Corporation.

The Corporation shall not carry on any other activities not permitted to be carried on by: (a) a corporation exempt from federal income tax under section 501(c)(3) of the Internal Revenue Code, or the corresponding section of any future federal tax code; or (b) a corporation, contributions to which are deductible under section 170(c)(2) of the Internal Revenue Code, or the corresponding section of any future federal tax code. No substantial part of the activities of the Corporation shall consist of the carrying on of propaganda, or otherwise attempting to influence legislation, and the Corporation shall not participate in, or intervene in (including the publishing or distributing of statements) any political campaign on behalf of or in opposition to any candidate for public office.

ARTICLE IV
CONSTRUCTION AND DEFINITIONS

Section 1. CONSTRUCTION AND DEFINITIONS. Unless the context

indicates otherwise, the general provisions, rules of construction, and definitions in the California Nonprofit Corporation Law shall govern the construction of these bylaws. Without limiting the generality of the preceding sentence, the masculine gender includes the feminine and neuter, the singular includes the plural, and the plural includes the singular, and the term "person" includes both a legal entity and a natural person.

ARTICLE V DEDICATION OF ASSETS

Section 1. **DEDICATION OF ASSETS.** The Corporation's assets are irrevocably dedicated to public benefit purposes as set forth in the charter governing the charter schools operated as or by the Corporation. No part of the net earnings, properties, or assets of the Corporation, on dissolution or otherwise, shall inure to the benefit of any private person or individual, or to any director or officer of the Corporation. On liquidation or dissolution, all properties and assets remaining after payment, or provision for payment, of all debts and liabilities of the Corporation shall be distributed to a nonprofit fund, foundation, corporation or association which is organized and operated exclusively for educational, public or charitable purposes and which has established its tax exempt status under Section 501(c)(3) of the Internal Revenue Code, or the corresponding section of any future federal tax code, or shall be distributed to the federal government, or to a state or local government, for a public purpose.

ARTICLE VI CORPORATION WITHOUT MEMBERS

Section 1. **CORPORATION WITHOUT MEMBERS.** The Corporation shall have no voting members within the meaning of the Nonprofit Corporation Law.

ARTICLE VII BOARD OF DIRECTORS

Section 1. **GENERAL POWERS.** Subject to the provisions and limitations of the California Nonprofit Public Benefit Corporation Law and any other applicable laws, and subject to any limitations of the articles of incorporation or bylaws, the Corporation's activities and affairs shall be managed, and all corporate powers shall be exercised by or under the direction of the Board of Directors ("Board").

Section 2. **SPECIFIC POWERS.** Without prejudice to the general powers set forth in Section 1 of this article, but subject to the same limitations, the Board of Directors shall have the power to:

- a. Appoint and remove, at the pleasure of the Board of Directors, all corporate officers, agents, and employees; prescribe powers and duties for them as are consistent with the law, the articles of incorporation, and these bylaws; fix their compensation; and require from them security for faithful service.
- b. Change the principal office or the principal business office in California from one location to another; cause the Corporation to be qualified to conduct its activities in any other state, territory, dependency, or country; conduct its activities in or outside California.

- c. Borrow money and incur indebtedness on the Corporation's behalf and cause to be executed and delivered for the Corporation's purposes, in the corporate name, promissory notes, bonds, debentures, deeds of trust, mortgages, pledges, hypothecations, and other evidences of debt and securities.
- d. Adopt and use a corporate seal.

Section 3. APPOINTED DIRECTORS AND TERMS. The number of directors shall be no less than five (5) and no more than fifteen (15), unless changed by amendments to these bylaws. All directors shall have full voting rights, including any representative appointed by the charter authorizer as consistent with Education Code Section 47604(b). If the charter authorizer designates a representative to serve on the Board of Directors, the Board of Directors may appoint an additional director to ensure an odd number of Board members. All directors, except for the representative designated by the charter authorizer, shall be appointed by the existing Board of Directors.

Except for the initial Board of Directors, each director shall hold office unless otherwise removed from office or by board action in accordance with these bylaws for two (2) year(s) and until a successor director has been designated and qualified. Terms for the initial Board of Directors shall be three (3) seats for a term of two (2) years and three (3) seats for a term of three (3) years. The initial Board of Directors shall be as follows:

<u>NAME</u>	<u>EXPIRATION OF TERM</u>
Jordan Blair	2022
Jerry Bell	2021
Timothy Blood	2022
Edith Espinoza	2021
Linda Farley	2021
James Moore	2022

Section 4. RESTRICTION ON INTERESTED PERSONS AS DIRECTORS. No persons serving on the Board of Directors may be interested persons. An interested person is (a) any person currently being compensated by the Corporation for services rendered to it within the previous 12 months, whether as a full-time or part-time employee, independent contractor, or otherwise, excluding any reasonable compensation paid to a director as director; and (b) any brother, sister, ancestor, descendant, spouse, brother-in-law, sister-in-law, son-in-law, daughter-in-law, mother-in-law, or father-in-law of such person. The Board may adopt other policies circumscribing potential conflicts of interest.

Section 5. DIRECTORS' TERMS. Each director shall hold office unless otherwise removed from office in accordance with these bylaws for two (2) years and until a successor director has been designated and qualified. No director may serve more than three (3) consecutive terms.

Section 6. NOMINATIONS BY COMMITTEE. The Chairman of the Board of Directors or, if none, the Executive Director will appoint a committee to designate qualified candidates for election to the Board of Directors at least thirty (30) days before the date of any

election of directors. The nominating committee shall make its report at least seven (7) days before the date of such designation or at such other time as the Board of Directors may set and the Secretary shall forward to each Board member, with the notice of meeting required by these bylaws, a list of all candidates nominated by committee.

Section 7. EVENTS CAUSING VACANCIES ON BOARD. A vacancy or vacancies on the Board of Directors shall occur in the event of (a) the death, resignation, or removal of any director; (b) the declaration by resolution of the Board of Directors of a vacancy in the office of a director who has been convicted of a felony, declared of unsound mind by a court order, or found by final order or judgment of any court to have breached a duty under California Nonprofit Public Benefit Corporation Law, Chapter 2, Article 3; or (c) the increase of the authorized number of directors.

Section 8. RESIGNATION OF DIRECTORS. Except as provided below, any director may resign by giving written notice to the Chairman of the Board, if any, or to the Executive Director, or the Secretary, or to the Board. The resignation shall be effective when the notice is given unless the notice specifies a later time for the resignation to become effective. If a director's resignation is effective at a later time, the Board of Directors may elect a successor to take office as of the date when the resignation becomes effective.

Section 9. DIRECTOR MAY NOT RESIGN IF NO DIRECTOR REMAINS. Except on notice to the California Attorney General, no director may resign if the Corporation would be left without a duly elected director or directors.

Section 10. REMOVAL OF DIRECTORS. Any director, except for the representative appointed by the charter authorizer, may be removed, with or without cause, by the vote of the majority of the members of the entire Board of Directors at a special meeting called for that purpose, or at a regular meeting, provided that notice of that meeting and such removal are given in compliance with the provisions of the Ralph M. Brown Act (Chapter 9 (commencing with Section 54950) of Division 2 of Title 5 of the Government Code) as said chapter may be modified by subsequent legislation ("Brown Act"). The representative designated by the charter authorizer may be removed without cause by the charter authorizer or with the written consent of the charter authorizer. Any vacancy caused by the removal of a director shall be filled as provided in Section 12.

Section 11. VACANCIES FILLED BY BOARD. Vacancies on the Board of Directors, except for the representative appointed by the charter authorizer, may be filled by approval of the Board of Directors or, if the number of directors then in office is less than a quorum, by (a) the affirmative vote of a majority of the directors then in office at a regular or special meeting of the Board, or (b) a sole remaining director. A vacancy in the seat of the representative of the charter authorizer shall be filled by the charter authorizer.

Section 12. NO VACANCY ON REDUCTION OF NUMBER OF DIRECTORS. Any reduction of the authorized number of directors shall not result in any directors being removed before his or her term of office expires.

Section 13. PLACE OF BOARD OF DIRECTORS MEETINGS. Meetings shall be held at the principal office of the Corporation unless the Board of Directors designates another location in accordance with these bylaws. The Board of Directors may also designate that a

meeting be held at any place within the granting agency's boundaries designated in the notice of the meeting. All meetings of the Board of Directors shall be called, held and conducted in accordance with the terms and provisions of the Brown Act.

Section 14. MEETINGS; ANNUAL MEETINGS. All meetings of the Board of Directors and its committees shall be called, noticed, and held in compliance with the provisions of the Brown Act. The Board of Directors shall meet annually for the purpose of organization, appointment of officers, and the transaction of such other business as may properly be brought before the meeting. This meeting shall be held at a time, date, and place as noticed by the Board of Directors in accordance with the Brown Act.

Section 15. REGULAR MEETINGS. Regular meetings of the Board of Directors, including annual meetings, shall be held at such times and places as may from time to time be fixed by the Board of Directors. At least 72 hours before a regular meeting, the Board of Directors, or its designee shall post an agenda containing a brief general description of each item of business to be transacted or discussed at the meeting.

Section 16. SPECIAL MEETINGS. Special meetings of the Board of Directors for any purpose may be called at any time by the Chairman of the Board of Directors, if there is such an officer, or a majority of the Board of Directors. If a Chairman of the Board has not been elected then the Executive Director is authorized to call a special meeting in place of the Chairman of the Board. The party calling a special meeting shall determine the place, date, and time thereof.

Section 17. NOTICE OF SPECIAL MEETINGS. In accordance with the Brown Act, special meetings of the Board of Directors may be held only after twenty-four (24) hours notice is given to the public through the posting of an agenda. Directors shall also receive at least twenty-four (24) hours notice of the special meeting, in the following manner:

- a. Any such notice shall be addressed or delivered to each director at the director's address as it is shown on the records of the Corporation, or as may have been given to the Corporation by the director for purposes of notice, or, if an address is not shown on the Corporation's records or is not readily ascertainable, at the place at which the meetings of the Board of Directors are regularly held.
- b. Notice by mail shall be deemed received at the time a properly addressed written notice is deposited in the United States mail, postage prepaid. Any other written notice shall be deemed received at the time it is personally delivered to the recipient or is delivered to a common carrier for transmission, or is actually transmitted by the person giving the notice by electronic means to the recipient. Oral notice shall be deemed received at the time it is communicated, in person or by telephone or wireless, to the recipient or to a person at the office of the recipient whom the person giving the notice has reason to believe will promptly communicate it to the receiver.

The notice of special meeting shall state the time of the meeting, the place, and the general nature of the business proposed to be transacted at the meeting. No business, other than the business the general nature of which was set forth in the notice of the meeting, may be transacted at a special meeting.

Section 18. QUORUM. A majority of the directors then in office shall constitute a quorum. All acts or decisions of the Board of Directors will be by majority vote of the directors

in attendance, based upon the presence of a quorum. Should there be less than a majority of the directors present at the inception of any meeting, the meeting shall be adjourned. Directors may not vote by proxy. The vote or abstention of each Board member present for each action taken shall be publicly reported.

Section 19. TELECONFERENCE MEETINGS. Members of the Board of Directors may participate in teleconference meetings so long as all of the following requirements in the Brown Act are complied with:

- a. At a minimum, a quorum of the members of the Board of Directors shall participate in the teleconference meeting from locations within the boundaries of the granting agency in which the Corporation operates;
- b. All votes taken during a teleconference meeting shall be by roll call;
- c. If the Board of Directors elects to use teleconferencing, it shall post agendas at all teleconference locations with each teleconference location being identified in the notice and agenda of the meeting;
- d. All locations where a member of the Board of Directors participates in a meeting via teleconference must be fully accessible to members of the public and shall be listed on the agenda;¹
- e. Members of the public must be able to hear what is said during the meeting and shall be provided with an opportunity to address the Board of Directors directly at each teleconference location; and
- f. Members of the public attending a meeting conducted via teleconference need not give their name when entering the conference call.²

Section 20. ADJOURNMENT. A majority of the directors present, whether or not a quorum is present, may adjourn any Board of Directors meeting to another time or place. Notice of such adjournment to another time or place shall be given, prior to the time scheduled for the continuation of the meeting, to the directors who were not present at the time of the adjournment, and to the public in the manner prescribed by the Brown Act.

Section 21. COMPENSATION AND REIMBURSEMENT. Directors may not receive compensation for their services as directors or officers, only such reimbursement of expenses as the Board of Directors may establish by resolution to be just and reasonable as to the Corporation at the time that the resolution is adopted.

Section 22. CREATION AND POWERS OF COMMITTEES. The Board, by resolution adopted by a majority of the directors then in office, may create one or more committees of the Board, each consisting of two or more directors and no one who is not a director, to serve at the pleasure of the Board. Appointments to committees of the Board of

¹ This means that members of the Board of Directors who choose to utilize their homes or offices as teleconference locations must open these locations to the public and accommodate any members of the public who wish to attend the meeting at that location.

² The Brown Act prohibits requiring members of the public to provide their names as a condition of attendance at the meeting.

Directors shall be by majority vote of the directors then in office. The Board of Directors may appoint one or more directors as alternate members of any such committee, who may replace any absent member at any meeting. Any such committee shall have all the authority of the Board, to the extent provided in the Board of Directors' resolution, except that no committee may:

- a. Take any final action on any matter that, under the California Nonprofit Public Benefit Corporation Law, also requires approval of the members or approval of a majority of all members;
- b. Fill vacancies on the Board of Directors or any committee of the Board;
- c. Fix compensation of the directors for serving on the Board of Directors or on any committee;
- d. Amend or repeal bylaws or adopt new bylaws;
- e. Amend or repeal any resolution of the Board of Directors that by its express terms is not so amendable or subject to repeal;
- f. Create any other committees of the Board of Directors or appoint the members of committees of the Board;
- g. Expend corporate funds to support a nominee for director if more people have been nominated for director than can be elected; or
- h. Approve any contract or transaction to which the Corporation is a party and in which one or more of its directors has a material financial interest.

The Board may also create one or more advisory committees composed of directors and non-directors. It is the intent of the Board to encourage the participation and involvement of faculty, staff, parents, students and administrators through attending and participating in open committee meetings. The Board may establish, by resolution adopted by a majority of the directors then in office, advisory committees to serve at the pleasure of the Board.

Section 23. MEETINGS AND ACTION OF COMMITTEES. Meetings and actions of committees of the Board of Directors shall be governed by, held, and taken under the provisions of these bylaws concerning meetings, other Board of Directors' actions, and the Brown Act, if applicable, except that the time for general meetings of such committees and the calling of special meetings of such committees may be set either by Board of Directors' resolution or, if none, by resolution of the committee. Minutes of each meeting shall be kept and shall be filed with the corporate records. The Board of Directors may adopt rules for the governance of any committee as long as the rules are consistent with these bylaws. If the Board of Directors has not adopted rules, the committee may do so.

Section 24. NON-LIABILITY OF DIRECTORS. No director shall be personally liable for the debts, liabilities, or other obligations of the Corporation.

Section 25. COMPLIANCE WITH LAWS GOVERNING STUDENT RECORDS. The Charter School and the Board of Directors shall comply with all applicable provisions of the

Family Education Rights Privacy Act (“FERPA”) as set forth in Title 20 of the United States Code Section 1232g and attendant regulations as they may be amended from time to time.

ARTICLE VIII **OFFICERS OF THE CORPORATION**

Section 1. OFFICES HELD. The officers of the Corporation shall be a Chairman, a Secretary, and a Treasurer. The Corporation, at the Board's direction, may also have a Vice-Chair. The officers, in addition to the corporate duties set forth in this Article VIII, shall also have administrative duties as set forth in any applicable contract for employment or job specification.

Section 2. DUPLICATION OF OFFICE HOLDERS. Any number of offices may be held by the same person, except that neither the Secretary nor the Treasurer may serve concurrently as either the Executive Director or the Chairman of the Board.

Section 3. RESIGNATION OF OFFICERS. Any officer may resign at any time by giving written notice to the Board. The resignation shall take effect on the date the notice is received or at any later time specified in the notice. Unless otherwise specified in the notice, the resignation need not be accepted to be effective. Any resignation shall be without prejudice to any rights of the Corporation under any contract to which the officer is a party.

Section 4. VACANCIES IN OFFICE. A vacancy in any office because of death, resignation, removal, disqualification, or any other cause shall be filled in the manner prescribed in these bylaws for normal appointment to that office, provided, however, that vacancies need not be filled on an annual basis.

Section 5. CHAIRMAN OF THE BOARD. The Chairman of the Board of Directors will preside at the Board of Directors' meetings and shall exercise and perform such other powers and duties as the Board of Directors may assign from time to time. If a Chairman of the Board of Directors is elected, there may also be a Vice-Chairman of the Board of Directors. In the absence of the Chairman, the Vice-Chairman shall preside at Board of Directors meetings and shall exercise and perform such other powers and duties as the Board of Directors may assign from time to time.

Section 6. SECRETARY. The Secretary shall keep or cause to be kept, at the Corporation's principal office or such other place as the Board of Directors may direct, a book of minutes of all meetings, proceedings, and actions of the Board and of committees of the Board. The minutes of meetings shall include the time and place that the meeting was held; whether the meeting was annual, regular, special, or emergency and, if special or emergency, how authorized; the notice given; the names of the directors present at Board of Directors and committee meetings; and the vote or abstention of each Board member present for each action taken.

The Secretary shall keep or cause to be kept, at the principal California office, a copy of the articles of incorporation and bylaws, as amended to date.

The Secretary shall give, or cause to be given, notice of all meetings of the Board and of committees of the Board of Directors that these bylaws require to be given. The Secretary shall keep the corporate seal, if any, in safe custody and shall have such other powers and

perform such other duties as the Board of Directors or the bylaws may require.

Section 7. **TREASURER.** The Treasurer shall oversee all matters related to the school's finances, property, and budget. The Treasurer shall have a strong working relationship with the school's Executive Director and or back-office provider. He or she also oversees the school's leadership in the areas of money management and compliance.

Section 8. **EXECUTIVE DIRECTOR.** The Executive Director shall be the general manager of the Corporation and shall supervise, direct, and control the Corporation's activities, affairs, and officers as fully described in any applicable employment contract, agreement, or job specification. The Executive Director shall have such other powers and duties as the Board of Directors or the bylaws may require. If there is no Chairman of the Board, the Executive Director shall also preside at the Board of Directors' meetings.

Section 9. **ELECTION OF OFFICERS.** The officers of the Corporation shall be chosen annually by the Board of Directors and shall serve at the pleasure of the Board, subject to the rights of any officer under any employment contract.

Section 10. **REMOVAL OF OFFICERS.** Without prejudice to the rights of any officer under an employment contract, the Board of Directors may remove any officer with or without cause.

ARTICLE IX **CONTRACTS WITH DIRECTORS**

Section 1. **CONTRACTS WITH DIRECTORS.** The Corporation shall not enter into a contract or transaction in which a director directly or indirectly has a material financial interest (nor shall the Corporation enter into any contract or transaction with any other corporation, firm, association, or other entity in which one or more of the Corporation's directors are directors and have a material financial interest).

ARTICLE X **CONTRACTS WITH NON-DIRECTOR DESIGNATED EMPLOYEES**

Section 1. **CONTRACTS WITH NON-DIRECTOR DESIGNATED EMPLOYEES.** The Corporation shall not enter into a contract or transaction in which a non-director designated employee (e.g., officers and other key decision-making employees) directly or indirectly has a material financial interest unless all of the requirements in the Corporation's Conflict of Interest Code have been fulfilled.

ARTICLE XI **LOANS TO DIRECTORS AND OFFICERS**

Section 1. **LOANS TO DIRECTORS AND OFFICERS.** The Corporation shall not lend any money or property to or guarantee the obligation of any director or officer without the approval of the California Attorney General; provided, however, that the Corporation may advance money to a director or officer of the Corporation for expenses reasonably anticipated to be incurred in the performance of his or her duties if that director or officer would be entitled to

reimbursement for such expenses of the Corporation.

ARTICLE XII INDEMNIFICATION

Section 1. **INDEMNIFICATION.** To the fullest extent permitted by law, the Corporation shall indemnify its directors, officers, employees, and other persons described in Corporations Code Section 5238(a), including persons formerly occupying any such positions, against all expenses, judgments, fines, settlements, and other amounts actually and reasonably incurred by them in connection with any "proceeding," as that term is used in that section, and including an action by or in the right of the Corporation by reason of the fact that the person is or was a person described in that section. "Expenses," as used in this bylaw, shall have the same meaning as in that section of the Corporations Code.

On written request to the Board of Directors by any person seeking indemnification under Corporations Code Section 5238 (b) or Section 5238 (c) the Board of Directors shall promptly decide under Corporations Code Section 5238 (e) whether the applicable standard of conduct set forth in Corporations Code Section 5238 (b) or Section 5238 (c) has been met and, if so, the Board of Directors shall authorize indemnification.

ARTICLE XIII INSURANCE

Section 1. **INSURANCE.** The Corporation shall have the right to purchase and maintain insurance to the full extent permitted by law on behalf of its directors, officers, employees, and other agents, to cover any liability asserted against or incurred by any director, officer, employee, or agent in such capacity or arising from the director's, officer's, employee's, or agent's status as such.

ARTICLE XIV MAINTENANCE OF CORPORATE RECORDS

Section 1. **MAINTENANCE OF CORPORATE RECORDS.** The Corporation shall keep:

- a. Adequate and correct books and records of account;
- b. Written minutes of the proceedings of the Board and committees of the Board; and
- c. Such reports and records as required by law.

ARTICLE XV INSPECTION RIGHTS

Section 1. **DIRECTORS' RIGHT TO INSPECT.** Every director shall have the right at any reasonable time to inspect the Corporation's books, records, documents of every kind, physical properties, and the records of each subsidiary, as permitted by California and federal law. This right to inspect may be circumscribed in instances where the right to inspect conflicts with California or federal law (e.g., restrictions on the release of educational records

under FERPA) pertaining to access to books, records, and documents. The inspection may be made in person or by the director's agent or attorney. The right of inspection includes the right to copy and make extracts of documents as permitted by California and federal law.

Section 2. ACCOUNTING RECORDS AND MINUTES. On written demand on the Corporation, any director may inspect, copy, and make extracts of the accounting books and records and the minutes of the proceedings of the Board of Directors and committees of the Board of Directors at any reasonable time for a purpose reasonably related to the director's interest as a director. Any such inspection and copying may be made in person or by the director's agent or attorney. This right of inspection extends to the records of any subsidiary of the Corporation.

Section 3. MAINTENANCE AND INSPECTION OF ARTICLES AND BYLAWS. The Corporation shall keep at its principal California office the original or a copy of the articles of incorporation and bylaws, as amended to the current date, which shall be open to inspection by the directors at all reasonable times during office hours.

ARTICLE XVI REQUIRED REPORTS

Section 1. ANNUAL REPORTS. The Board of Directors shall cause an annual report to be sent to itself (the members of the Board of Directors) within 120 days after the end of the Corporation's fiscal year. That report shall contain the following information, in appropriate detail:

- a. The assets and liabilities, including the trust funds, or the Corporation as of the end of the fiscal year;
- b. The principal changes in assets and liabilities, including trust funds;
- c. The Corporation's revenue or receipts, both unrestricted and restricted to particular purposes;
- d. The Corporation's expenses or disbursement for both general and restricted purposes;
- e. Any information required under these bylaws; and
- f. An independent accountant's report or, if none, the certificate of an authorized officer of the Corporation that such statements were prepared without audit from the Corporation's books and records.

Section 2. ANNUAL STATEMENT OF CERTAIN TRANSACTIONS AND INDEMNIFICATIONS. As part of the annual report to all directors, or as a separate document if no annual report is issued, the Corporation shall, within 120 days after the end of the Corporation's fiscal year, annually prepare and mail or deliver to each director and furnish to each director a statement of any transaction or indemnification of the following kind:

- (a) Any transaction (i) in which the Corporation, or its parent or subsidiary, was a

party, (ii) in which an “interested person” had a direct or indirect material financial interest, and (iii) which involved more than \$50,000 or was one of several transactions with the same interested person involving, in the aggregate, more than \$50,000. For this purpose, an “interested person” is either:

(1) Any director or officer of the Corporation, its parent, or subsidiary (but mere common directorship shall not be considered such an interest); or

(2) Any holder of more than 10 percent of the voting power of the Corporation, its parent, or its subsidiary. The statement shall include a brief description of the transaction, the names of interested persons involved, their relationship to the Corporation, the nature of their interest, provided that if the transaction was with a partnership in which the interested person is a partner, only the interest of the partnership need be stated.

(b) The amount and circumstances of any indemnifications aggregating more than \$10,000 paid during the fiscal year to any director or officer of the Corporation pursuant to Article XII of these Bylaws.

ARTICLE XVII BYLAW AMENDMENTS

Section 1. BYLAW AMENDMENTS. The Board of Directors may adopt, amend or repeal any of these bylaws by a majority vote of the directors present at a meeting duly held at which a quorum is present, except that no amendment shall change any provisions of any charter governing any charter school operated as or by the Corporation or make any provisions of these bylaws inconsistent with such charter, the Corporation’s articles of incorporation, or any laws.

ARTICLE XVIII FISCAL YEAR

Section 1. FISCAL YEAR OF THE CORPORATION. The fiscal year of the Corporation shall begin on July 1st and end on June 30th of each year.

CERTIFICATE OF SECRETARY

I certify that I am the duly elected and acting Secretary of Capital College & Career Academy, a California nonprofit public benefit corporation; that these bylaws, consisting of 13 pages, are the bylaws of the Corporation as adopted by the Board of Directors on July 8, 2019; and amended and approved on August 2, 2021 at 6:00 p.m. in Sacramento, California.



Jacobe Caditz, Secretary

APPENDIX T



Request to Speak Form

Directions:

Please complete this form and turn it in prior to the start of the board meeting. When addressing the Board, speakers are requested to state their name and address from the podium and adhere to the time limits set forth.

“Public Comment” is set aside for members of the audience to raise issues that are not specifically on the agenda. However, due to public meeting laws, the Board can only listen to your issue, not respond or take action. These presentations are limited to three (3) minutes and total time allotted to non-agenda items will not exceed fifteen (15) minutes. The Board may give direction to staff to respond to your concern or you may be offered the option of returning with a citizen-requested item.

With regard to items that are on the agenda, you may specify that agenda item on this form and you will be given an opportunity to speak for up to three (3) minutes when the Board discusses that item.

Citizens may request that a topic related to school business be placed on a future agenda. Once such an item is properly agendized and publicly noticed, the Board can respond, interact, and act upon the item.

Name (Last, First): _____

When would you like to comment:

- Public Comment**
 Agenda Item: _____

Request topic for future Agenda:

- Topic:** _____

APPENDIX U

PROFESSIONAL INQUIRY PARTNERSHIP (PIP) PLANNING DOCUMENT

PROFESSIONAL INQUIRY PROCESS (PIP)

Professional growth is an essential component of CCCA. A core tenant is that learning is an iterative and collaborative process. Through the structures of learning communities we continue to innovate as educators and serve the ever changing needs of all students. The CCCA Professional Inquiry Process allows staff to explore areas of interest while seeking innovative solutions to classroom level challenges.

The PIP action research process will provide you the opportunity to address specific areas of professional inquiry related to individual interests and school site needs. We encourage the use of PIPs to look at issues that impact the school overall (i.e. grading policies, benchmark assessments, critical thinking, use of technology, etc.) through discussions based upon quantitative and qualitative information. We encourage you to align your PIP with work you are already doing in your classrooms. This should give you quite a bit of flexibility to direct your PIP and improve your instructional practice.

Your “deliverable” will be a 1-2 page synopsis of your PIP findings and any results from your research or collaboration. We will be sharing the outcomes of our PIP work with the entire staff on [INSERT DATE]

Synopsis

Topic

Strategic Focus Area:

Theme/Guiding Topic:

Group Members:

Research Question(s) / Intended Outcome(s)

(What questions do we hope to answer or outcome do we hope to achieve?)

1.

Information/Data Sources

(What resources, tools, data sources, or other objective sources will we employ?)

Analysis/Work/Project

Results/Conclusions

Notes

APPENDIX V



STEPS TO OPENING



Ideation

January- Capital College & Career Academy officially launched its efforts to bring an innovative construction focused high school to the Sacramento area.

April 24- Incorporated

July 8- First BOD meeting held

October 9- CCCA partners with Charter Impact to provide back office support

2019

2020

Startup Phase 1

June 1- CCCA officially votes to push back opening date to 2022/23 school year due to COVID-19

June 9- CCCA receives its 501(c)3 designation

October 5- CCCA fundraising efforts launch

December 1- Fundraising goal of \$30,000

December 31- Finalized petition and budget



Phase 1

Fundraising Goal:
\$30,000



Startup Phase 2

January 1- CCCA officially launches its student outreach efforts and begins phase 2 of fundraising

February 28- MOU or promissory letter obtained from community college

March 30- First legal review of charter petition completed

2021

2021

Startup Phase 2

April 30- Complete virtual STEM night

May 1- 300+ interest signatures obtained

May 15- Finalized budget based on phase 2 donations

June 1- Final legal review

August 1- Petition submission

August 30- Community outreach phase 3 begins



Phase 2

Fundraising Goal:
\$300,000



CAPITAL COLLEGE & CAREER ACADEMY OPENING IN THE FALL OF 2022

Capital College & Career Academy (CCCA) is a rigorous college-infused high school where students no longer have to choose between college or a career. All CCCA students will have the opportunity to take Sacramento State and American River College courses on their respective campuses for free while in high school.

Capital College & Career Academy is the only high school in Sacramento region focused solely on the construction trades.



- CCCA is an Early College High School - All students will be enrolled in a post-secondary institution or employed within 6 months of graduation
- Our curriculum is built with Construction Industry Professionals, Los Rios Community College District, Sacramento State, National Center for Construction Education and Research and the California Department of Education
- Students attain a H.S. Diploma, an Associates Degree or College Certificate, Career Connections and Trade-Specific Certifications
- CCCA will provide students with hands-on academic experiences
- Students learn from a trades curriculum integrated with work-and-project-based learning with foundational skills in carpentry, electrical and plumbing
- With three college pathways for architecture, engineering and project management, students are paired with industry partners during their Junior and Senior years while working towards obtaining an entry level position

Over their four years at CCCA, students will complete over 500 hours of career exploration, Petition Apprenticeships, and trades training, providing graduates with real-world work experience.

Mission

All students will be enrolled in a post-secondary institution or employed within six months of graduation.

93%
CTE STUDENTS
GO ON TO

- ENROLL IN COLLEGE
- ENLIST IN THE MILITARY
- WORK WITHIN SIX MONTHS

30%
CA 9TH GRADERS
GRADUATE FROM
COLLEGE

88%
POSTSECONDARY
CTE STUDENTS
EARN A
CREDENTIAL | CERTIFICATE | DEGREE

{ CARPENTERS
ELECTRICIANS
PLUMBERS }

ARE WITHIN TOP TEN
IN-DEMAND JOBS IN THE
CONSTRUCTION
INDUSTRY

CTE STUDENTS EXCEED EXPECTATIONS

In the past, workforce was divided into white or blue-collar careers. Today, jobs are increasingly “blue and white striped,” yet our schools by and large steer students towards an entry-level job or college admission. Capital College & Career Academy (CCCA) educates youth in a manner that prepares them for today’s workforce and career needs.

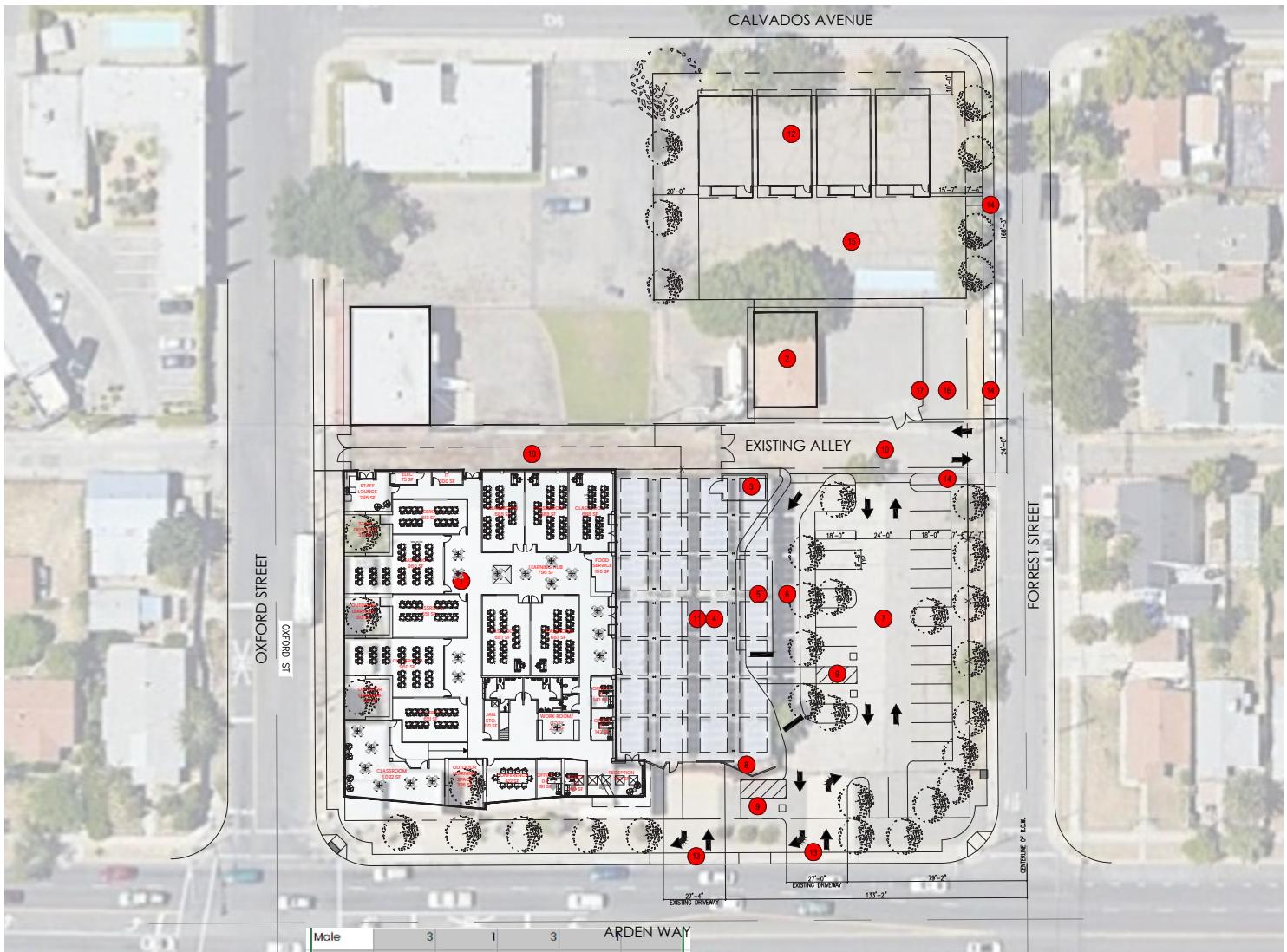
An Early College High School, CCCA blends college and high school curricula while removing barriers and increasing access to higher education for students. The school targets incoming 9th-graders who are motivated learners, desiring a hands-on academic experience. Priority enrollment is granted to students who are first in their family to attend college, with all students following clearly articulated pathways that culminate with a degree or industry-level certifications.



CCCA's culture will be built through hands-on learning, individual student supports, internships and real-world experiences. Graduates will exemplify the five pillars of Capital College & Career Academy: Innovation, responsibility, collaboration, critical thinking, and leadership, making them attractive to prospective employers and colleges alike.



CONNECT WITH US ON SOCIAL MEDIA



"The Sacramento Region requires a singularly excellent high school that prepares students for college while simultaneously providing valuable hands-on education in the construction trades, so no matter the student's path beyond high school, they are prepared for successful careers in the construction industry. The Capital College & Career Academy is that school."

FOUNDING PARTNERS

MAJOR GIFTS (IN EXCESS OF \$10K)

Associated Builders and Contractors NorCal
The Boldt Company
Five Star Bank
Northern California Carpenters Trust Fund
McCarthy Building Companies, Inc.
Roebelen Contracting, Inc.
Turner Construction
Studio W Architects

CONSTRUCTION EMPLOYERS

Bell Brothers Plumbing Heating & Air
The Boldt Company
Mark III Construction, Inc.
MarketOne Builders
McCarthy Building Companies, Inc.
Pacific Coast Companies, Inc.
Royal Electric, Co.
Turner Construction

CONSTRUCTION ASSOCIATIONS

Associated General Contractors of California
Construction Industry Education Foundation
Sacramento Regional Builders Exchange
Women in Construction Owners & Executives USA

CCCA BOARD OF DIRECTORS

JOHN BELPERIO

Executive Officer
The Northern CA Carpenters Regional Council

IAN MCQUOID

Senior Vice President of Operations
McCarthy Building Company, Inc.

TIMOTHY BLOOD

Preconstruction Manager
Turner Construction

JAMES MOORE

Case Manager
Volunteers of America

DAN DUMKE

Vice President, General Manager
The Boldt Company

TIMOTHY MURPHY

Chief Executive Officer
Sacramento Regional Builders Exchange

BEN FELL

Interim Director of College-to-Learner
California State University, Sacramento

RAMON HOPKINS

Division of Construction Chief
California Department of Transportation

MICH KIQAN GÓMEZ

Vice Principal
EPIC School

DEBORAH WILDER, ESQ

Past President
Women Construction Owners+Executives

STEPHANIE HANNAH

Chief Financial Officer
Charge EPC

KEN WENHAM

President, CEO
Roebelen Contracting Inc.

FUNDING OPPORTUNITIES

LEAD
SECURED
GIFT

\$100,000 Cash/In-Kind Contribution

Primary Campus Naming Rights
(i.e. "Capital College and Career Academy - XYZ Campus")

MAJOR GIFTS

\$25,000 - \$50,000 Cash/In-Kind Contribution

Naming Rights to Rooms within the Facility
(i.e. "Five Star Bank Construction Laboratory")

FOUNDER'S WALL

Petition Appendices

\$10,000 Cash/In-Kind Contribution

Company Name and Logo Presented on Founder's Wall at Primary Campus⁶⁷⁶

11/5/2019	CIEF Community Grant	\$1,000.00
11/18/2019	AGC Construction Education Foundation	\$1,500.00
11/6/2020	Bell Brothers (00-0001)	\$5,000.00
12/16/2020	ABC NorCal (00-0002)	\$5,000.00
4/1/2021	Five Star Bank	\$30,000.00
6/1/2021	Royal Electric (00-0004)	\$5,000.00
6/1/2021	SMUD (00-0003)	\$1,000.00
6/9/2021	Mark III (00-0005)	\$1,500.00
6/26/2021	Construction Industry Education Foundation (00-0006)	\$2,000.00
9/3/2021	WCOE Donation	\$5,000.00
9/6/2021	Clara Smith (private contribution)	\$250.00
9/12/2021	Royal Electric	\$5,000.00
9/12/2021	Law Office of Deborah Wilder (WCOE)	\$1,000.00
9/12/2021	Construction Industry Education Foundation (WCOE)	\$485.00
9/20/2021	Shames Construction Company LTD (WCOE)	\$500.00
9/20/2021	Bjork Construction Company Inc. (WCOE)	\$500.00
9/24/2021	Northern California Carpenters Union	\$25,000.00
10/11/2021	Roebbelin	\$100,000.00
10/12/2021	Bay Tank & Boiler Works dba BT Metals (WCOE) via CIEF Donation	\$485.00
10/18/2021	McCarthy Building Companies	\$50,000.00
12/5/2021	The Boldt Company	\$5,000.00
12/5/2021	Weyerhaeuser Community Grant	\$3,000.00
1/1/2022	SMUD Shine Grant	\$25,000.00
1/1/2022	Turner Construction	\$15,000.00
Upon charter approval	Silicon Schools Venture Fund	\$200,000.00
Upon school opening	Silicon Schools Venture Fund	\$400,000.00
Total Funds Contributed		\$888,220.00

Sacramento County Office of Education
Board of Trustees
10474 Mather Blvd
Mather, CA 95655

December 15, 2021

Dear Board of Trustee Members,

I write this letter in support of Capital College & Career Academy (CCCA), a proposed 9th-12th grade charter school for the Sacramento County community.

As the Chief Executive Officer of the Silicon Schools Fund, an organization focused on supporting schools across central and Northern California, I meet with and evaluate most of the educators seeking to start new schools in the region. Our team has been highly impressed by the founder of the proposed school, Kevin Dobson. We have also conducted thorough diligence on the education model and are impressed by their level of preparation and commitment to serving all students.

The Silicon Schools Fund works with over 60 schools across Northern California, reimagining how schools enable all students to succeed. We support traditional district schools, independent schools, and charter schools. I've personally founded a high performing school in Hayward, Leadership Public Schools, and served as the Chief Academic Officer of a high performing network of schools, Envision Schools as well as worked within large district settings including Boston Public Schools and the Los Angeles Unified School District.

Based on this experience and our interactions with CCCA, we have made an unrestricted \$200,000 grant to Capital College & Career Academy, contingent upon charter approval.

If CCCA receives a charter, opens successfully, and delivers on its vision as we expect they will, we will make up to an additional \$400,000 in unrestricted grants to support the school. We strongly support and recommend approval of a charter for Capital College & Career Academy. Thank you for your consideration.

Sincerely,



Brian Greenberg
Chief Executive Officer





February 16, 2022

Kevin Dobson
114 Santiago Avenue
Sacramento, CA 95815

Dear Mr. Dobson,

Established as a non-profit entity, Builders4Kids was launched by Roebbelan Contracting, Inc. with a goal to assist organizations in progressing their programs to desired levels, not only monetarily, but also with in-kind services, materials and volunteer hours.

Roebbelan recognizes social responsibility and community support as an integral part of doing business. Each Roebbelan employee is empowered to make a REAL DIFFERENCE in the lives of others; where they work, where they play and where they pray.

Builders4Kids sets out to assist children's organizations in the Sacramento region to make enlightened contributions to the community, serving many charities over many years.

This year, we have selected Capital College & Career Academy as the benefactor of our 2022 Builders Fore Kids Charity Golf Tournament, which will be held on Monday, May 2, 2022.

It is our pleasure to pledge a donation of \$50,000 to Capital College & Career Academy.

Since 2003, the Builders Fore Kids Charity Golf Tournament has raised over \$675,000 for children's organizations located in the Sacramento Region and continues to be one of the premiere golf tournaments in the area for the construction industry.

As a local company, it is our hope that other organizations in our region follow our lead and promote giving back – making our community the best it can be!

Sincerely,

Kenneth J. Wenham
President/CEO
530-945-6392
kenw@roebbelan.com

The Boldt Family Fund

September 24, 2021

Jordan Blair
Construction Industry Educational Foundation
5370 Elvas Ave.
Sacramento, CA 95819-2339

Dear Jordan:

I am pleased to inform you that *The Boldt Family Fund, Inc.*, a supporting organization of the Community Foundation for the Fox Valley Region, Inc., has awarded a grant of \$10,000.00 to your organization designated to the Gold Level Founding Sponsor of the Capital College & Career Academy. Payments of this grant will be as follows:

Month/Year	Amount
November 11, 2021	\$5,000.00
November 10, 2022	\$5,000.00

The IRS stipulates that in exchange for the grant, no tangible goods or benefits may be received by the donor who established the fund, or by an advisor or related party.

While this grant does not require a tax receipt, you are encouraged to express your appreciation to the donor in writing, which we will be pleased to forward. **In publicity efforts, please acknowledge the award as a gift from The Boldt Company** or contact me to discuss other public references.

If you have any questions, I may be reached at ckranz@cffoxvalley.org or 920.702.7637. Thank you for the difference your organization makes in the lives of others. Through your efforts you are strengthening your community for current and future generations.

Cordially,



Carissa Kranz
Donor Services Manager

BOFF 68693

A supporting organization of the Community Foundation for the Fox Valley Region, Inc.
4455 W. Lawrence Street | Appleton, WI 54914 | P:920.830.1290

Misión

Todos los estudiantes estarán inscritos en una institución postsecundaria o empleados dentro de los seis meses posteriores a la graduación.

93%

CTE ESTUDIANTES
VAN A

- INSCRIBIRSE EN UNA UNIVERSIDAD
- ALISTARSE EN EL MILITAR
- TRABAJAR DENTRO DE SEIS MESES

30%

CA ESTUDIANTES DE
9TH GRADO
SE GRADUAN DE LA
UNIVERSIDAD

88%

LOS ESTUDIANTES
POST-SECUNDARIOS
DE CTE GANAN UN/
UNA

CREDENCIAL | CERTIFICADO | TÍTULO UNIVERSITARIO

CTE ESTUDIANTES **EXCEDER** EXPECTATIVAS

{ CARPINTEROS
ELÉCTRICISTAS
FONTANEROS }

ESTÁN DENTRO DE LOS
DIEZ PRINCIPALES
TRABAJOS EN DEMANDA
EN LA INDUSTRIA
DE CONSTRUCCIÓN

¿Le gusta trabajar con las manos o en proyectos que estarán disponibles en los próximos años?

Los trabajos del sector de la construcción están bien remunerados y tienen un futuro prometedor.

Graduados estarán preparados para una carrera universitaria acelerada.

Este modelo único permite a los estudiantes tomar cursos universitarios en el campus universitario y obtener certificados del mundo real que los preparan para un trabajo en la industria de la construcción.



CAPITAL COLLEGE & CAREER ACADEMY ES UNA ESCUELA PREPARATORIA TEMPRANA QUE SE INAGURARA EN EL OTOÑO DEL 2023

CCCA se propone ser una escuela secundaria rigurosa con infusión universitaria donde los estudiantes ya no tienen que elegir entre la universidad o una carrera. TODOS los estudiantes de CCCA tendrán la oportunidad de tomar cursos de Sacramento State o American River College en sus campus de forma gratuita a partir de su tercer año de escuela secundaria.

Regístrate hoy escaneando este código QR



APOYADO POR:



FIVE STAR BANK



@SacramentoCCCA
www.capcca.org

Mission

All students will be enrolled in a post-secondary institution or employed within six months of graduation.

93%

CTE STUDENTS

GO ON TO

- ENROLL IN COLLEGE
- ENLIST IN THE MILITARY
- WORK WITHIN SIX MONTHS

30%

CA 9TH GRADERS
GRADUATE FROM
COLLEGE

88%

POSTSECONDARY
CTE STUDENTS
EARN A

CREDENTIAL | CERTIFICATE | DEGREE

CTE STUDENTS **EXCEED** EXPECTATIONS

{ CARPENTERS
ELECTRICIANS
PLUMBERS }
ARE WITHIN TOP TEN
IN-DEMAND JOBS IN THE
CONSTRUCTION
INDUSTRY



**CAPITAL COLLEGE & CAREER ACADEMY
IS AN EARLY COLLEGE HIGH SCHOOL
OPENING IN THE FALL OF 2023**

CCCA is setting out to be a rigorous college-infused high school where students no longer have to choose between college or a career. ALL CCCA students will have the opportunity to take Sacramento State or American River College courses on their campuses for free starting in their Junior year of high school.

Sign up today by scanning this QR Code



SUPPORTED BY:



FIVE STAR BANK



@SacramentoCCCA
www.capcca.org

ແກ້ວະກິດ

ນັກງຽນທຸກຄົນລະເຂົ້າຮຽນໃນ
ນະຖາບັນຫວັງມັດທະຍົມຫາ
ລົງຈໍາງງານພາລີໃນທີ່ກಡືອນ
ຫວັງລາກຮຽນລົບ

93%

ນັກສຶກສາ CTE
ຮືບຕໍ່ໄປ

- ວົງທະບຽນຍິ່ນວິທະຍາໄວ
- ລົດທະບຽນໃນການທະຫາວາງ
- ເຮັດວຽກພາຍໃນທີ່ກಡືອນ

30%

CA ນັກງຽນລົບຊັ້ນທີ
9 ລົບຄາວິທະຍາໄວ

88%

ນັກງຽນມັດທະຍົມສີ
ກາສາມີລາຍໄດ້ກຳ

ຂໍ້ມູນປະຈຳຕົວ | ໃບຢັ້ງຢືນ | ປະລິນຍາ

ງາມ
ຜູ້ເວີອກຕັ້ງ
ອຸປະສົກ

ແມ່ນຍິ່ນ 10 ຕ່າງ
ທີ່ຕ້ອງການສູງສຸດໃນອຸ
ດສາທະ ກໍາ ການກ່ຽວໜ້າ

ນັກງຽນ CTE ວິ່ນຄາດ ພວຍ



Capital College &
ວິຊາຊີບວິທະຍາໄວແມ່ນໂຮງຮຽນມັດທະຍົມຕາ
ອນຕັ້ນສຶກສາໃນວະດູ ໃປໄມ້ຫຼຸນປີ 2023

CCCA ກໍາ

ບົດໃຫ້ເປັນໂຮງຮຽນມັດທະຍົມຕອນປາຍທີ່ເຂັ້ມງວດທີ່ນັກງຽນບໍ່ຕ້ອງເວື່ອກວະຫວ່າງວິທະຍາໄວຫວີອ
ກຊີບ. ນັກສຶກສາທັງ ໝົດ ຂອງ CCCA ຈະມີໂອກາດໄດ້ຮັງນໜວກສູດ Sacramento State ຫົວ
American River College ໃນວິທະຍາເຂດຂອງພວກເຂົາໄດ້ປ່ວຍຄ່າໃນຂະນະທີ່ຮຽນຢູ່ມັດທະຍົມ.

ວິທະບຽນມື້ນີ້ໄດ້ລະເການວະຫັດ QR ບື້



ວະ ໜັບ ວະ ໜູນ ໂດຍ:



FIVE STAR BANK



Turner
Building the Future



Roebbelens



BOLDT



@SacramentoCCCA
www.capcca.org

Lub Zeem Muag

Txhua tus tub ntxhais kawm tau txuas ntxiv mus qib siab losyog kom nrhiav tau laj kam ua li ntawm 6 hli tom qab kawm tiav qib kaum-ob.

COV TUB NTXHAIS KAWM CTE TAU ZOO DUA LI QHOV TEEM TSEG

93%

COV TUB NTXHAIS
KAWM CTE MUS

- SAU NPE KAWM QIB SIAB
- PHAB FAJ UA PEEB ZEEJ
- NRHIAV TAU HAUJLWM TOM QAB 6 LUB HLI

30%

CA COV TUB NTXHAIS
KAWM QIB CUAJ
THIAJ KAWM TIAV QIB
SIAB.

88%

NTAWM COV TUB NTXHAIS
KAWM QIB SIAB TAU TXAIS
IB DAIM NTAWV POV THAWJ
LI NRAM NO

NTAWV TSO CAI | NTAWV KAWM TIAV | NTAWV POV THAWJ

{ COV KWS UA VAJ
UA TSEV, UA NTOO
COV KWS KHO
HLUAV TAWS XOB
COV KWS KHO KAV
DEJ }

Faim laj kam saum toj no yog peb yam ntawm kaum yam uas tib neeg tim tsum tshaj nyob rau sab ua vaj ua tsev thiab kev

Koj puas yog ib tug nyiam siv tes ua haujlwm losyog xav ua cov haujlwm uas muaj ua tsis tus ncua rau tom ntej? Faim laj kam ua vaj ua tsev thiab kev them nyiaj zoo thiab tseem yuav muaj nyob yav pem suab.

Thaum kawm tag qib kaum-ob ces lawv twb paub tseeb thiab paub npaj lawv yam haujlwm lawm.

Tus qauv qhia no , muab hwv tsam rau cov tub ntxhais kawm cov chav qib siab nyob rau hauv cov tsev kawm ntawv qib siab; thiab yuav muaj feem tau txais daim ntawv pov thawj rau txoj haujlwm ntawm faim laj kam nws kawm!



CAPITAL COLLEGE & CAREER ACADEMY YOG IB LUB
TSEV KAWM NTAWV QHIB LOS QHIA COV CHAV
KAWM QIB SIAB RAU QIB CUAJ TXOG KAUM-OB
YUAV QHIB RAU XYOO 2023 NO

CCCA yog ib lub tsev kawm ntawv muaj qhia cov chav kawm qib siab nrog thiab cov tub ntxhais tsis tas yuav xaiv kawm mus rau qib siab losyog kawm txog ib txoj laj kam. Txhua tus kawm nyob rau CCCA nod, muaj hwv tsam kawm tau Sacramento State lossis American River cov chav no dawb.

Nias tus tsiaj ntawv QR no mus tso npe kawm



TXHAWB NQA LOS NTAWM:



FIVE STAR BANK



@SacramentoCCCA
www.capcca.org



Bridge Design Contest with Capital College & Career Academy!

This free event, for grades 5-8, is designed to test your engineering skills as you work with a professional architect. All while having a great time with other Girl Scouts!

Thursday, March 11
4:00 PM to 5:00 PM



Scan this QR code or
visit us at
girlscoutshcc.org to register



Construction Industry Panel with Capital College & Career Academy

Ever wonder what a day in the life of a woman in construction looks like? Interested in exploring what goes into becoming an engineer, architect, or contractor? Then join this event to talk to women who work locally in all sorts of construction trades!

Thursday, April 8
4:00 to 5:00 p.m.



Scan this QR code or
visit us at
girlscoutshcc.org to register

Capital College & Career Academy Presents



Family Informational Series

Learn more about this unique and innovative approach to learning coming to Sacramento in the fall of 2022. CCCA will start with an initial Freshman class comprised of current 7th-grade students.

Register Today:

April 24, 2021

1 P.M. to 2:30 P.M.

May 8, 2021

10 A.M. to 11:30 A.M.

May 22, 2021

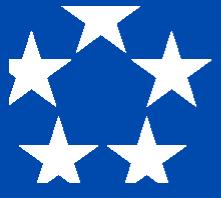
1 P.M. to 2:30 P.M.

June 5, 2021

6 P.M. to 7:30 P.M.



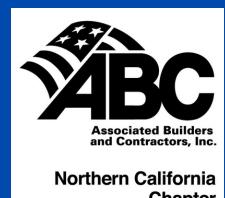
Thanks to our supporters



FIVE STAR BANK



SMUD®



Turner

girl scouts
heart of central
california



Tower Building Challenge with CCCA

Test your engineering skills with Capital College & Career Academy's Tower Bridge Design Challenge! Using just paper and tape, design and build the tallest tower you can that's able to stand on its own for 5 seconds! Learn some tips and tricks from engineering experts, and share your final result with the group. All participants will receive a 'swag bag' from CCCA in the mail

Thursday, May 6, 4:00 to 5:00 p.m.

Scan this QR code or
visit us at
girlscoutshcc.org to register





STEM Series



Learn from industry experts, win prizes, and leave with your own creations. These free events all begin at 4:00 p.m. and are open to all registered Girl Scouts.

Events:

- 01 Water Challenge- 8/5/2021**
- 02 Building Fundamentals- 9/2/2021**
- 03 It's Electric- 10/7/2021**
- 04 Amazing World of Concrete- 11/4/2021**
- 05 Virtual Design and Construction- 12/2/2021**

Program Sponsors:



HELIX ELECTRIC
CONSTRUCTORS • ENGINEERS

Register with the Girl Scouts Heart of Central California today to have access to all of our fall programming



CCCA's Supporting Organizations



FIVE STAR BANK



CIEF





Water Challenge with Capital College & Career Academy

Test your building skills with Capital College & Career Academy's Water Challenge. Working with industry experts, girls will compete in a hands-on activity to build a piping system to move water from one point to another. Girls will build their understanding of various tools and of careers in the trades through hands-on demonstrations. All participants in this free event will receive a CCCA bag filled with industry-sponsored swag.

Thursday, August 5, 4:00 to 5:00 p.m.

Scan this QR code or

visit us at

girlscoutshcc.org to register



690



Building Fundamentals with Capital College & Career Academy

Build your carpentry skills and leave prepared to continue working on your woodworker badge. Participating girls will work with industry experts to learn introductory skills for a range of tools. All girls will obtain the fundamentals required so that they can build their own wooden creation. All participants in this free event will receive a CCCA bag and t-shirt filled with industry-sponsored swag.

Thursday, September 2,
4:00 to 5:00 p.m.

Scan this QR code or visit us at girlscoutshcc.org to register



CCCA's Supporting Organizations





It's Electric with Capital College & Career Academy

Join Capital College & Career Academy in partnership with Helix Electrical and WECA to learn the fundamentals of basic electrical circuits, how electricity is conducted between two points, and how math is used by electricians and electrical engineers. Then, the power will be in your own hands as you build your own electrical circuit and experiment to see if you can get the electricity flowing from one place to another!

Thursday, October 7,
4:00 to 5:00 p.m.

Scan this QR code or
visit us at
girlscoutshcc.org to register



CCCA's Supporting Organizations





Amazing World of Concrete with Capital College & Career Academy

Learn the science behind structural concrete, and the process to build walls and floors of a building with Capital College & Career Academy in partnership with McCarthy Building Companies. There will be hands-on activities and an opportunity to make your very own concrete paperweight. In addition, all participants will receive an industry swag bag and a t-shirt.

Thursday, November 4,
4:00 to 5:00 p.m.

Scan this QR code or
visit us at
girlscoutshcc.org
to register



CCCA's Supporting Organizations



FIVE STAR BANK



Roebelen



CIEF



SMUD®

Turner



MARK III

693 SRBX
SACRAMENTO REGIONAL BUILDERS EXCHANGE



Virtual Design and Construction with Capital College & Career Academy

During this immersive experience with Capital College & Career Academy and McCarthy's Virtual Design & Construction Group, students will learn how 3D software is helping shape the future of construction. The girls will gain insight as to how Virtual Design allows us lead the industry as we strategize, plan, and build some of the most complex modern projects. McCarthy will teach about being a virtual builder, fly through 3D models, allow the girls to get hands-on experience with flying drones, and more.

Thursday, December 2,
4:00 to 5:00 p.m.

Scan this QR code or
visit us at
girlscoutshcc.org
to register



CCCA's Supporting Organizations



FIVE STAR BANK



CIEF



Turner



MARK III

694 SRBX
SACRAMENTO REGIONAL BUILDERS EXCHANGE



2022 STEM Series



Learn from industry experts, win prizes, and leave with your own creations. These free events all begin at 4:00 p.m. and are open to all registered Girl Scouts.

Events:

- 01** The Power of Wind Energy- 1/20/2022
- 02** Carpentry 101- 2/3/2022
- 03** Bridge Building Challenge- 3/3/2022
- 04** Construction Industry Panel- 4/7/2022
- 05** Tower Building Challenge - 5/5/2022
- 06** Utility Workshop- 6/2/2022
- 07** Hands on Construction 101- 7/7/2022
- 08** Water Challenge- 8/4/2022
- 09** Building Fundamentals- 9/1/2022
- 10** It's Electric- 10/6/2022
- 11** Amazing World of Concrete- 11/3/2022
- 12** Virtual Design and Construction- 12/1/2022

Programming Sponsors:



HELIX ELECTRIC
CONSTRUCTORS • ENGINEERS



Register with the Girl Scouts Heart of Central California today to have access to all of these **FREE** events



CCCA's Supporting Organizations



APPENDIX W

Capital College & Career Academy

Budget Narrative & Cash Flow Statement

Capital College & Career Academy's ("CCCA") financial statements include a 5-year pro-forma annual budget and 3-year monthly cash flow statement (3 years of operations for 2023-24 through 2025-26).

Opening Cash and Fund Balance

Prior to opening, CCCA has received \$250,000 in unrestricted grant funding and is scheduled to receive an additional unrestricted \$200,000. In addition to this funding, CCCA has budgeted approximately \$50,000 in pre-opening expenses during 2022-23 (legal, recruitment and compensation for school leadership). CCCA's 2023-24 budget opens with beginning cash and fund balance of \$400,000 available to support Year 1. This opening balance provides significant support for Year 1 operations should revenue decline or expenses increase compared to budget.

Students: Enrollment, Demographics and Average Daily Attendance

Revenues for CCCA will largely depend on the number of students enrolled and their attendance. Average Daily Attendance (ADA) is the aggregate attendance during a reporting period divided by the number of days the school is in session during that period. ADA is used to calculate many of the revenue sources. CCCA's budget conservatively forecasts a 92% attendance rate for high school based on statewide trends. If actual attendance exceeds this rate, revenue would increase.

It is planned that CCCA will open in 2023-24 with enrollment of 80 and grow to 370 during 2026-27. The following table shows CCCA's projected enrollment and ADA.

Table A: Enrollment & ADA

	2023-24	2024-25	2025-26	2026-27	2027-28
	Year 1	Year 2	Year 3	Year 4	Year 5
<i>Projected Enrollment & ADA by Grade</i>					
9th Grade	80	85	90	100	100
10th Grade	-	80	85	90	100
11th Grade	-	-	80	85	90
12th Grade	-	-	-	80	85
Total Projected Enrollment	80	165	255	355	375
<i>Average Daily Attendance (ADA)</i>					
ADA %	92%	92%	92%	92%	92%
Total	73.60	151.80	234.60	326.60	345.00

Revenues

CCCA's budget has been developed during December 2021 using current budget guidance: FCMAT LCFF calculator version 22.2b released November 4, 2021 and 2021-22 Enacted Budget guidance from School Services of California released July 22, 2021. State budget guidance is evolving, and CCCA will continue to monitor and update their planning documents as updates are released.

Factoring in all revenues at the school, per-pupil funding is expected to be around \$15,500/ADA at CCCA excluding philanthropy and start-up funding. State revenue streams provide the largest source of funding making up about 75%-85% of CCCA's total revenues. All revenues are monitored throughout the year as various funding estimates are refined and recalculated.

Table B: Summary of Projected Revenues

	2023-24	2024-25	2025-26	2026-27	2027-28
	Year 1	Year 2	Year 3	Year 4	Year 5
<i>Summary of Revenue Programs</i>					
State Aid - Revenue Limit	\$884,721	\$1,896,006	\$2,931,070	\$4,082,343	\$4,312,656
Federal Revenue	155,562	261,861	239,602	316,384	331,241
Other State Revenue	63,350	313,543	486,490	678,446	720,651
Other Local Revenue	200,000	100,000	100,000	-	-
Total Revenues	\$1,303,633	\$2,571,410	\$3,757,163	\$5,077,173	\$5,364,549
<i>State Aid Revenues as % of Total</i>	67.9%	73.7%	78.0%	80.4%	80.4%
<i>Revenues per ADA</i>	\$ 17,712	\$ 16,939	\$ 16,015	\$ 15,546	\$ 15,549

State Revenues

State Revenues are estimated based on specific programs as identified below, with the majority of funding dependent upon the annual State budget and the school's student population.

Principal Apportionment

The LCFF FCMAT calculator (FCMAT Version v22.2b released 11/04/21) was used to determine the LCFF projections for each year of the above revenue projections which are based on expected student ADA and the expected unduplicated count of students at CCCA of 58.1%. This rate is consistent with the demographics of Sacramento County. CCCA's resident district is projected to have a significantly higher UPP rate, near 90% in 2020/21. Should CCCA's actual UPP rate exceed the budgeted 58.1% their revenue budget would increase accordingly.

Under current FCMAT projections \$200 per ADA of principal apportionment funding will be disbursed via the Education Protection Account during 2023-24 and 2024-25. After that time, EPA funding is forecast to end. As a county-wide charter, CCCA is not budgeting funding from resident districts in-lieu of property taxes. During Year 1, CCCA will apply for the Special Advance Apportionment providing initial funding through the PENSEC and 20-Day Advance. All of these sources combine to complete the LCFF funding detailed in the FCMAT calculator, and changes to one source are offset with changes to State Aid. CCCA will continue to update their projections as FCMAT guidance is updated.

Table C: Projected State Revenues

	2023-24	2024-25	2025-26	2026-27	2027-28
	Year 1	Year 2	Year 3	Year 4	Year 5
<i>State Aid - Revenue Limit</i>					
LCFF State Aid	\$870,001	\$1,865,646	\$2,931,070	\$4,082,343	\$4,312,656
Education Protection Account	14,720	30,360	-	-	-
In Lieu of Property Taxes	-	-	-	-	-
Total State Revenue	\$884,721	\$1,896,006	\$2,931,070	\$4,082,343	\$4,312,656

Federal Revenues

Special Education

CCCA provides special education services and will work with a Special Education Local Planning Area (SELPA) to ensure resources are provided to ensure compliant, efficient and effective delivery of services. CCCA's state special education funding includes general state aid of \$625/ADA, net of SELPA admin fees budgeted 5.50%. In addition to state special education funding, the revenue projection for CCCA also assumes \$125/ADA of federal special education funding beginning in year 2.

Free and Reduced-Price Meal Eligibility

The federally funded National School Lunch Program provides free and reduced-price meals for lunch and breakfast to eligible students, based on parent/guardian income levels. For this budget, we assume that the percentage of our students eligible to receive federal funding reimbursements will be about 58%. CCCA has budgeted federal reimbursement rates \$2.05 breakfast and \$3.26 lunch based on 2021/22 reduced/especially needy rates. Food expenses for this program are shown in Expenses below.

Title Programs

Based on roughly 58% of students qualifying for free and reduced prices meals, CCCA has also included federal funds. Title I and II funding is budgeted at approximately \$20,000 and \$2,500, respectively, in Year 1. Actual funding will be determined based on CCCA's student population and current funding rates after CCCA completes the Consolidated Application in the Spring before 2023-24.

CCCA intends to apply for Public Charter School Grant Program (PCSGP) funding to support start-up costs during 2023-24 and expansion costs during 2024-25. PCSGP funding is budgeted only for identified new curriculum and supplies, the final grant budget may cover additional costs as determined eligible.

Table D: Projected Federal Revenues

	2023-24	2024-25	2025-26	2026-27	2027-28
	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>	<i>Year 5</i>
<i>Federal Revenue</i>					
Special Education - Entitlement	-	\$10,000	\$20,625	\$15,455	\$13,922
Federal Child Nutrition	42,746	88,163	136,251	189,683	200,370
Title I, Part A - Basic Low Income	20,240	41,745	64,515	89,815	94,875
Title II, Part A - Teacher Quality	2,576	5,313	8,211	11,431	12,075
Title V, Part B - PCSG	104,180	136,471	-	-	-
Title IV, Part A	-	10,000	10,000	10,000	10,000
Total Federal Revenue	\$169,742	\$291,692	\$239,602	\$316,384	\$331,241

Other State Revenues

Child Nutrition

CCCA's budget includes participation in Universal Meals starting in 2023/24. CCCA has budgeted state meals reimbursements not to exceed the difference between the federal free reimbursement rate (forecast breakfast \$2.6 and lunch \$3.66) and the actual budgeted federal reimbursement (reduced price rate). Should CCCA's federal reimbursement rate increase, their state reimbursement rate would be reduced accordingly. Food expenses for this program are shown in Expenses below.

Charter School Facility Grant (SB740)

Because CCCA is projecting to have a FRPM eligibility above 55%, the budget includes SB740 funding based on the lesser of \$ \$1,180 per ADA or 75% of the budgeted lease cost. The budget SB740 calculation is based on December 2021 guidance of \$1,232 per ADA, reduced by a 95.8% proration factor. CCCA anticipates future funding will change with the state budget, and will update planning accordingly as appropriate.

Lottery & Mandated Block Grant

Lottery funding is based upon a projection of \$228 per ADA per year. Lottery funds are mainly allocated for general purpose use with nearly 28% of the funds restricted for instructional materials. Projections for the Mandate Block Grant are assumed at \$50.55/ADA for grades 9-12 (Budget 2021/22 forecast for 2023/24). Since funding is dependent on the previous year's ADA, CCCA will not be eligible to receive the Mandate Block Grant funding until the second year of operations.

The Lottery funds have been included in year one and an accrual and receivable at the end of year one as the funds will be paid as a prior year adjustment during year two of operations.

Table E: Projected Other State Revenues

	2023-24	2024-25	2025-26	2026-27	2027-28
	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>	<i>Year 5</i>
<i>Other State Revenue</i>					
State Special Education	\$43,470	\$89,657	\$138,561	\$192,898	\$203,766
Child Nutrition	3,099	6,392	9,879	13,753	14,528
School Facilities (SB740)	-	179,163	276,888	385,472	407,188
Mandated Cost	-	3,720	7,673	11,859	16,510
State Lottery	\$16,781	\$34,610	\$53,489	\$74,465	\$78,660
Total Other State Revenue	\$63,350	\$313,543	\$486,490	\$678,446	\$720,651

Other Local Revenues

CCCA has received current unrestricted grants and pledges for \$450,000 prior to 2023/24. In addition, CCCA has received a pledge of \$400,000 to support opening and expansion, budgeted \$200,000 for 2023/24 and \$100,000 each for 2024/24 and 2025/26.

Table F: Projected Other Local Revenues

	2023-24	2024-25	2025-26	2026-27	2027-28
	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>	<i>Year 5</i>
<i>Other Local Revenue</i>					
Contributions, Unrestricted	200,000	100,000	100,000	-	-
Total Federal Revenue	\$200,000	\$100,000	\$100,000	-	-

Expenditures

The projected expenditures through 2027-28 are shown below and are followed by a summary of assumptions for some of the larger expenses.

Table G: Summary of Projected Expenses

	2023-24	2024-25	2025-26	2026-27	2027-28
	Year 1	Year 2	Year 3	Year 4	Year 5
<i>Summary of Projected Expenses</i>					
Certificated Salaries	\$488,490	\$792,926	\$1,179,646	\$1,494,330	\$1,598,445
Classified Salaries	118,800	159,732	182,590	251,299	276,783
Employee Benefits	217,137	335,149	473,997	615,746	660,903
Total Compensation	\$824,427	\$1,287,807	\$1,836,233	\$2,361,375	\$2,536,131
Books and Supplies	193,434	345,276	519,105	719,253	722,887
Subagreement Services	77,600	171,363	307,235	444,259	475,631
Operations and Housekeeping	71,600	115,949	119,672	123,657	126,455
Facilities, Repairs and Other Leases	25,000	341,656	754,410	753,594	777,444
Professional/Consulting Services	80,991	115,571	159,322	208,975	220,528
Interest	1,125	1,000	1,000	1,000	1,000
Total Non-Comp	\$449,750	\$1,090,814	\$1,860,744	\$2,250,738	\$2,323,945
Total Expenses	\$1,274,177	\$2,378,621	\$3,696,977	\$4,612,113	\$4,860,077

Total Compensation - Salaries and Employee Benefits

Total compensation costs (salary and benefits) at capacity remain relatively constant near 50% of total expenditures. "Compensation" includes the salary costs of all staff, including those who work full-time and part-time, and includes all staff benefits including STRS, PERS, social security, Medicare, and workers' compensation.

CCCA's teacher staffing levels are based upon enrollment projections. Ratios of Certificated Teachers to Students is expected to be at or below 25:1 over the course of the full 5 years of operations.

Table H: Instructional Staff Ratio

	2023-24	2024-25	2025-26	2026-27	2027-28
	Year 1	Year 2	Year 3	Year 4	Year 5
<i>Instructional Staff Ratio</i>					
School Attendance	80.0	165.0	255.0	355.0	375.0
Certificated Teacher	5.0	7.0	11.0	15.0	16.0
Certificated Pupil Support	1.1	2.0	2.0	2.0	2.0
Total Instructional Staff	6.1	9.0	13.0	17.0	18.0
<i>Student : Instructional Staff Ratio</i>	13.1	18.3	19.6	20.9	20.8

During 2023-24, staffing is budgeted for twelve staff: five teachers, education specialist, hourly counselor (.125 FTE), site director, hourly instructional aide, nutrition staff, custodian and office manager.

During 2024-25, CCCA's budget adds six additional staff: two teachers, counselor (full time), assistant site director, hourly instructional aide and nutrition assistant. Beginning June 2025, stipends are budgeted each June for teachers participating in one week externship program.

During 2025-26, CCCA's budget adds six more staff: four teachers, special education director and hourly instructional aide.

During 2026-27, CCCA's budget adds six additional staff: four teachers, hourly instructional aide and clerical support.

During 2027-28, CCCA's enrollment growth has stabilized, and the budget adds two staff: one teacher and one hourly instructional aide.

For the first year of operations (2023-24), it is assumed that the Site Director and Office Manager will begin on July 1, 2022. Instructional staff are forecast eleven month employees.

The average salary structure for key FTE staff positions is listed in the table below. The budget assumes a 2% cost of living adjustment every year.

Table I: Average Budgeted Salary by Position

	2023-24	2024-25	2025-26	2026-27	2027-28
	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>	<i>Year 5</i>
Average Budgeted Salary by Position					
Teachers and Pupil Support	\$ 65,100	\$ 66,867	\$ 68,026	\$ 69,291	\$ 70,659
Administrative Staff - Certified	\$ 80,000	\$ 82,800	\$ 84,797	\$ 86,493	\$ 88,223

Table J: Employee Benefits

The table below lists the total projected annual employer costs for all employee benefits, on a year-by-year basis. Within employee benefits, most benefits are statutory and are determined by either state or federal mandate and are based on current rate factors. These benefits differ by type of employee (i.e. certificated or classified) and by whether they are full-time, part-time and/or hourly employees. CCCA's employees participate in different combinations of STRS, PERS, Social Security, Medicare, and workers' compensation depending on position. CCCA's budget is utilizing 2021-22 Enacted Budget guidance to forecast 2023/24 benefits costs. Actual rates are likely to change, and CCCA will update their budget accordingly. For full-time certificated employees, who participate in the State Teachers' Retirement System (and not in the Federal Social Security system), the employer contribution is budgeted 19.10% in 2023-24 and future years. Employer PERS contribution rates are budgeted 27.10% in 2023-24, and 27.70% in future years. Health insurance is budgeted at employer cost of \$8,500 per eligible employee, increasing annually with COLA. Unemployment and workers compensation are budgeted at .20% and 1.20%, respectively.

	2023-24	2024-25	2025-26	2026-27	2027-28
	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>	<i>Year 5</i>
Employee Benefits					
STRS	\$93,302	\$151,449	\$225,312	\$285,417	\$305,303
PERS	32,195	44,246	50,577	69,610	76,669
OASDI	7,366	9,903	11,321	15,581	17,161
Medicare	8,806	13,814	19,752	25,312	27,191
Health and Welfare	77,563	104,040	150,338	198,446	211,615
State Unemployment	182	266	350	434	462
Workers' Compensation	7,287	11,432	16,347	20,948	22,503
Total Benefits	\$226,700	\$335,149	\$473,997	\$615,746	\$660,903

Books and Supplies and Food Services

CCCA's budget includes cost for curriculum, instructional supplies and materials totaling \$66,980 in 2023/24.

The purchase of equipment will also be a critical part of the instructional program. The budget accounts for the purchase of this equipment (furniture and technology) on a per pupil, per full time staff member and general purchases. As these items do wear out over time and need replacement, the budget accounts for the replacement of requisite devices over time in addition to the initial purchase in the first year of operation. 2023/24 equipment purchases are budgeted at \$56,000.

CCCA has budgeted to participate in the state's Universal Meals program and will provide breakfast and lunch for all students. Meals are budgeted at 2021-22 rates of \$2.04 for breakfast and \$3.43 per lunch, forecast \$70,454 total in 2023-24.

Table K: Books, Supplies, & Food Services

	2023-24	2024-25	2025-26	2026-27	2027-28
	Year 1	Year 2	Year 3	Year 4	Year 5
Books & Supplies					
Textbooks and Core Curricula	\$30,180	\$63,491	\$100,085	\$142,121	\$153,130
Books and Other Materials	8,000	16,830	26,530	37,673	40,591
School Supplies	20,000	42,075	66,326	94,182	101,478
Office Expense	8,800	18,513	29,183	41,440	44,650
Noncapitalized Equipment	57,688	54,631	63,338	72,063	25,563
Food Services	70,454	148,217	233,644	331,774	357,475
Total Books & Supplies	\$195,121	\$343,757	\$519,105	\$719,253	\$722,887

Other Expenses

Many of the operating cost projections are based upon historical averages experienced at other independent charter schools, such as communication costs, utilities, insurance, and equipment lease costs.

Table M: Subagreement Services

	2023-24	2024-25	2025-26	2026-27	2027-28
	Year 1	Year 2	Year 3	Year 4	Year 5
Subagreement Services					
Special Education	12,000	33,357	91,560	139,374	147,329
Transportation	64,000	134,640	212,242	301,383	324,730
Other Educational Consultants	1,600	3,366	3,433	3,502	3,572
Total Subagreement Services	\$77,600	\$171,363	\$307,235	\$444,259	\$475,631

SPED Consultants

Special Education Consultant costs include all outside service provider costs, in addition to services provided by CCCA staff, estimated at \$12,000 in year 1 (plus increase for enrollment growth and COLA adjustments thereafter). This includes psychological, speech language and occupational therapy services to CCCA's students with IEPs. Actual expenses will very dependent on enrollment, and CCCA retains sufficient fund balance to cover additional expenses as necessary.

Transportation

CCCA has budgeted \$64,000 in 2023-24 for transportation for students. The team has identified multiple transportation options including van rentals through Enterprise Holdings. These projected costs are based on 2021 California Government Employee Long Term rental rates plus the cost of an hourly driver's salary. Future year expenses are increased for enrollment growth and COLA.

Table N: Operations and Housekeeping

	2023-24	2024-25	2025-26	2026-27	2027-28
	Year 1	Year 2	Year 3	Year 4	Year 5
<i>Operations and Housekeeping</i>					
Auto and Travel	\$4,000	\$4,080	\$4,162	\$4,245	\$4,330
Dues & Memberships	\$1,200	\$2,525	\$3,980	\$5,651	\$6,089
Insurance	\$28,000	\$28,560	\$29,131	\$29,714	\$30,308
Utilities	\$24,000	\$50,490	\$51,500	\$52,530	\$53,580
Communications	\$14,400	\$30,294	\$30,900	\$31,518	\$32,148
Total Operations and Housekeeping	\$71,600	\$115,949	\$119,672	\$123,657	\$126,455

Table O: Facilities, Repairs and Other Leases Expenses

	2023-24	2024-25	2025-26	2026-27	2027-28
	Year 1	Year 2	Year 3	Year 4	Year 5
<i>Facilities, Repairs and Other Leases</i>					
Rent	-	\$290,100	\$675,200	\$673,600	\$676,650
Additional Rent	10,000	20,000	40,000	40,000	60,000
Equipment Leases	9,000	18,934	19,312	19,699	20,093
Repairs and Maintenance	6,000	12,623	19,898	20,296	20,702
Total Facilities, Repairs and Other Leases	\$25,000	\$341,656	\$754,410	\$753,594	\$777,444

Facilities Rent

CCCA has negotiated bond financing to purchase their planned facility site (501 Arden Way) through a related non-profit supporting organization who will lease the facility back to CCCA. The purchase agreement includes deferred rent during Year 1 (2023-24) and partially deferred rent during Year 2 (2024-25), totaling \$290,100. Rent payments settle in 2025-26 at approximately \$675,000 annually. The deferred rent in the lease structure allows CCCA to build on their cash and fund balance during Year 1 and Year 2 growth and provide greater financial stability for future years.

Additional Rent

CCCA has budgeted for resource center facility costs beginning the second half of 2023-24. During 2023-24, CCCA has budgeted \$10,000, increasing to \$20,000 for 2024-25. The budget includes expansion to additional sites in 2025/26 and 2027/28.

Table P: Professional Services

	2023-24	2024-25	2025-26	2026-27	2027-28
	Year 1	Year 2	Year 3	Year 4	Year 5
<i>Professional Services</i>					
Audit & Taxes	\$4,000	\$12,000	\$12,240	\$12,485	\$12,734
Legal	10,000	10,200	10,404	10,612	10,824
Professional Development	5,964	6,780	10,688	15,177	16,352
Other taxes and fees	456	465	475	484	494
Payroll Service Fee	5,475	11,518	18,157	25,782	27,780
Management Fee	42,000	51,994	75,143	101,543	107,291
Authorizer Oversight Fee	8,847	18,960	29,311	40,823	43,127
Public Relations/Recruitment	5,000	5,100	5,202	5,306	5,412
Total Professional Services	\$81,743	\$117,018	\$161,619	\$212,213	\$224,014

Expenses shown in the table above are based on preliminary negotiations with prospective service providers or industry experience.

Management Fee

CCCA has contracted with Charter Impact, Inc. to provide financial management services including financial reporting, accounts payable, payroll processing and general accounting. Fees for these services are budgeted at 2% of total revenue, with a minimum fee of \$42,000.

Authorizer Oversight Fee

CCCA has budgeted an authorizer oversight fee of 1% of LCFF revenues.

Interest Expense

CCSA plan to apply for the California School Finance Authority's (CSFA) Charter School revolving Loan Fund Program (CSRLF). The CSRLF provides low cost loans up to \$250,000 to new schools in Year 1 repaid through deductions to apportionments in Years 2 – 5. Interest expense for the CSRLF is forecast to be immaterial and is budgeted at an approximately 1% annual rate.

Table Q: Interest

	2023-24	2024-25	2025-26	2026-27	2027-28
	Year 1	Year 2	Year 3	Year 4	Year 5
<i>Depreciation & Interest</i>					
Interest	1,125	1,000	1,000	1,000	1,000
Total Depreciation & Interest	\$1,125	\$1,000	\$1,000	\$1,000	\$1,000

Fund Balance

Supported by a strong beginning fund balance, CCCA has budgeted to end 2023-24 with a fund balance 33% of annual expenses. This greatly exceeds the CDE-recommended level of 5% and provides significant support to cover potential challenges from increased expenses or reduced revenue. CCCA's budget maintains a strong fund balance while growing, continually exceeding CDE-recommended levels.

	2023-24	2024-25	2025-26	2026-27	2027-28
	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>	<i>Year 5</i>
<i>Fund Balance</i>					
Beginning Fund Balance	\$400,000	\$433,322	\$654,494	\$712,383	\$1,174,204
Increase/(Decrease) in Net Assets	33,322	221,172	57,888	461,821	500,986
Ending Fund Balance	\$433,322	\$654,494	\$712,383	\$1,174,204	\$1,675,190
Fund Balance (% of Expenditures)	33.7%	27.5%	19.3%	25.4%	34.4%

Cash Flow

Ending Cash Balance

CCCA's cash balance at the end of 2023-24 is projected to exceed \$500,000, near 40% of annual expenses, an exceptional strength for a first year school. CCCA's cash flow forecast exceeds 15% cash balance throughout 2023-24 and retains a steady cash balance through the 5-year projection.

Cash Flow Adjustments

Cash flow adjustments included in the presentation consist of:

1. Timing for government funding receivables with final funding awards received after June 30th each year.
2. Timing of accounts payable and accrued liabilities are minor adjustments for year end payables and accrued interest on Year 1 of the CSFA revolving loan.
3. Proceeds and payments on debt consist of the \$250,000 CSFA Revolving Loan forecast to be received in three installments during 2023-24 and repaid \$62,500 annually between 2024-25 and 2027-28. As a not-for-profit org operating a charter school, CCCA utilizes the full accrual method of accounting in accordance with FASB (the Financial Accounting Standards Board). Reporting in full accrual, proceeds and payments on debt are recorded on the balance sheet, and do not impact revenues or expenses. Accordingly, CCCA has included the loan's impact on cash flow in the budget, but not influenced the operating revenue or expenses.

Capital College and Career Academy

Multi-Year Forecast

Revised 12/16/2021



	2023-24 Budget	2024-25 Forecast	2025-26 Forecast	2026-27 Forecast	2027-28 Forecast
Assumptions					
LCFF COLA	3.11%	3.54%	0.00%	0.00%	0.00%
Non-LCFF Revenue COLA	n/a	0.00%	0.00%	0.00%	0.00%
Expense COLA	2.00%	2.00%	2.00%	2.00%	2.00%
Enrollment	80.00	165.00	255.00	355.00	375.00
Average Daily Attendance	73.60	151.80	234.60	326.60	345.00
Revenues					
State Aid - Revenue Limit					
8011 LCFF State Aid	\$ 870,001	\$ 1,865,646	\$ 2,931,070	\$ 4,082,343	\$ 4,312,656
8012 Education Protection Account	14,720	30,360	-	-	-
8096 In Lieu of Property Taxes	-	-	-	-	-
	<u>884,721</u>	<u>1,896,006</u>	<u>2,931,070</u>	<u>4,082,343</u>	<u>4,312,656</u>
Federal Revenue					
8181 Special Education - Entitlement	-	10,000	20,625	15,455	13,922
8220 Federal Child Nutrition	42,746	88,163	136,251	189,683	200,370
8290 Title I, Part A - Basic Low Income	20,240	41,745	64,515	89,815	94,875
8291 Title II, Part A - Teacher Quality	2,576	5,313	8,211	11,431	12,075
8294 Title V, Part B - PCSG	105,868	134,952	-	-	-
8296 Other Federal Revenue	-	10,000	10,000	10,000	10,000
	<u>171,429</u>	<u>290,173</u>	<u>239,602</u>	<u>316,384</u>	<u>331,241</u>
Other State Revenue					
8311 State Special Education	43,470	89,657	138,561	192,898	203,766
8520 Child Nutrition	3,099	6,392	9,879	13,753	14,528
8545 School Facilities (SB740)	-	179,163	276,888	385,472	407,188
8550 Mandated Cost	-	3,720	7,673	11,859	16,510
8560 State Lottery	16,781	34,610	53,489	74,465	78,660
	<u>63,350</u>	<u>313,543</u>	<u>486,490</u>	<u>678,446</u>	<u>720,651</u>
Other Local Revenue					
8980 Contributions, Unrestricted	200,000	100,000	100,000	-	-
	<u>200,000</u>	<u>100,000</u>	<u>100,000</u>	<u>-</u>	<u>-</u>
Total Revenue	\$ 1,319,500	\$ 2,599,722	\$ 3,757,163	\$ 5,077,173	\$ 5,364,549
Expenses					
Certificated Salaries					
1100 Teachers' Salaries	325,000	464,100	743,886	1,034,680	1,125,732
1170 Teachers' Substitute Hours	9,750	13,923	22,317	31,040	33,772
1175 Teachers' Extra Duty/Stipends	-	11,603	18,597	25,867	28,143
1200 Pupil Support Salaries	73,740	137,700	140,454	143,263	146,128
1300 Administrators' Salaries	80,000	165,600	254,392	259,480	264,669
	<u>488,490</u>	<u>792,926</u>	<u>1,179,646</u>	<u>1,494,330</u>	<u>1,598,445</u>
Classified Salaries					
2100 Instructional Salaries	18,900	38,556	58,991	80,227	102,290
2200 Support Salaries	54,900	75,276	76,782	78,317	79,883
2400 Clerical and Office Staff Salaries	45,000	45,900	46,818	92,754	94,609
	<u>118,800</u>	<u>159,732</u>	<u>182,590</u>	<u>251,299</u>	<u>276,783</u>
Benefits					
3101 STRS	93,302	151,449	225,312	285,417	305,303
3202 PERS	32,195	44,246	50,577	69,610	76,669
3301 OASDI	7,366	9,903	11,321	15,581	17,161
3311 Medicare	8,806	13,814	19,752	25,312	27,191
3401 Health and Welfare	77,563	104,040	150,338	198,446	211,615
3501 State Unemployment	182	266	350	434	462
3601 Workers' Compensation	7,287	11,432	16,347	20,948	22,503
	<u>226,700</u>	<u>335,149</u>	<u>473,997</u>	<u>615,746</u>	<u>660,903</u>

Capital College and Career Academy

Multi-Year Forecast

Revised 12/16/2021



	2023-24 Budget	2024-25 Forecast	2025-26 Forecast	2026-27 Forecast	2027-28 Forecast
Books and Supplies					
4100 Textbooks and Core Curricula	30,180	63,491	100,085	142,121	153,130
4200 Books and Other Materials	8,000	16,830	26,530	37,673	40,591
4302 School Supplies	20,000	42,075	66,326	94,182	101,478
4310 Office Expense	8,800	18,513	29,183	41,440	44,650
4400 Noncapitalized Equipment	57,688	54,631	63,338	72,063	25,563
4700 Food Services	70,454	148,217	233,644	331,774	357,475
	195,121	343,757	519,105	719,253	722,887
Subagreement Services					
5102 Special Education	12,000	33,357	91,560	139,374	147,329
5104 Transportation	64,000	134,640	212,242	301,383	324,730
5106 Other Educational Consultants	1,600	3,366	3,433	3,502	3,572
	77,600	171,363	307,235	444,259	475,631
Operations and Housekeeping					
5201 Auto and Travel	4,000	4,080	4,162	4,245	4,330
5300 Dues & Memberships	1,200	2,525	3,980	5,651	6,089
5400 Insurance	28,000	28,560	29,131	29,714	30,308
5501 Utilities	24,000	50,490	51,500	52,530	53,580
5900 Communications	14,400	30,294	30,900	31,518	32,148
	71,600	115,949	119,672	123,657	126,455
Facilities, Repairs and Other Leases					
5601 Rent	-	290,100	675,200	673,600	676,650
5602 Additional Rent	10,000	20,000	40,000	40,000	60,000
5603 Equipment Leases	9,000	18,934	19,312	19,699	20,093
5610 Repairs and Maintenance	6,000	12,623	19,898	20,296	20,702
	25,000	341,656	754,410	753,594	777,444
Professional/Consulting Services					
5802 Audit & Taxes	4,000	12,000	12,240	12,485	12,734
5803 Legal	10,000	10,200	10,404	10,612	10,824
5804 Professional Development	5,964	6,780	10,688	15,177	16,352
5809 Other taxes and fees	456	465	475	484	494
5810 Payroll Service Fee	5,475	11,518	18,157	25,782	27,780
5811 Management Fee	42,000	51,994	75,143	101,543	107,291
5812 Authorizer Oversight Fee	8,847	18,960	29,311	40,823	43,127
5815 Public Relations/Recruitment	5,000	5,100	5,202	5,306	5,412
	81,743	117,018	161,619	212,213	224,014
Interest					
7438 Interest Expense	1,125	1,000	1,000	1,000	1,000
	1,125	1,000	1,000	1,000	1,000
Total Expenses	\$ 1,286,178	\$ 2,378,550	\$ 3,699,274	\$ 4,615,351	\$ 4,863,562
Surplus (Deficit)	\$ 33,322	\$ 221,172	\$ 57,888	\$ 461,821	\$ 500,986
	3%	9%	2%	10%	10%
Fund Balance, Beginning of Year	\$ 400,000	\$ 433,322	\$ 654,494	\$ 712,383	\$ 1,174,204
Fund Balance, End of Year	\$ 433,322	\$ 654,494	\$ 712,383	\$ 1,174,204	\$ 1,675,190
	33.7%	27.5%	19.3%	25.4%	34.4%

Capital College and Career Academy

Multi-Year Forecast

Revised 12/16/2021



	2023-24 Budget	2024-25 Forecast	2025-26 Forecast	2026-27 Forecast	2027-28 Forecast
Cash Flow Adjustments					
Surplus (Deficit)	33,322	221,172	57,888	461,821	500,986
Cash Flows From Operating Activities					
Public Funding Receivables	(174,778)	(110,824)	(136,378)	(148,033)	(35,837)
Accounts Payable	3,206	6,992	9,027	(2,981)	923
Accrued Expenses	1,125	(1,125)	-	-	-
Cash Flows From Financing Activities					
Proceeds(Payments) on Debt	250,000	(62,500)	(62,500)	(62,500)	(62,500)
Total Change in Cash	112,874	53,715	(131,962)	248,307	403,573
Cash, Beginning of Year	400,000	512,874	566,589	434,627	682,935
Cash, End of Year	\$ 512,874	\$ 566,589	\$ 434,627	\$ 682,935	\$ 1,086,507

Capital College and Career Academy

Monthly Cash Flow/Budget FY23-24

Revised 12/16/2021



ADA = 73.60

	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Year-End Accruals	Annual Budget
Revenues														
State Aid - Revenue Limit														
8011 LCFF State Aid	-	-	-	321,900	-	-	156,600	-	78,300	78,300	78,300	78,300	78,300	870,001
8012 Education Protection Account	-	-	-	3,680	-	-	3,680	-	-	3,680	-	-	3,680	14,720
8096 In Lieu of Property Taxes	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	325,580	-	-	160,280	-	78,300	81,980	78,300	78,300	81,980	884,721
Federal Revenue														
8181 Special Education - Entitlement	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8220 Federal Child Nutrition	-	-	-	2,137	4,061	4,061	4,061	4,061	4,061	4,061	4,061	4,061	8,122	42,746
8290 Title I, Part A - Basic Low Income	-	-	-	5,060	-	-	5,060	-	-	5,060	-	-	5,060	20,240
8291 Title II, Part A - Teacher Quality	-	-	-	644	-	-	644	-	-	644	-	-	644	2,576
8294 Title V, Part B - PCSG	-	-	-	-	-	-	-	-	-	-	-	-	52,934	105,868
8296 Other Federal Revenue	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	7,841	4,061	4,061	9,765	4,061	4,061	9,765	4,061	56,995	66,759	171,429
Other State Revenue														
8311 State Special Education	-	-	-	-	-	-	-	-	8,694	8,694	8,694	8,694	8,694	43,470
8520 Child Nutrition	-	-	-	282	282	282	282	282	282	282	282	282	564	3,099
8545 School Facilities (SB740)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8550 Mandated Cost	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8560 State Lottery	-	-	-	-	-	-	-	-	-	-	-	-	16,781	16,781
	-	-	-	282	282	282	282	282	8,976	8,976	8,976	8,976	26,038	63,350
Other Local Revenue														
8980 Contributions, Unrestricted	-	200,000	-	-	-	-	-	-	-	-	-	-	-	200,000
	-	200,000	-	-	-	-	-	-	-	-	-	-	-	200,000
Total Revenue	-	200,000	-	333,703	4,343	4,343	170,327	4,343	91,337	100,721	91,337	144,270	174,778	1,319,500
Expenses														
Certificated Salaries														
1100 Teachers' Salaries	-	29,545	29,545	29,545	29,545	29,545	29,545	29,545	29,545	29,545	29,545	29,545	-	325,000
1170 Teachers' Substitute Hours	-	886	886	886	886	886	886	886	886	886	886	886	-	9,750
1175 Teachers' Extra Duty/Stipends	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1200 Pupil Support Salaries	-	6,704	6,704	6,704	6,704	6,704	6,704	6,704	6,704	6,704	6,704	6,704	-	73,740
1300 Administrators' Salaries	6,667	6,667	6,667	6,667	6,667	6,667	6,667	6,667	6,667	6,667	6,667	6,667	-	80,000
	6,667	43,802	43,802	43,802	43,802	43,802	43,802	43,802	43,802	43,802	43,802	43,802	-	488,490
Classified Salaries														
2100 Instructional Salaries	-	1,718	1,718	1,718	1,718	1,718	1,718	1,718	1,718	1,718	1,718	1,718	-	18,900
2200 Support Salaries	-	4,991	4,991	4,991	4,991	4,991	4,991	4,991	4,991	4,991	4,991	4,991	-	54,900
2400 Clerical and Office Staff Salaries	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750	-	45,000
	3,750	10,459	10,459	10,459	10,459	10,459	10,459	10,459	10,459	10,459	10,459	10,459	-	118,800
Benefits														
3101 STRS	1,273	8,366	8,366	8,366	8,366	8,366	8,366	8,366	8,366	8,366	8,366	8,366	-	93,302
3202 PERS	1,016	2,834	2,834	2,834	2,834	2,834	2,834	2,834	2,834	2,834	2,834	2,834	-	32,195
3301 OASDI	233	648	648	648	648	648	648	648	648	648	648	648	-	7,366
3311 Medicare	151	787	787	787	787	787	787	787	787	787	787	787	-	8,806
3401 Health and Welfare	6,464	6,464	6,464	6,464	6,464	6,464	6,464	6,464	6,464	6,464	6,464	6,464	-	77,563
3501 State Unemployment	9	9	9	9	9	9	46	36	18	9	9	9	-	182
3601 Workers' Compensation	125	651	651	651	651	651	651	651	651	651	651	651	-	7,287
	9,271	19,760	19,760	19,760	19,760	19,760	19,796	19,787	19,769	19,760	19,760	19,760	-	226,700

Capital College and Career Academy

Monthly Cash Flow/Budget FY23-24

Revised 12/16/2021



ADA = 73.60

	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Year-End Accruals	Annual Budget
Books and Supplies														
4100 Textbooks and Core Materials	-	7,545	7,545	7,545	7,545	-	-	-	-	-	-	-	-	30,180
4200 Books and Reference Materials	1,600	1,600	1,600	1,600	1,600	-	-	-	-	-	-	-	-	8,000
4302 School Supplies	1,667	1,667	1,667	1,667	1,667	1,667	1,667	1,667	1,667	1,667	1,667	1,667	-	20,000
4310 Office Expense	733	733	733	733	733	733	733	733	733	733	733	733	-	8,800
4400 Noncapitalized Equipment	28,844	28,844	-	-	-	-	-	-	-	-	-	-	-	57,688
4700 Food Services	-	6,405	6,405	6,405	6,405	6,405	6,405	6,405	6,405	6,405	6,405	6,405	-	70,454
	32,844	46,794	17,950	17,950	17,950	8,805	8,805	8,805	8,805	8,805	8,805	8,805	-	195,121
Subagreement Services														
5102 Special Education	-	1,091	1,091	1,091	1,091	1,091	1,091	1,091	1,091	1,091	1,091	1,091	-	12,000
5104 Transportation	-	5,818	5,818	5,818	5,818	5,818	5,818	5,818	5,818	5,818	5,818	5,818	-	64,000
5106 Other Educational Consultants	-	-	160	160	160	160	160	160	160	160	160	160	-	1,600
	-	6,909	7,069	7,069	7,069	7,069	7,069	7,069	7,069	7,069	7,069	7,069	-	77,600
Operations and Housekeeping														
5201 Auto and Travel	-	364	364	364	364	364	364	364	364	364	364	364	-	4,000
5300 Dues & Memberships	100	100	100	100	100	100	100	100	100	100	100	100	-	1,200
5400 Insurance	2,333	2,333	2,333	2,333	2,333	2,333	2,333	2,333	2,333	2,333	2,333	2,333	-	28,000
5501 Utilities	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	-	24,000
5900 Communications	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	-	14,400
	5,633	5,997	5,997	5,997	5,997	5,997	5,997	5,997	5,997	5,997	5,997	5,997	-	71,600
Facilities, Repairs and Other Leases														
5601 Rent	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5602 Additional Rent	-	-	-	-	-	-	2,000	2,000	2,000	2,000	2,000	2,000	-	10,000
5603 Equipment Leases	750	750	750	750	750	750	750	750	750	750	750	750	-	9,000
5610 Repairs and Maintenance	500	500	500	500	500	500	500	500	500	500	500	500	-	6,000
	1,250	1,250	1,250	1,250	1,250	1,250	3,250	3,250	3,250	3,250	3,250	1,250	-	25,000
Professional/Consulting Services														
5802 Audit & Taxes	-	-	-	-	-	-	-	-	-	-	-	-	4,000	-
5803 Legal	833	833	833	833	833	833	833	833	833	833	833	833	-	10,000
5804 Professional Development	-	-	5,964	-	-	-	-	-	-	-	-	-	-	5,964
5809 Other taxes and fees	-	-	46	46	46	46	46	46	46	46	46	46	-	456
5810 Payroll Service Fee	456	456	456	456	456	456	456	456	456	456	456	456	-	5,475
5811 Management Fee	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	-	42,000
5812 Authorizer Oversight Fee	-	-	-	-	-	3,256	-	-	2,386	-	-	-	3,206	8,847
5815 Public Relations/Recruitment	-	-	500	500	500	500	500	500	500	500	500	500	-	5,000
	4,790	4,790	11,299	5,335	5,335	5,335	8,591	5,335	5,335	7,721	5,335	9,335	3,206	81,743
Interest														
7438 Interest Expense	-	-	-	-	-	-	-	-	-	-	-	-	1,125	-
	-	-	-	-	-	-	-	-	-	-	-	-	1,125	-
Total Expenses	64,204	139,760	117,586	111,622	111,622	102,477	107,769	104,504	104,486	106,863	104,477	107,602	3,206	1,286,178
Monthly Surplus (Deficit)	(64,204)	60,240	(117,586)	222,081	(107,279)	(98,134)	62,558	(100,162)	(13,149)	(6,142)	(13,140)	36,668	171,573	33,322

Capital College and Career Academy

Monthly Cash Flow/Budget FY23-24

Revised 12/16/2021



ADA = 73.60

	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Year-End Accruals	Annual Budget
Cash Flow Adjustments														
Monthly Surplus (Deficit)	(64,204)	60,240	(117,586)	222,081	(107,279)	(98,134)	62,558	(100,162)	(13,149)	(6,142)	(13,140)	36,668	171,573	33,322
Cash flows from operating activities	-	-	-	-	-	-	-	-	-	-	-	-	(174,778)	(174,778)
Public Funding Receivables	-	-	-	-	-	-	-	-	-	-	-	-	3,206	3,206
Accounts Payable	-	-	-	-	-	-	-	-	-	-	-	-	1,125	1,125
Accrued Expenses	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cash flows from financing activities	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Proceeds(Payments) on Debt	-	-	100,000	-	-	75,000	-	-	-	-	-	75,000	-	250,000
Total Change in Cash	(64,204)	60,240	(17,586)	222,081	(107,279)	(98,134)	137,558	(100,162)	(13,149)	(6,142)	(13,140)	112,793		
Cash, Beginning of Month	400,000	335,796	396,036	378,450	600,531	493,251	395,117	532,674	432,513	419,363	413,221	400,081		
Cash, End of Month	335,796	396,036	378,450	600,531	493,251	395,117	532,674	432,513	419,363	413,221	400,081	512,874		

Capital College and Career Academy



Monthly Cash Flow/Forecast FY24-25

Revised 12/16/2021

ADA = 151.80

	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Year-End Accruals	Annual Forecast	Prior Year Forecast	Favorable / (Unfav.)
Revenues																
State Aid - Revenue Limit															ADA = 73.60	
8011 LCFF State Aid	-	45,228	45,228	416,096	81,410	81,410	244,230	81,410	174,127	174,127	174,127	174,127	174,127	1,865,646	870,001	995,645
8012 Education Protection Account	-	-	-	3,680	-	-	3,680	-	-	15,410	-	-	7,590	30,360	14,720	15,640
8096 In Lieu of Property Taxes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	45,228	45,228	419,776	81,410	81,410	247,910	81,410	174,127	189,537	174,127	174,127	181,717	1,896,006	884,721	1,011,285
Federal Revenue																
8181 Special Education - Entitlement	-	-	-	-	-	-	-	-	-	-	-	-	-	10,000	10,000	10,000
8220 Federal Child Nutrition	-	-	4,408	4,408	8,816	8,816	8,816	8,816	8,816	8,816	8,816	8,816	8,816	88,163	42,746	45,417
8290 Title I, Part A - Basic Low Income	-	-	-	10,436	-	-	10,436	-	-	10,436	-	-	-	41,745	20,240	21,505
8291 Title II, Part A - Teacher Quality	-	-	-	1,328	-	-	1,328	-	-	1,328	-	-	-	5,313	2,576	2,737
8294 Title V, Part B - PCSG	-	-	-	-	-	-	67,476	-	-	67,476	-	-	-	134,952	105,868	29,085
8296 Other Federal Revenue	-	-	-	2,500	-	-	2,500	-	-	2,500	-	-	-	10,000	-	10,000
	-	-	4,408	18,673	8,816	8,816	23,081	76,292	8,816	23,081	76,292	8,816	33,081	290,173	171,429	118,744
Other State Revenue																
8311 State Special Education	-	4,483	4,483	8,069	8,069	8,069	8,069	8,069	8,069	8,069	8,069	8,069	8,069	89,657	43,470	46,187
8520 Child Nutrition	-	-	320	320	639	639	639	639	639	639	639	639	639	6,392	3,099	3,293
8545 School Facilities (SB740)	-	-	-	-	-	-	89,581	-	-	-	44,791	-	-	179,163	-	-
8550 Mandated Cost	-	-	-	-	-	3,720	-	-	-	-	-	-	-	3,720	-	3,720
8560 State Lottery	-	-	-	-	-	-	8,653	-	-	8,653	-	-	-	34,610	16,781	17,830
	-	4,483	4,802	8,389	8,708	12,429	106,942	8,708	8,708	17,361	53,499	8,708	70,804	313,543	63,350	71,030
Other Local Revenue																
8980 Contributions, Unrestricted	-	100,000	-	-	-	-	-	-	-	-	-	-	-	100,000	200,000	(100,000)
	-	100,000	-	-	-	-	-	-	-	-	-	-	-	100,000	200,000	(100,000)
Total Revenue	-	149,711	54,438	446,837	98,935	102,655	377,933	166,411	191,652	229,979	303,918	191,652	285,602	2,599,722	1,319,500	1,280,222
Expenses																
Certificated Salaries																
1100 Teachers' Salaries	-	42,191	42,191	42,191	42,191	42,191	42,191	42,191	42,191	42,191	42,191	42,191	-	464,100	325,000	(139,100)
1170 Teachers' Substitute Hours	-	1,266	1,266	1,266	1,266	1,266	1,266	1,266	1,266	1,266	1,266	1,266	-	13,923	9,750	(4,173)
1175 Teachers' Extra Duty/Stipends	-	-	-	-	-	-	-	-	-	-	-	-	-	11,603	-	(11,603)
1200 Pupil Support Salaries	-	12,518	12,518	12,518	12,518	12,518	12,518	12,518	12,518	12,518	12,518	12,518	-	137,700	73,740	(63,960)
1300 Administrators' Salaries	13,800	13,800	13,800	13,800	13,800	13,800	13,800	13,800	13,800	13,800	13,800	13,800	-	165,600	80,000	(85,600)
	13,800	69,775	69,775	69,775	69,775	69,775	69,775	69,775	69,775	69,775	69,775	81,377	-	792,926	488,490	(304,436)
Classified Salaries																
2100 Instructional Salaries	-	3,505	3,505	3,505	3,505	3,505	3,505	3,505	3,505	3,505	3,505	3,505	-	38,556	18,900	(19,656)
2200 Support Salaries	-	6,843	6,843	6,843	6,843	6,843	6,843	6,843	6,843	6,843	6,843	6,843	-	75,276	54,900	(20,376)
2400 Clerical and Office Staff Salaries	3,825	3,825	3,825	3,825	3,825	3,825	3,825	3,825	3,825	3,825	3,825	3,825	-	45,900	45,000	(900)
	3,825	14,173	14,173	14,173	14,173	14,173	14,173	14,173	14,173	14,173	14,173	14,173	-	159,732	118,800	(40,932)
Benefits																
3101 STRS	2,067	13,580	13,580	13,580	13,580	13,580	13,580	13,580	13,580	13,580	13,580	13,580	-	151,449	93,302	(58,147)
3202 PERS	1,397	3,895	3,895	3,895	3,895	3,895	3,895	3,895	3,895	3,895	3,895	3,895	-	44,246	32,195	(12,051)
3301 OASDI	313	872	872	872	872	872	872	872	872	872	872	872	-	9,903	7,366	(2,538)
3311 Medicare	237	1,234	1,234	1,234	1,234	1,234	1,234	1,234	1,234	1,234	1,234	1,234	-	13,814	8,806	(5,008)
3401 Health and Welfare	8,670	8,670	8,670	8,670	8,670	8,670	8,670	8,670	8,670	8,670	8,670	8,670	-	104,040	77,563	(26,478)
3501 State Unemployment	13	13	13	13	13	13	67	53	27	13	13	13	-	266	182	(84)
3601 Workers' Compensation	196	1,021	1,021	1,021	1,021	1,021	1,021	1,021	1,021	1,021	1,021	1,021	-	11,432	7,287	(4,144)
	12,892	29,286	29,286	29,286	29,286	29,286	29,340	29,326	29,300	29,286	29,286	29,286	-	335,149	226,700	(108,450)

Capital College and Career Academy



Monthly Cash Flow/Forecast FY24-25

Revised 12/16/2021

ADA = 151.80

	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Year-End Accruals	Annual Forecast	Prior Year Forecast	Favorable / (Unfav.)	
Books and Supplies																	
4100 Textbooks and Core Curricula Mat	-	15,873	15,873	15,873	15,873	-	-	-	-	-	-	-	-	63,491	30,180	(33,311)	
4200 Books and Other Reference Mater	3,366	3,366	3,366	3,366	3,366	-	-	-	-	-	-	-	-	16,830	8,000	(8,830)	
4302 School Supplies	3,506	3,506	3,506	3,506	3,506	3,506	3,506	3,506	3,506	3,506	3,506	3,506	-	42,075	20,000	(22,075)	
4310 Office Expense	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	-	18,513	8,800	(9,713)	
4400 Noncapitalized Equipment	27,316	27,316	-	-	-	-	-	-	-	-	-	-	-	54,631	57,688	3,056	
4700 Food Services	-	13,474	13,474	13,474	13,474	13,474	13,474	13,474	13,474	13,474	13,474	13,474	-	148,217	70,454	(77,763)	
	35,731	65,078	37,762	37,762	37,762	18,523	18,523	18,523	18,523	18,523	18,523	18,523	-	343,757	195,121	(148,636)	
Subagreement Services																	
5102 Special Education	-	1,668	1,668	3,002	3,002	3,002	3,002	3,002	3,002	3,002	3,002	3,002	3,002	33,357	12,000	(21,357)	
5104 Transportation	-	12,240	12,240	12,240	12,240	12,240	12,240	12,240	12,240	12,240	12,240	12,240	-	134,640	64,000	(70,640)	
5106 Other Educational Consultants	-	-	337	337	337	337	337	337	337	337	337	337	-	3,366	1,600	(1,766)	
	-	13,908	14,244	15,579	15,579	15,579	15,579	15,579	15,579	15,579	15,579	15,579	3,002	171,363	77,600	(93,763)	
Operations and Housekeeping																	
5201 Auto and Travel	-	371	371	371	371	371	371	371	371	371	371	371	-	4,080	4,000	(80)	
5300 Dues & Memberships	210	210	210	210	210	210	210	210	210	210	210	210	-	2,525	1,200	(1,325)	
5400 Insurance	2,380	2,380	2,380	2,380	2,380	2,380	2,380	2,380	2,380	2,380	2,380	2,380	-	28,560	28,000	(560)	
5501 Utilities	4,208	4,208	4,208	4,208	4,208	4,208	4,208	4,208	4,208	4,208	4,208	4,208	-	50,490	24,000	(26,490)	
5900 Communications	2,525	2,525	2,525	2,525	2,525	2,525	2,525	2,525	2,525	2,525	2,525	2,525	-	30,294	14,400	(15,894)	
	9,322	9,693	9,693	9,693	9,693	9,693	9,693	9,693	9,693	9,693	9,693	9,693	-	115,949	71,600	(44,349)	
Facilities, Repairs and Other Leases																	
5601 Rent	24,175	24,175	24,175	24,175	24,175	24,175	24,175	24,175	24,175	24,175	24,175	24,175	-	290,100	-	(290,100)	
5602 Additional Rent	-	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	-	20,000	10,000	(10,000)	
5603 Equipment Leases	1,578	1,578	1,578	1,578	1,578	1,578	1,578	1,578	1,578	1,578	1,578	1,578	-	18,934	9,000	(9,934)	
5610 Repairs and Maintenance	1,052	1,052	1,052	1,052	1,052	1,052	1,052	1,052	1,052	1,052	1,052	1,052	-	12,623	6,000	(6,623)	
	26,805	28,805	28,805	28,805	28,805	28,805	28,805	28,805	28,805	28,805	28,805	28,805	-	341,656	25,000	(316,656)	
Professional/Consulting Services																	
5802 Audit & Taxes	-	-	-	-	-	6,000	-	-	-	-	-	-	6,000	-	12,000	4,000	(8,000)
5803 Legal	850	850	850	850	850	850	850	850	850	850	850	850	-	10,200	10,000	(200)	
5804 Professional Development	-	-	6,780	-	-	-	-	-	-	-	-	-	-	6,780	5,964	(816)	
5809 Other taxes and fees	-	-	47	47	47	47	47	47	47	47	47	47	-	465	456	(9)	
5810 Payroll Service Fee	960	960	960	960	960	960	960	960	960	960	960	960	-	11,518	5,475	(6,043)	
5811 Management Fee	4,333	4,333	4,333	4,333	4,333	4,333	4,333	4,333	4,333	4,333	4,333	4,333	-	51,994	42,000	(9,994)	
5812 Authorizer Oversight Fee	-	-	-	905	-	-	5,826	-	-	5,034	-	-	7,195	18,960	8,847	(10,113)	
5815 Public Relations/Recruitment	-	-	510	510	510	510	510	510	510	510	510	510	-	5,100	5,000	(100)	
	6,143	6,143	13,479	7,604	6,699	12,699	12,525	6,699	6,699	11,734	6,699	12,699	7,195	117,018	81,743	(35,275)	
Interest																	
7438 Interest Expense	-	-	-	167	167	167	167	167	167	-	-	-	-	1,000	1,125	125	
	-	-	-	167	167	167	167	167	167	-	-	-	-	1,000	1,125	125	
Total Expenses	108,518	236,861	217,218	212,844	211,939	198,700	198,580	192,740	192,714	197,568	192,534	208,136	10,197	2,378,550	1,286,178	(1,092,371)	
Monthly Surplus (Deficit)	(108,518)	(87,150)	(162,780)	233,993	(113,005)	(96,045)	179,354	(26,330)	(1,062)	32,410	111,385	(16,485)	275,405	221,172	33,322	187,851	

Capital College and Career Academy



Monthly Cash Flow/Forecast FY24-25

Revised 12/16/2021

ADA = 151.80

	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Year-End Accruals	Annual Forecast	Prior Year Forecast	Favorable / (Unfav.)
Cash Flow Adjustments																
Monthly Surplus (Deficit)	(108,518)	(87,150)	(162,780)	233,993	(113,005)	(96,045)	179,354	(26,330)	(1,062)	32,410	111,385	(16,485)	275,405	221,172		
Cash flows from operating activities																
Public Funding Receivables	81,980	-	-	-	-	-	92,798	-	-	-	-	-	(285,602)	(110,824)		
Prepaid Expenses	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Accounts Payable	(3,206)	-	-	-	-	-	-	-	-	-	-	-	10,197	6,992		
Accrued Expenses	-	-	-	(1,125)	-	-	-	-	-	-	-	-	-	(1,125)		
Cash flows from financing activities																
Proceeds(Payments) on Debt	-	-	-	(10,417)	(10,417)	(10,417)	(10,417)	(10,417)	(10,417)	(10,417)	(10,417)	(10,417)	-	(62,500)		
Total Change in Cash	(29,743)	(87,150)	(162,780)	222,452	(123,421)	(106,462)	261,735	(36,746)	(11,479)	32,410	111,385	(16,485)				
Cash, Beginning of Month	512,874	483,131	395,981	233,201	455,653	332,231	225,769	487,504	450,758	439,279	471,689	583,074				
Cash, End of Month	483,131	395,981	233,201	455,653	332,231	225,769	487,504	450,758	439,279	471,689	583,074	566,589				

Capital College and Career Academy



Monthly Cash Flow/Forecast FY25-26

Revised 12/16/2021

ADA = 234.60

	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Year-End Accruals	Annual Forecast	Prior Year Forecast	Favorable / (Unfav.)	
Revenues																	
State Aid - Revenue Limit															ADA = 151.80		
8011 LCFF State Aid	-	94,829	94,829	510,926	170,692	170,692	336,211	170,692	276,440	276,440	276,440	276,440	276,440	2,931,070	1,865,646	1,065,424	
8012 Education Protection Account	-	-	-	3,680	-	-	3,680	-	-	15,410	-	-	(22,770)	-	30,360	(30,360)	
8096 In Lieu of Property Taxes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	-	94,829	94,829	514,606	170,692	170,692	339,891	170,692	276,440	291,850	276,440	276,440	253,670	2,931,070	1,896,006	1,035,064	
Federal Revenue																	
8181 Special Education - Entitlement	-	-	-	-	-	-	-	-	-	-	-	-	-	20,625	20,625	10,000	10,625
8220 Federal Child Nutrition	-	-	6,813	6,813	13,625	13,625	13,625	13,625	13,625	13,625	13,625	13,625	13,625	136,251	88,163	48,089	
8290 Title I, Part A - Basic Low Income	-	-	-	16,129	-	-	16,129	-	-	16,129	-	-	16,129	64,515	41,745	22,770	
8291 Title II, Part A - Teacher Quality	-	-	-	2,053	-	-	2,053	-	-	2,053	-	-	2,053	8,211	5,313	2,898	
8294 Title V, Part B - PCSG	-	-	-	-	-	-	-	-	-	-	-	-	-	-	134,952	(134,952)	
8296 Other Federal Revenue	-	-	-	2,500	-	-	2,500	-	-	2,500	-	-	2,500	10,000	10,000	-	
	-	6,813	27,494	13,625	13,625	34,307	13,625	13,625	34,307	13,625	13,625	13,625	54,932	239,602	290,173	(50,571)	
Other State Revenue																	
8311 State Special Education	-	6,928	6,928	12,470	12,470	12,470	12,470	12,470	12,470	12,470	12,470	12,470	12,470	138,561	89,657	48,904	
8520 Child Nutrition	-	-	494	494	988	988	988	988	988	988	988	988	988	9,879	6,392	3,487	
8545 School Facilities (SB740)	-	-	-	-	-	-	138,444	-	-	-	-	-	69,222	276,888	179,163		
8550 Mandated Cost	-	-	-	-	-	3,720	-	-	-	-	-	-	-	7,673	3,720	3,953	
8560 State Lottery	-	-	-	-	-	-	13,372	-	-	13,372	-	-	26,744	53,489	34,610	18,878	
	-	6,928	7,422	12,964	13,458	17,179	165,275	13,458	13,458	26,831	82,680	13,458	113,378	486,490	313,543	75,222	
Other Local Revenue																	
8980 Contributions, Unrestricted	-	100,000	-	-	-	-	-	-	-	-	-	-	-	100,000	100,000	-	
	-	100,000	-	-	-	-	-	-	-	-	-	-	-	100,000	100,000	-	
Total Revenue	-	201,757	109,063	555,064	197,775	201,496	539,472	197,775	303,524	352,987	372,746	303,524	421,980	3,757,163	2,599,722	1,157,441	
Expenses																	
Certificated Salaries																	
1100 Teachers' Salaries	-	67,626	67,626	67,626	67,626	67,626	67,626	67,626	67,626	67,626	67,626	67,626	-	743,886	464,100	(279,786)	
1170 Teachers' Substitute Hours	-	2,029	2,029	2,029	2,029	2,029	2,029	2,029	2,029	2,029	2,029	2,029	-	22,317	13,923	(8,394)	
1175 Teachers' Extra Duty/Stipends	-	-	-	-	-	-	-	-	-	-	-	-	-	18,597	11,603	(6,995)	
1200 Pupil Support Salaries	-	12,769	12,769	12,769	12,769	12,769	12,769	12,769	12,769	12,769	12,769	12,769	-	140,454	137,700	(2,754)	
1300 Administrators' Salaries	-	21,199	21,199	21,199	21,199	21,199	21,199	21,199	21,199	21,199	21,199	21,199	-	254,392	165,600	(88,792)	
	-	21,199	103,623	103,623	103,623	103,623	103,623	103,623	103,623	103,623	103,623	103,623	-	1,179,646	792,926	(386,720)	
Classified Salaries																	
2100 Instructional Salaries	-	5,363	5,363	5,363	5,363	5,363	5,363	5,363	5,363	5,363	5,363	5,363	-	58,991	38,556	(20,435)	
2200 Support Salaries	-	6,980	6,980	6,980	6,980	6,980	6,980	6,980	6,980	6,980	6,980	6,980	-	76,782	75,276	(1,506)	
2400 Clerical and Office Staff Salaries	3,902	3,902	3,902	3,902	3,902	3,902	3,902	3,902	3,902	3,902	3,902	3,902	-	46,818	45,900	(918)	
	3,902	16,244	16,244	16,244	16,244	16,244	16,244	16,244	16,244	16,244	16,244	16,244	-	182,590	159,732	(22,858)	
Benefits																	
3101 STRS	3,075	20,203	20,203	20,203	20,203	20,203	20,203	20,203	20,203	20,203	20,203	20,203	-	225,312	151,449	(73,864)	
3202 PERS	1,597	4,453	4,453	4,453	4,453	4,453	4,453	4,453	4,453	4,453	4,453	4,453	-	50,577	44,246	(6,332)	
3301 OASDI	357	997	997	997	997	997	997	997	997	997	997	997	-	11,321	9,903	(1,417)	
3311 Medicare	339	1,765	1,765	1,765	1,765	1,765	1,765	1,765	1,765	1,765	1,765	1,765	-	19,752	13,814	(5,939)	
3401 Health and Welfare	12,528	12,528	12,528	12,528	12,528	12,528	12,528	12,528	12,528	12,528	12,528	12,528	-	150,338	104,040	(46,298)	
3501 State Unemployment	18	18	18	18	18	18	88	70	35	18	18	18	-	350	266	(84)	
3601 Workers' Compensation	280	1,461	1,461	1,461</													

Capital College and Career Academy



Monthly Cash Flow/Forecast FY25-26

Revised 12/16/2021

ADA = 234.60

	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Year-End Accruals	Annual Forecast	Prior Year Forecast	Favorable / (Unfav.)
Books and Supplies																
4100 Textbooks and Core Curricula Mat	-	25,021	25,021	25,021	25,021	-	-	-	-	-	-	-	-	100,085	63,491	(36,594)
4200 Books and Other Reference Mater	5,306	5,306	5,306	5,306	5,306	-	-	-	-	-	-	-	-	26,530	16,830	(9,700)
4302 School Supplies	5,527	5,527	5,527	5,527	5,527	5,527	5,527	5,527	5,527	5,527	5,527	5,527	-	66,326	42,075	(24,251)
4310 Office Expense	2,432	2,432	2,432	2,432	2,432	2,432	2,432	2,432	2,432	2,432	2,432	2,432	-	29,183	18,513	(10,670)
4400 Noncapitalized Equipment	31,669	31,669	-	-	-	-	-	-	-	-	-	-	-	63,338	54,631	(8,706)
4700 Food Services	-	21,240	21,240	21,240	21,240	21,240	21,240	21,240	21,240	21,240	21,240	21,240	-	233,644	148,217	(85,427)
	44,934	91,195	59,527	59,527	59,527	29,199	29,199	29,199	29,199	29,199	29,199	29,199	29,199	519,105	343,757	(175,348)
Subagreement Services																
5102 Special Education	-	4,578	4,578	8,240	8,240	8,240	8,240	8,240	8,240	8,240	8,240	8,240	8,240	91,560	33,357	(58,203)
5104 Transportation	-	19,295	19,295	19,295	19,295	19,295	19,295	19,295	19,295	19,295	19,295	19,295	-	212,242	134,640	(77,602)
5106 Other Educational Consultants	-	-	343	343	343	343	343	343	343	343	343	343	-	3,433	3,366	(67)
	-	23,873	24,216	27,878	27,878	27,878	27,878	27,878	27,878	27,878	27,878	27,878	8,240	307,235	171,363	(135,872)
Operations and Housekeeping																
5201 Auto and Travel	-	378	378	378	378	378	378	378	378	378	378	378	-	4,162	4,080	(82)
5300 Dues & Memberships	332	332	332	332	332	332	332	332	332	332	332	332	-	3,980	2,525	(1,455)
5400 Insurance	2,428	2,428	2,428	2,428	2,428	2,428	2,428	2,428	2,428	2,428	2,428	2,428	-	29,131	28,560	(571)
5501 Utilities	4,292	4,292	4,292	4,292	4,292	4,292	4,292	4,292	4,292	4,292	4,292	4,292	-	51,500	50,490	(1,010)
5900 Communications	2,575	2,575	2,575	2,575	2,575	2,575	2,575	2,575	2,575	2,575	2,575	2,575	-	30,900	30,294	(606)
	9,626	10,004	10,004	10,004	10,004	10,004	10,004	10,004	10,004	10,004	10,004	10,004	-	119,672	115,949	(3,724)
Facilities, Repairs and Other Leases																
5601 Rent	56,267	56,267	56,267	56,267	56,267	56,267	56,267	56,267	56,267	56,267	56,267	56,267	-	675,200	290,100	(385,100)
5603 Equipment Leases	1,609	1,609	1,609	1,609	1,609	1,609	1,609	1,609	1,609	1,609	1,609	1,609	-	19,312	18,934	(379)
5610 Repairs and Maintenance	1,658	1,658	1,658	1,658	1,658	1,658	1,658	1,658	1,658	1,658	1,658	1,658	-	19,898	12,623	(7,275)
	59,534	63,534	63,534	63,534	63,534	63,534	63,534	63,534	63,534	63,534	63,534	63,534	-	754,410	341,656	(412,754)
Professional/Consulting Services																
5802 Audit & Taxes	-	-	-	-	-	6,120	-	-	-	-	-	6,120	-	12,240	12,000	(240)
5803 Legal	867	867	867	867	867	867	867	867	867	867	867	867	-	10,404	10,200	(204)
5804 Professional Development	-	-	10,688	-	-	-	-	-	-	-	-	-	-	10,688	6,780	(3,908)
5809 Other taxes and fees	-	-	47	47	47	47	47	47	47	47	47	47	-	475	465	(9)
5810 Payroll Service Fee	1,513	1,513	1,513	1,513	1,513	1,513	1,513	1,513	1,513	1,513	1,513	1,513	-	18,157	11,518	(6,639)
5811 Management Fee	6,262	6,262	6,262	6,262	6,262	6,262	6,262	6,262	6,262	6,262	6,262	6,262	-	75,143	51,994	(23,149)
5812 Authorizer Oversight Fee	-	-	-	1,897	-	-	8,560	-	-	7,870	-	-	10,984	29,311	18,960	(10,351)
5815 Public Relations/Recruitment	-	-	520	520	520	520	520	520	520	520	520	520	-	5,202	5,100	(102)
	8,642	8,642	19,897	11,106	9,210	15,330	17,770	9,210	9,210	17,080	9,210	15,330	10,984	161,619	117,018	(44,601)
Interest																
7438 Interest Expense	-	-	-	167	167	167	167	167	167	-	-	-	-	1,000	1,000	-
	-	-	-	167	167	167	167	167	167	-	-	-	-	1,000	1,000	-
Total Expenses	166,030	358,540	338,470	333,507	331,611	307,404	309,913	301,336	301,301	308,987	301,117	321,834	19,224	3,699,274	2,378,550	(1,320,725)
Monthly Surplus (Deficit)	(166,030)	(156,783)	(229,406)	221,557	(133,836)	(105,908)	229,559	(103,561)	2,223	44,000	71,629	(18,310)	402,755	57,888	221,172	(163,284)

Capital College and Career Academy



Monthly Cash Flow/Forecast FY25-26

Revised 12/16/2021

ADA = 234.60

	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Year-End Accruals	Annual Forecast	Prior Year Forecast	Favorable / (Unfav.)
Cash Flow Adjustments																
Monthly Surplus (Deficit)	(166,030)	(156,783)	(229,406)	221,557	(133,836)	(105,908)	229,559	(103,561)	2,223	44,000	71,629	(18,310)	402,755	57,888		
Cash flows from operating activities																
Public Funding Receivables	191,172	44,791	17,305	-	-	-	32,334	-	-	-	-	-	(421,980)	(136,378)		
Prepaid Expenses	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Accounts Payable	(10,197)	-	-	-	-	-	-	-	-	-	-	-	19,224	9,027		
Accrued Expenses	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Cash flows from financing activities																
Proceeds(Payments) on Debt	-	-	-	-	(10,417)	(10,417)	(10,417)	(10,417)	(10,417)	(10,417)	(10,417)	(10,417)	-	-	(62,500)	
Total Change in Cash	14,945	(111,992)	(212,101)	211,140	(144,252)	(116,324)	251,476	(113,977)	(8,194)	44,000	71,629	(18,310)				
Cash, Beginning of Month	566,589	581,534	469,542	257,441	468,581	324,329	208,004	459,480	345,503	337,309	381,309	452,938				
Cash, End of Month	581,534	469,542	257,441	468,581	324,329	208,004	459,480	345,503	337,309	381,309	452,938	434,627				



Capital College & Career Academy

Executive Team

Kevin Dobson
Founder/Director

Armando Cornelio
Construction Coordinator

Board of Directors

John Belperio
Northern District Manager,
Northern CA Carpenters Regional Council

Timothy Blood
Preconstruction Manager,
Turner Construction

Jacobe Caditz
Community Education Manager,
SMUD

Dan Dumke
Project Executive,
The Boldt Company

Ben Fell
Interim Director of College-to-Learner,
California State University, Sacramento

Mich Kiwan Gómez
Spanish Bilingual Teacher,
Twin Rivers Unified School District

Stephanie Hannah, CPA, CCIFP
Chief Financial Officer,
Charge EPC

Ramon Hopkins
Division of Construction Chief,
California Department of Transportation

Ian McQuoid
Senior Vice President Operations,
McCarthy Building Companies, Inc.

James Moore
Case Manager,
Volunteers of America

Timothy Murphy
Chief Executive Officer,
Sacramento Regional Builders Exchange

Ken Wenham
President,
Roebbelein Contracting, Inc.

Deborah Wilder
Past President,
Women Construction Owners & Executives

REIMBURSEMENT RESOLUTION

[A resolution of the Board of Directors of Capital College & Career Academy Declaring an official intent to reimburse itself from the proceeds of a future borrowing for capital expenditures and providing certain other matters in connection therewith.]

WHEREAS, Capital College & Career Academy (the “Corporation”) is a nonprofit public benefit corporation, duly organized and existing under the laws of the State of California (the “State”), and is duly qualified to do business in the State, and, under its articles of incorporation, the Corporation is authorized to undertake the acquisition, construction, rehabilitation, equipping and financing of buildings and facilities; and

WHEREAS, the Corporation has determined that it is necessary to finance and/or refinance the cost of the acquisition, construction, improvement, rehabilitation, equipping and furnishing of the real property located at 501 Arden Way, Sacramento, California 95815 (collectively, the “Project”); and

WHEREAS, the Board of Directors of the Corporation (the “Board”) is the governing body of the Corporation; and

WHEREAS, the Corporation proposes to finance the Project with the proceeds of a tax-exempt borrowing in the aggregate principal amount of not to exceed \$10,000,000; and

WHEREAS, the Corporation reasonably expects to expend certain funds in the future for capital expenditures related to the Project; and

WHEREAS, the Corporation currently intends and reasonably expects to participate in a borrowing to finance the Project, including an amount of not to exceed \$10,000,000 for reimbursing the Corporation for capital expenditures made by the Corporation for the Project prior to the date when funds for the Project are available from such borrowing; and

WHEREAS, the initial expenditure of funds of the Corporation for the Project for which the Corporation desires reimbursement occurred on a date that is within 60 days prior to the date hereof but before such borrowing; and

WHEREAS, such borrowing by the Corporation shall occur within 18 months of either the date that the Corporation first expended funds for the Project or the date that the Project is placed in service, whichever is later (but in no event more than three years after the date of the original expenditure of the Corporation’s funds for the Project); and

WHEREAS, the Board hereby desires to declare its official intent, pursuant to 26 C.F.R.v§ 1.150-2, to reimburse the Corporation for the expenditure of the Corporation’s funds for the Project from the proceeds of a future borrowing of the Corporation.

Section 1. **Dates of Capital Expenditures.** All of the capital expenditures covered by this Resolution were or will be made not earlier than 60 days prior to the date of this Resolution.

Section 2. **Declaration of Official Intent.** The Corporation presently intends and reasonably expects to participate in a borrowing within 18 months of either the date of the first expenditure of funds by the Corporation for the Project or the date that the Project is placed in service, whichever is later (but in no event more than three years after the date of the original expenditure of the Corporation's funds for the Project), and to allocate an amount not to exceed \$10,000,000 of the proceeds thereof to reimburse the Corporation for its expenditures in connection with the Project.

Section 3. **Resolution Number.** This is the first resolution of the Corporation declaring its intent to reimburse itself for the Project from proceeds of a borrowing.

Section 4. **Confirmation of Prior Acts.** All prior actions of the officials, employees and agents of the Corporation that are in conformity with the purpose and intent of this Resolution and in furtherance of the Project shall be and the same hereby are in all respects ratified, approved and confirmed.

Section 5. **Effective Date of Resolution.** This Resolution shall take effect immediately upon its adoption.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF CAPITAL COLLEGE & CAREER ACADEMY:

	Aye	Nay
Jerry Bell	-	-
Jordan Blair	X	<input type="checkbox"/>
Timothy Blood	-	-
Edith Espinoza	-	-
Linda Farley	X	<input type="checkbox"/>
James Moore	-	-
Stephanie Hannah	X	<input type="checkbox"/>
Tim Murphy	X	<input type="checkbox"/>
Jacobe Caditz	X	<input type="checkbox"/>
Ian McQuoid	X	<input type="checkbox"/>

SOURCES AND USES OF FUNDS

Capital Career College
Series 2022A&B
Preliminary Numbers as of 11/30/2021
35 year maturity
Cap-I and Interest Only through 12/15/2024 (2.5 years)
50% DSRF

Sources:	Series 2022 Tax-Exempt	Series 2022 Taxable	Total
Bond Proceeds:			
Par Amount	8,900,000.00	660,000.00	9,560,000.00
<hr/>			
	8,900,000.00	660,000.00	9,560,000.00
<hr/>			
Uses:	Series 2022 Tax-Exempt	Series 2022 Taxable	Total
Project Fund Deposits:			
Project Fund	7,000,000.00		7,000,000.00
Other Fund Deposits:			
Debt Service Reserve Fund	339,200.00	17,898.23	357,098.23
CAPI Through 12/15/2024	1,379,500.00	119,350.00	1,498,850.00
	1,718,700.00	137,248.23	1,855,948.23
Delivery Date Expenses:			
Cost of Issuance	177,998.00	522,002.00	700,000.00
Other Uses of Funds:			
Additional Proceeds	3,302.00	749.77	4,051.77
	8,900,000.00	660,000.00	9,560,000.00
<hr/>			

BOND PRICING

Capital Career College
Series 2022A&B
Preliminary Numbers as of 11/30/2021
35 year maturity
Cap-I and Interest Only through 12/15/2024 (2.5 years)
50% DSRF

<i>Bond Component</i>	<i>Maturity Date</i>	<i>Amount</i>	<i>Rate</i>	<i>Yield</i>	<i>Price</i>
TE Term Bond 2057:					
	06/15/2023		6.000%	6.000%	100.000
	06/15/2024		6.000%	6.000%	100.000
	06/15/2025		6.000%	6.000%	100.000
	06/15/2026	5,000	6.000%	6.000%	100.000
	06/15/2027	5,000	6.000%	6.000%	100.000
	06/15/2028	5,000	6.000%	6.000%	100.000
	06/15/2029	5,000	6.000%	6.000%	100.000
	06/15/2030	10,000	6.000%	6.000%	100.000
	06/15/2031	5,000	6.000%	6.000%	100.000
	06/15/2032	145,000	6.000%	6.000%	100.000
	06/15/2033	155,000	6.000%	6.000%	100.000
	06/15/2034	160,000	6.000%	6.000%	100.000
	06/15/2035	170,000	6.000%	6.000%	100.000
	06/15/2036	180,000	6.000%	6.000%	100.000
	06/15/2037	195,000	6.000%	6.000%	100.000
	06/15/2038	205,000	6.000%	6.000%	100.000
	06/15/2039	215,000	6.000%	6.000%	100.000
	06/15/2040	230,000	6.000%	6.000%	100.000
	06/15/2041	245,000	6.000%	6.000%	100.000
	06/15/2042	260,000	6.000%	6.000%	100.000
	06/15/2043	275,000	6.000%	6.000%	100.000
	06/15/2044	290,000	6.000%	6.000%	100.000
	06/15/2045	310,000	6.000%	6.000%	100.000
	06/15/2046	325,000	6.000%	6.000%	100.000
	06/15/2047	345,000	6.000%	6.000%	100.000
	06/15/2048	365,000	6.000%	6.000%	100.000
	06/15/2049	390,000	6.000%	6.000%	100.000
	06/15/2050	410,000	6.000%	6.000%	100.000
	06/15/2051	435,000	6.000%	6.000%	100.000
	06/15/2052	460,000	6.000%	6.000%	100.000
	06/15/2053	490,000	6.000%	6.000%	100.000
	06/15/2054	520,000	6.000%	6.000%	100.000
	06/15/2055	550,000	6.000%	6.000%	100.000
	06/15/2056	585,000	6.000%	6.000%	100.000
	06/15/2057	<u>955,000</u>	6.000%	6.000%	100.000
		<u>8,900,000</u>			
Taxable Term Bond 2031:					
	06/15/2023		7.000%	7.000%	100.000
	06/15/2024		7.000%	7.000%	100.000
	06/15/2025		7.000%	7.000%	100.000
	06/15/2026	90,000	7.000%	7.000%	100.000
	06/15/2027	95,000	7.000%	7.000%	100.000
	06/15/2028	105,000	7.000%	7.000%	100.000
	06/15/2029	110,000	7.000%	7.000%	100.000
	06/15/2030	115,000	7.000%	7.000%	100.000
	06/15/2031	<u>145,000</u>	7.000%	7.000%	100.000
		<u>660,000</u>			
		<u>9,560,000</u>			

BOND PRICING

**Capital Career College
Series 2022A&B
Preliminary Numbers as of 11/30/2021
35 year maturity
Cap-I and Interest Only through 12/15/2024 (2.5 years)
50% DSRF**

Dated Date	05/15/2022
Delivery Date	05/15/2022
First Coupon	12/15/2022
Par Amount	9,560,000.00
Original Issue Discount	
Production Underwriter's Discount	9,560,000.00 100.000000%
Purchase Price	9,560,000.00
Accrued Interest	100.000000%
Net Proceeds	9,560,000.00

BOND SUMMARY STATISTICS

**Capital Career College
Series 2022A&B
Preliminary Numbers as of 11/30/2021
35 year maturity
Cap-I and Interest Only through 12/15/2024 (2.5 years)
50% DSRF**

Dated Date	05/15/2022
Delivery Date	05/15/2022
Last Maturity	06/15/2057
Arbitrage Yield	6.030360%
True Interest Cost (TIC)	6.030360%
Net Interest Cost (NIC)	6.315646%
All-In TIC	6.669986%
Average Coupon	6.019126%
Average Life (years)	24.694
Duration of Issue (years)	12.527
Par Amount	9,560,000.00
Bond Proceeds	9,560,000.00
Total Interest	14,209,450.00
Net Interest	14,209,450.00
Total Debt Service	23,769,450.00
Maximum Annual Debt Service	1,012,300.00
Average Annual Debt Service	677,514.01
Underwriter's Fees (per \$1000)	
Average Takedown	
Other Fee	
Total Underwriter's Discount	
Bid Price	100.000000

Bond Component	Par Value	Price	Average Coupon	Average Life	PV of 1 bp change
Taxable Term Bond 2031	660,000.00	100.000	7.000%	6.841	435.60
TE Term Bond 2057	8,900,000.00	100.000	6.000%	26.018	12,905.00
9,560,000.00			24.694		13,340.60

	TIC	All-In TIC	Arbitrage Yield
Par Value	9,560,000.00	9,560,000.00	9,560,000.00
+ Accrued Interest			
+ Premium (Discount)			
- Underwriter's Discount			
- Cost of Issuance Expense		-700,000.00	
- Other Amounts			
Target Value	9,560,000.00	8,860,000.00	9,560,000.00
Target Date	05/15/2022	05/15/2022	05/15/2022
Yield	6.030360%	6.669986%	6.030360%

NET DEBT SERVICE

**Capital Career College
Series 2022A&B**
Preliminary Numbers as of 11/30/2021
35 year maturity
Cap-I and Interest Only through 12/15/2024 (2.5 years)
50% DSRF

Period Ending	Total Debt Service	Debt Service Reserve Fund	CAPI Through 12/15/2024	Net Debt Service
06/15/2023	628,550		628,550	
06/15/2024	580,200		580,200	
06/15/2025	580,200		290,100	290,100.00
06/15/2026	675,200			675,200.00
06/15/2027	673,600			673,600.00
06/15/2028	676,650			676,650.00
06/15/2029	674,000			674,000.00
06/15/2030	676,000			676,000.00
06/15/2031	692,350	17,898.23		674,451.77
06/15/2032	676,900			676,900.00
06/15/2033	678,200			678,200.00
06/15/2034	673,900			673,900.00
06/15/2035	674,300			674,300.00
06/15/2036	674,100			674,100.00
06/15/2037	678,300			678,300.00
06/15/2038	676,600			676,600.00
06/15/2039	674,300			674,300.00
06/15/2040	676,400			676,400.00
06/15/2041	677,600			677,600.00
06/15/2042	677,900			677,900.00
06/15/2043	677,300			677,300.00
06/15/2044	675,800			675,800.00
06/15/2045	678,400			678,400.00
06/15/2046	674,800			674,800.00
06/15/2047	675,300			675,300.00
06/15/2048	674,600			674,600.00
06/15/2049	677,700			677,700.00
06/15/2050	674,300			674,300.00
06/15/2051	674,700			674,700.00
06/15/2052	673,600			673,600.00
06/15/2053	676,000			676,000.00
06/15/2054	676,600			676,600.00
06/15/2055	675,400			675,400.00
06/15/2056	677,400			677,400.00
06/15/2057	1,012,300	339,200.00		673,100.00
	23,769,450	357,098.23	1,498,850	21,913,501.77

NET DEBT SERVICE

Capital Community College Series 2022A&B Series 2022 Tax-Exempt

<i>Period Ending</i>	<i>Total Debt Service</i>	<i>Debt Service Reserve Fund</i>	<i>CAPI Through 12/15/2024</i>	<i>Net Debt Service</i>
06/15/2023	578,500		578,500	
06/15/2024	534,000		534,000	
06/15/2025	534,000		267,000	267,000
06/15/2026	539,000			539,000
06/15/2027	538,700			538,700
06/15/2028	538,400			538,400
06/15/2029	538,100			538,100
06/15/2030	542,800			542,800
06/15/2031	537,200			537,200
06/15/2032	676,900			676,900
06/15/2033	678,200			678,200
06/15/2034	673,900			673,900
06/15/2035	674,300			674,300
06/15/2036	674,100			674,100
06/15/2037	678,300			678,300
06/15/2038	676,600			676,600
06/15/2039	674,300			674,300
06/15/2040	676,400			676,400
06/15/2041	677,600			677,600
06/15/2042	677,900			677,900
06/15/2043	677,300			677,300
06/15/2044	675,800			675,800
06/15/2045	678,400			678,400
06/15/2046	674,800			674,800
06/15/2047	675,300			675,300
06/15/2048	674,600			674,600
06/15/2049	677,700			677,700
06/15/2050	674,300			674,300
06/15/2051	674,700			674,700
06/15/2052	673,600			673,600
06/15/2053	676,000			676,000
06/15/2054	676,600			676,600
06/15/2055	675,400			675,400
06/15/2056	677,400			677,400
06/15/2057	1,012,300	339,200		673,100
	22,793,400	339,200	1,379,500	21,074,700

NET DEBT SERVICE**Capital Community College Series 2022A&B
Series 2022 Taxable**

<i>Period Ending</i>	<i>Total Debt Service</i>	<i>Debt Service Reserve Fund</i>	<i>CAPI Through 12/15/2024</i>	<i>Net Debt Service</i>
06/15/2023	50,050		50,050	
06/15/2024	46,200		46,200	
06/15/2025	46,200		23,100	23,100.00
06/15/2026	136,200			136,200.00
06/15/2027	134,900			134,900.00
06/15/2028	138,250			138,250.00
06/15/2029	135,900			135,900.00
06/15/2030	133,200			133,200.00
06/15/2031	155,150	17,898.23		137,251.77
	976,050	17,898.23	119,350	838,801.77

BOND DEBT SERVICE

**Capital Career College
Series 2022A&B
Preliminary Numbers as of 11/30/2021
35 year maturity
Cap-I and Interest Only through 12/15/2024 (2.5 years)
50% DSRF**

Period Ending	Principal	Coupon	Interest	Debt Service	Annual Debt Service
12/15/2022			338,450	338,450	
06/15/2023			290,100	290,100	628,550
12/15/2023			290,100	290,100	
06/15/2024			290,100	290,100	580,200
12/15/2024			290,100	290,100	
06/15/2025			290,100	290,100	580,200
12/15/2025			290,100	290,100	
06/15/2026	95,000	** %	290,100	385,100	675,200
12/15/2026			286,800	286,800	
06/15/2027	100,000	** %	286,800	386,800	673,600
12/15/2027			283,325	283,325	
06/15/2028	110,000	** %	283,325	393,325	676,650
12/15/2028			279,500	279,500	
06/15/2029	115,000	** %	279,500	394,500	674,000
12/15/2029			275,500	275,500	
06/15/2030	125,000	** %	275,500	400,500	676,000
12/15/2030			271,175	271,175	
06/15/2031	150,000	** %	271,175	421,175	692,350
12/15/2031			265,950	265,950	
06/15/2032	145,000	6.000%	265,950	410,950	676,900
12/15/2032			261,600	261,600	
06/15/2033	155,000	6.000%	261,600	416,600	678,200
12/15/2033			256,950	256,950	
06/15/2034	160,000	6.000%	256,950	416,950	673,900
12/15/2034			252,150	252,150	
06/15/2035	170,000	6.000%	252,150	422,150	674,300
12/15/2035			247,050	247,050	
06/15/2036	180,000	6.000%	247,050	427,050	674,100
12/15/2036			241,650	241,650	
06/15/2037	195,000	6.000%	241,650	436,650	678,300
12/15/2037			235,800	235,800	
06/15/2038	205,000	6.000%	235,800	440,800	676,600
12/15/2038			229,650	229,650	
06/15/2039	215,000	6.000%	229,650	444,650	674,300
12/15/2039			223,200	223,200	
06/15/2040	230,000	6.000%	223,200	453,200	676,400
12/15/2040			216,300	216,300	
06/15/2041	245,000	6.000%	216,300	461,300	677,600
12/15/2041			208,950	208,950	
06/15/2042	260,000	6.000%	208,950	468,950	677,900
12/15/2042			201,150	201,150	
06/15/2043	275,000	6.000%	201,150	476,150	677,300
12/15/2043			192,900	192,900	
06/15/2044	290,000	6.000%	192,900	482,900	675,800
12/15/2044			184,200	184,200	
06/15/2045	310,000	6.000%	184,200	494,200	678,400
12/15/2045			174,900	174,900	
06/15/2046	325,000	6.000%	174,900	499,900	674,800
12/15/2046			165,150	165,150	
06/15/2047	345,000	6.000%	165,150	510,150	675,300
12/15/2047			154,800	154,800	
06/15/2048	365,000	6.000%	154,800	519,800	674,600
12/15/2048			143,850	143,850	
06/15/2049	390,000	6.000%	143,850	533,850	677,700
12/15/2049			132,150	132,150	
06/15/2050	410,000	6.000%	132,150	542,150	674,300
12/15/2050			119,850	119,850	
06/15/2051	435,000	6.000%	119,850	554,850	674,700
12/15/2051			106,800	106,800	
06/15/2052	460,000	6.000%	106,800	566,800	673,600
12/15/2052			93,000	93,000	
06/15/2053	490,000	6.000%	93,000	583,000	676,000
12/15/2053			78,300	78,300	
06/15/2054	520,000	6.000%	78,300	598,300	676,600

BOND DEBT SERVICE

**Capital Career College
Series 2022A&B
Preliminary Numbers as of 11/30/2021
35 year maturity
Cap-I and Interest Only through 12/15/2024 (2.5 years)
50% DSRF**

<i>Period Ending</i>	<i>Principal</i>	<i>Coupon</i>	<i>Interest</i>	<i>Debt Service</i>	<i>Annual Debt Service</i>
12/15/2054			62,700	62,700	
06/15/2055	550,000	6.000%	62,700	612,700	675,400
12/15/2055			46,200	46,200	
06/15/2056	585,000	6.000%	46,200	631,200	677,400
12/15/2056			28,650	28,650	
06/15/2057	955,000	6.000%	28,650	983,650	1,012,300
	9,560,000		14,209,450	23,769,450	23,769,450

BOND DEBT SERVICE**Capital Community College Series 2022A&B
Series 2022 Tax-Exempt**

<i>Period Ending</i>	<i>Principal</i>	<i>Coupon</i>	<i>Interest</i>	<i>Debt Service</i>
06/15/2023			578,500	578,500
06/15/2024			534,000	534,000
06/15/2025			534,000	534,000
06/15/2026	5,000	6.000%	534,000	539,000
06/15/2027	5,000	6.000%	533,700	538,700
06/15/2028	5,000	6.000%	533,400	538,400
06/15/2029	5,000	6.000%	533,100	538,100
06/15/2030	10,000	6.000%	532,800	542,800
06/15/2031	5,000	6.000%	532,200	537,200
06/15/2032	145,000	6.000%	531,900	676,900
06/15/2033	155,000	6.000%	523,200	678,200
06/15/2034	160,000	6.000%	513,900	673,900
06/15/2035	170,000	6.000%	504,300	674,300
06/15/2036	180,000	6.000%	494,100	674,100
06/15/2037	195,000	6.000%	483,300	678,300
06/15/2038	205,000	6.000%	471,600	676,600
06/15/2039	215,000	6.000%	459,300	674,300
06/15/2040	230,000	6.000%	446,400	676,400
06/15/2041	245,000	6.000%	432,600	677,600
06/15/2042	260,000	6.000%	417,900	677,900
06/15/2043	275,000	6.000%	402,300	677,300
06/15/2044	290,000	6.000%	385,800	675,800
06/15/2045	310,000	6.000%	368,400	678,400
06/15/2046	325,000	6.000%	349,800	674,800
06/15/2047	345,000	6.000%	330,300	675,300
06/15/2048	365,000	6.000%	309,600	674,600
06/15/2049	390,000	6.000%	287,700	677,700
06/15/2050	410,000	6.000%	264,300	674,300
06/15/2051	435,000	6.000%	239,700	674,700
06/15/2052	460,000	6.000%	213,600	673,600
06/15/2053	490,000	6.000%	186,000	676,000
06/15/2054	520,000	6.000%	156,600	676,600
06/15/2055	550,000	6.000%	125,400	675,400
06/15/2056	585,000	6.000%	92,400	677,400
06/15/2057	955,000	6.000%	57,300	1,012,300
	8,900,000		13,893,400	22,793,400

BOND DEBT SERVICE**Capital Community College Series 2022A&B
Series 2022 Taxable**

<i>Period Ending</i>	<i>Principal</i>	<i>Coupon</i>	<i>Interest</i>	<i>Debt Service</i>
06/15/2023			50,050	50,050
06/15/2024			46,200	46,200
06/15/2025			46,200	46,200
06/15/2026	90,000	7.000%	46,200	136,200
06/15/2027	95,000	7.000%	39,900	134,900
06/15/2028	105,000	7.000%	33,250	138,250
06/15/2029	110,000	7.000%	25,900	135,900
06/15/2030	115,000	7.000%	18,200	133,200
06/15/2031	145,000	7.000%	10,150	155,150
	660,000		316,050	976,050

Business Rental Short Term Preferred Rate Agreement

Between

Customer: _____
 Contact: _____
 Address: _____

Company: Enterprise Rent-A-Car
 Contact: Lisa Holmes
 Address: 150 N. Sunrise Ave.
Roseville, CA 95661

2021 California Government Employee Rates:
Rent-A-Car Rental Rates

<u>Car Class</u>	<u>Vehicle Description</u>	<u>Daily Rate</u>	<u>Weekly Rate</u>
CCAR	Compact	\$37.75	\$158.55
ICAR	Mid-Size/Intermediate	\$37.75	\$158.55
FCAR	Full-Size	\$39.00	\$163.80
MVAR	Mini Van	\$55.00	\$275.00
IFAR	Four Wheel Drive/SUV	\$55.00	\$275.00
PPAR	Pick Up Truck	\$65.00	\$300.00
SCAH	Hybrid Electric Vehicle	\$47.00	\$235.00
ICAE	Plug-In Hybrid/Zero Emission Vehicle	\$54.00	\$270.00
SCAR	Standard	\$39.00	\$163.80
PCAR	Premium	\$55.00	\$286.00
LCAR	Luxury	\$70.00	\$385.00
SFAR	Medium SUV	\$75.00	\$375.00
FFAR	Large SUV	\$105.00	\$525.00
PRAR	Premium SUV	\$125.00	\$625.00
FVAR	Large Van	\$125.00	\$625.00
SKAR	Cargo Van	\$87.42	\$437.09

Rent-A-Truck Rental Rates

<u>Car Class</u>	<u>Vehicle Description</u>	<u>Daily Rate</u>	<u>Weekly Rate</u>
SKAR	Cargo Van	\$87.42	\$437.09
JKAR	Mini-Cargo Van	\$72.12	\$360.60
UKAR	High Top Cargo Van	\$98.35	\$491.73
OQAR	3/4 Ton Pickup Truck w/Tow	\$85.00	\$510.00
UQAR	1 Ton Utility	\$100.01	\$600.00
BCUT	15' Cutaway Box Van w/Ramp	\$76.49	\$382.45
DBOX	16' Box Truck	\$92.88	\$464.41
FBOX	24' Box	\$109.27	\$546.36
GBOX	26' Box Truck	\$109.27	\$546.36
DSTK	14' Stake Bed	\$92.88	\$464.41
FSTK	24' Stake Bed	\$109.27	\$546.36

Rental Rates: Rates apply to all locations within the United States, local and airport locations included, excluding New York.

- **Rates Include:** Unlimited mileage (see exceptions below for large truck rates), Collision Damage Waiver (CDW), \$300,000 Liability Protection (LP), and Roadside Assistance Program (RAP).

- **Exceptions for Large Truck Rates:** All miles traveled will be billed at \$0.20 per mile, normal drop fees apply.
- **Rates Do Not Include:** VLF, Rental Branch Specific Location Fees (Such as Airport/City/County Fees), fuel, additional rental options (such as GPS Units) and hourly charges. Models are subject to availability; a model of car may be requested but is not guaranteed.

Fuel Charges: Anytime a vehicle is returned with less fuel than it was rented with, the branch will charge Market Rate/Value for refueling.

Drop Charges: For rentals to Customer's employees for business use, there will be no drop charges for any vehicles that are picked up and returned at an alternative Rental Branch location within the US with the exception of New York (does not apply to Rent-A-Truck vehicles). This does not apply to any vehicles rented under personal rental benefit accounts.

CDW for Business Rentals: For rentals to Customer's employees for business use, Rental Rates include full CDW (Collision Damage Waiver) with no deductible. CDW will cover any physical damage to the vehicle that may occur during a rental and is subject to the terms and limitations set forth in Enterprise's standard rental contract.

LP for Business Rentals: For rentals to Customer's employees for business use, Rental Rates include LP (Liability Protection). LP will cover up to \$300,000 in liability claims that may occur during a rental, as the result of an accident, and is subject to the terms and limitations set forth in Enterprise's standard rental contract.

Terms of Contract: This Customer is participating in the CA Government Business Contract with Enterprise Rent-A-Car. This contract will be in effect through February 29, 2024.

Payment Method (please select one):

- Customer Pay Account-Rentals will be paid at time of rental via renting employee
- Direct Bill-Rentals will be direct billed to your organization monthly and payment can be made via check
- Direct Bill with Credit Card-Rentals will be charged as one lump sum charge monthly to a Corporate Credit Card
**please provide credit card information at the end of the form for this type of billing*

Reporting: An Excel or PDF file (depending on account type) will be provided monthly to show activity of rentals on the Customer's Account Number. This feature only applies to Direct Bill accounts.

Contact Information: Contacts for various inquiries are:

Set Up Questions

Megan Herring

Megan.F.Herring@ehi.com

Main Account Contact

Lisa Holmes

Lisa.M.Holmes@ehi.com

Application: Please complete the form at the end of this PRA and email it back to Megan Herring so that we may create your account in our systems. Once your account has been established, we will send out new account information to the email address(s) you have listed below. Please note if you are requesting a Direct Bill or Credit Card on File Account, you will need to complete the additional billing contact information.

Agreement Signatures

Company Name

Signature: _____
Authorized Representative

Name: _____

Title: _____

Date: Tuesday, January 11, 2022

Enterprise Rent-A-Car
Company Name

Signature: Lisa Holmes
Authorized Representative

Name: Lisa Holmes

Title: State of California Account Manager

Date: Tuesday, January 11, 2022

By completing this form _____ is requesting a Business Rental
(Organization Name)
Account with Enterprise Rent-A-Car.

Main Account Contact

Name: _____

Email Address: _____

Phone: _____

Mailing Address _____

Travel Agency Information

Do your Employees book through a Travel Agency? (Please Circle One) Yes No

Travel Agency: _____

E-mail Address: _____

Additional Information for Direct Bill Account**Billing Contact (if different from above)**

Name: _____

E-mail Address: _____

Phone: _____

Billing/PO/Cost Code

Do you Require Cost Codes, Purchase Orders, etc.? (Please Circle One) Yes No

Cost Code Label: _____
(Ex: PO Number, Department Name, Cost Code, etc.)

Credit Card Information*

Credit Card #: _____

Exp. Date: _____

Signer Name: _____

Signature: _____

*This is only required for the Direct Bill with Credit Card payment option

APPENDIX X

EXHIBIT A
SCOPE OF WORK: BUSINESS MANAGEMENT SERVICES

1. IMPLEMENTATION AND TRAINING

- a. Create a customized accounting database based specifically on the school's reporting needs (both internal and external)
- b. Import historical data to the extent possible (typically monthly balances as far back as data is available) to allow for maximum comparability of financial information
- c. Review existing contracts for terms, requirements and school responsibilities
- d. Create, refine or replace existing processes and procedures to increase efficiency and improve the strength of internal controls
- e. Provide training in specific processes and procedures including to school site staff including: accounts payable, accounts receivable/deposits, petty cash accounts, student stores, payroll, etc.
- f. Provide training to new and/or existing board members on:
 - i. Charter school funding - including drivers, calculations, restrictions and cash flow timing,
 - ii. Reading and interpreting financial reports, and
 - iii. Internal controls and the board's responsibility for oversight and maintenance

2. ACCOUNTS PAYABLE PROCESSING

- a. Review all invoices sent to Charter Impact for proper approval and coding
 - i. Any discrepancies will be reported to the Client within three business days of CI becoming aware of the discrepancy. CI is not responsible for communicating any information to Client vendors. The fees described in Section 3.01 are based upon Client cooperation and compliance with CI processes and procedures. Time incurred to process payments outside of the pre-established timeline is subject to additional fees as described in Section 8.04 above.
- b. Enter invoices for each reporting entity, process check payments, and send checks directly to vendors to reduce turn-around time
- c. Provide weekly check registers, accounts payable aging reports, vendor payment history or other ad hoc reports on a recurring or as needed basis
- d. On an emergency basis, same day payments can be processed in addition to the weekly cycle (*additional processing fees apply).
- e. Complete 1099s for all independent contractors.
 - i. It is the Client's sole responsibility to obtain and submit to CI the IRS Form W-9 for all vendors. Client acknowledges that CI is not responsible for processing of Form 1099 for any vendor for which CI has not received a Form W-9 or for any vendor that has not been paid through CI's vendor payment process.

3. ACCOUNTS RECEIVABLE PROCESSING

- a. Monitor the receipt of State approved ADA funding amounts and verify balances paid are correct
- b. Work directly with governmental agencies to resolve any issues or discrepancies identified
- c. Review all donor letters and grant agreements for proper coding and revenue recognition in accordance with GAAP
- d. Maintain independent records, as necessary, for both public and private sources to ensure accurate reporting and compliance

4. BANK RECONCILIATION AND GENERAL LEDGER MAINTENANCE

- a. Reconcile all bank accounts on a weekly basis for a heightened level of security and monitoring
- b. Alert management immediately to any irregularities, un-reconciled amounts, or missing documentation
- c. Maintain general ledger in accordance with GAAP on an ongoing basis, ensuring all revenues and expenses are recorded and reported accurately
- d. Maintain an inventory of fixed assets over the school-designated capitalization threshold and calculate depreciation on a monthly basis

5. CASH MANAGEMENT

- a. On a weekly basis, use reconciled bank balance to project daily cash balances for 30 days (for analysis of cash for any period of time over 30 days, the monthly forecast will be utilized)
- b. On a weekly basis, provide schools with amount of cash available for accounts payable or other discretionary spending while ensuring sufficient funds for regularly recurring transactions such as payroll, taxes, rent, insurance, etc.
- c. Plan and manage payment of outstanding debt as needed
- d. Prepare all financial reporting necessary for renewal of loans or lines of credit
- e. Present line of credit status to board and obtain board resolutions as needed
- f. Monitor compliance with all debt covenants as a part of the ongoing budgeting and forecasting process
- g. Analyze future cash flow and determine whether schools need to make adjustments to spending or seek other funding options.

6. MONTHLY FINANCIAL REPORTING

- a. Provide a monthly reporting package by the 20th day of the following month, assuming all necessary data is received from the school site on a timely basis, to ensure management has the necessary information to make sound business decisions
- b. Create financial reporting package based on customized business segments. This includes budgets and forecasts as well.
- c. Offer a menu of report options for the monthly financial reports including, but not limited to:
 - i. Monthly summary by financial section with bulleted highlights for presentation purposes

- ii. Monthly Cash Flow Forecast and comparison to approved budget
- iii. Budget vs. Actual Report (both current month and year-to-date)
- iv. Schedule of Revenue and Expenses by Period
- v. Comparative Statement of Financial Position
- vi. Combining/Consolidating Statements of Activities and Financial Position
- vii. Statement of Cash Flows (both current month and year-to-date)
- viii. Accounts Payable/Receivable Aging
- ix. Check Register(s)
- x. General Ledger Detail
- xi. Other customized reports as requested by the school, executive team or board
- d. On a monthly basis, review and present the financial package with the school staff and/or board members to assess the current fiscal condition of the school
- e. Provide access to the accounting database via a VPN connection allowing school staff to run reports and see real-time data as it exists in the system
- f. On an as needed basis, provide or present financial information or training to lenders, board members, community members, parents or other external parties as requested by the school.

7. COMPLIANCE AND GRANT REPORTING

- a. Support school with LCAP development, including preparation of the budget, ensuring adherence to Supplemental and Concentration funding requirements and integrating the LCAP budget into the overall school operating budget
- b. Assist the school with grant applications including the development of grant-specific budgets as well as school long-term projections
- c. In the event that new funding programs become available, funding program elements and pricing will be revised if the Client wishes CI to pursue such funding. These applications will be subject to the timelines and conditions of the funding programs and will be the primary responsibility of the Client.
- d. Track all restricted revenues (both public and private) to ensure compliance with governmental and donor-required restrictions
- e. Provide financial information and reporting to governmental entities, donors, and other supporting organizations for grant compliance

8. CHARTER AUTHORIZER SUPPORT

- a. Support the school with all financial and business communications with the charter authorizer. This includes, but is not limited to: Prepare regular financial reporting (budget and interims)
- b. Provide ad hoc financial documents and reports as requested
- c. Partner with school leaders to meet with authorizer staff to discuss fiscal health and outlook of the school
- d. Assist in the renewal process by preparing and/or reviewing fiscal narratives, preparing the required forecasts and cash flow projections, and calculating the LCFF with assumptions.

9. ANNUAL BUDGET CREATION AND REVISIONS

- a. Work with school staff on an annual basis to create a 5-year budget and cash flow projection on an annual basis to ensure proper future planning
- b. Provide a monthly budget and cash flow report to monitor the cash balance and protect against the gap caused by revenue and expenditure seasonality
- c. Revise the annual forecasts on an as-needed basis (but at least monthly) to provide school staff and board members with accurate year-end projections and the information necessary in a constantly changing environment

10. AUDIT PREPARATION AND OVERSIGHT WITH AUTHORIZERS

- a. Maintain electronic records of all transaction support
- b. Work directly with the independent auditors to provide information, thereby reducing client time commitment and audit fees
- c. Participate in, and support all oversight reviews from charter authorizers and governmental agencies to improve outcomes

11. TAX PREPARATION AND SUPPORT

- a. Prepare and electronically submit Form 1096 (summary of all 1099 forms) to the IRS for all required vendors and service providers
- b. Prepare and report sales and use tax returns
- c. Provide any and all information necessary for the preparation and submission of Form 990. *Payroll tax reporting is included in the payroll processing Exhibit B below.*

12. STRATEGIC PLANNING

- a. Work with school management and the Board of Directors to develop long-term strategies to ensure the school's prosperity
- b. Provide second opinions and act as sounding board for school management and the Board on business and financial matters

EXHIBIT B

SCOPE OF WORK: PAYROLL SERVICES

1. PAYROLL PROCESSING

- a. Maintain employee static pay information in a payroll database
- b. Process status updates, new hires, terminations, and/or informational changes in payroll system
- c. Assist in the development of a regular payroll schedule that is compliant with State labor laws and consistent with employee contracts
- d. Process supplemental payroll runs such as the following:
 - i. Involuntary termination - the check will be prepared ahead of time and provided to the school on the termination date
 - ii. Voluntary termination without notice - the check will be prepared and delivered to the employee within the time frame required by the State
 - iii. Scheduled bonuses/stipends
 - iv. Additional unscheduled/emergency payroll runs
- e. Process and pay all federal and state payroll tax payments according to required guidelines
- f. Prepare the state payroll tax filing report annually, and quarterly for federal and state agencies
- g. Prepare, review, and distribute W-2s to all employees

2. RETIREMENT REPORTING

- a. Process and submit monthly STRS and PERS reports to the 3rd party administrator (i.e. Hess and Assoc.) or County office
- b. Submit payment via ACH or cashier's check within the requisite timeframe for the pension contributions
- c. Process 403(b) retirement plan deductions, if applicable, and in compliance with State and Federal laws submit payments to the third-party administrator

3. WEB-BASED EMPLOYEE TIMEKEEPING SYSTEM

- a. All employees can be given online access to a streamlined, secure electronic timekeeping system which is fully integrated into our accounting system and eliminates the need for paper timesheets.
- b. In addition to entering time, employees can also electronically:
 - i. request time off
 - ii. make changes to their addresses and W2s
 - iii. access their historical paystubs

4. GENERAL SUPPORT

- a. Provide support and assistance with creation of internal processes and procedures, forms and tracking systems

EXHIBIT C
SCOPE OF WORK: STUDENT DATA SERVICES

1. CALPADS REPORTING

- a. Reconcile all attendance data on a monthly basis
- b. CALPADS Fall 1 Data submission, including SSID Enrollment, Student Information Record, English Learner Program Record and Student Program Records
- c. CALPADS Fall 2 Data submission, including Staff Assignment, Staff Demographics, Course Section and Student Course Section
- d. CALPADS EOY 1-3 submission, including Student Discipline, Student Waiver, Student CTE and Student Absence
- e. Maintain monthly enrollment synchronization with CALPADS and SIS retrieval
- f. Report CALPADS anomalies to school management
- g. Report development, including transcripts, report cards and custom reports

2. ATTENDANCE TRACKING AND REPORTING

- a. Monthly attendance reconciliation
- b. Independent Studies setup
- c. Revised monthly submission
- d. Attendance audit report tracking
- e. Monthly ADA calculation
- f. Prepare Monthly, P-1, P-2 and Annual attendance reports from school-provided records, and submit to the chartering agency
- g. Attendance alerts
- h. Report all requisite attendance data to the charter authorizer and State agencies

3. STUDENT INFORMATION SYSTEM (SIS) SUPPORT

- a. Conduct multiple trainings for various school staff as needed:
 - i. Initial product training, including but not limited to system navigation, student and staff account management, student scheduling task management, and import and export of data and reports
 - ii. Client Counselor and Registrar/Office Manager trainings on system components, including but not limited to entering and managing historical grades, graduation progress tracking, student demographic data entry (including state required fields), parent/emergency contact data entry, and data quality checks to run student data audits/exception reports to identify missing data.
 - iii. SIS trainings as needed for school staff on entering attendance, attendance changes, and running attendance reports, working with attendance data grid, truancy reports/letters, and attendance audits.
 - iv. PowerLunch, Admin and PowerTeacherPro trainings
- b. System Setup Assist with Beginning of Year and End of Year tasks such as:
 - i. importing student records, create years/terms, final grade setup, create sections, etc.

- ii. Configure bell schedules and calendars that mirror regular, minimum and assembly day bell schedules
- iii. Configure adequate attendance, incident, entry and exit codes that capture data at a desired level of granularity
- iv. Track student activities such as: Independent Studies, Basketball team, academic decathlon, etc.
- v. Setup teacher grading environment via grade scales, assignment categories, standards, teacher comments, etc.
- vi. Perform System Administrative tasks such as integration with 3rd party software providers, maintain security groups and new school setup.

4. DATA AND ANALYSIS

- a. Generate standard reports based on available data in support of multiyear and subgroup analysis of CAASPP, English Learner, graduation rates, suspension rates, college/career readiness and chronic absenteeism data
- b. Perform ongoing data validation to find and flag missing or incorrect data for correction purposes
- c. Correlation analysis to validate or invalidate assumptions or expected academic achievement impact
- d. Generate grade distribution report by section, teacher and/or course names
- e. Produce English Learner reclassification candidate list based on available data and school criteria
- f. Benchmark data analysis in support of identifying reteaching opportunities
- g. Create perfect attendance, at-risk of chronic absenteeism, attendance rates by subgroups reports

APPENDIX Y

PETITION FOR THE ESTABLISHMENT OF CAPITAL COLLEGE & CAREER ACADEMY CHARTER SCHOOL

We the undersigned believe that the attached charter for the creation of Capital College & Career Academy Charter School (the "Charter School") merits consideration and hereby petition the governing board of the Sacramento County Office of Education to grant approval of the charter pursuant to Education Code Section 47605 to enable the creation of the Charter School. The Petitioners for the Charter School agree to operate the Charter School pursuant to the terms of the Charter Schools Act and the provisions of the Charter School's charter. The petitioners authorize the Leadership Team to negotiate any non-substantive amendments to the charter necessary to secure approval. Signature page is attached to petition upon signature. The petitioners listed below certify that they are teachers who are meaningfully interested in teaching at the Charter.

	NAME	SIGNATURE	ADDRESS	SUBJECT TAUGHT	PHONE NUMBER	DATE
1.	Kirsten Spall	Kirsten Spall	3609 1st Ave Sacramento CA 95817	English	917-501-4671	1-12-22
2.	Emily Finch	Emily Finch	2220 Catherwood Way Sacramento, CA 95835	Science	925-989-0133	1-13-22
3.	Stephen Osborn	Stephen Osborn	5304 Baumhart Way Carmichael, CA 95608	Math	916-203-6055	1/7/22
4.	Sept Pollard	Sept Pollard	1654 Truckee River, Woodland, CA 95695	Social Studies	530-383-0274	1/10/22
5.				Foreign Language		
6.				CTE		
7.	Rich Fanning	RF	700 Valleyo Ave #80 Roseville CA 95678	Physical Education	916-709-1843	1-10-22

APPENDIX Z

CERTIFICATION OF COMPLETE CHARTER PETITION

Education Code Section 47605.6(b)

A charter petition is deemed received by the county board of education for purposes of commencing the timelines described in this subdivision when the petitioner submits a petition, in accordance with Education Code Section 47605.6(a)(1)(A) or (B), to the county office of education.

No later than 60 days after receiving a petition, the county board of education shall hold a public hearing on the provisions of the charter, at which time the county board of education shall consider the level of support for the petition by teachers, parents or guardians, and the school districts where the charter school petitioner proposes to place school facilities. Following review of the petition and the public hearing, the county board of education shall either grant or deny the charter within 90 days of receipt of the petition, provided, however, that the date may be extended by an additional 30 days if both parties agree to the extension.

- Date of submission: Friday, February 25, 2022

Certification

By signing below, I certify as follows:

1. That I am the authorized representative, and that I am competent and qualified to certify to the facts herein;
2. That, as authorized representative, I have personal knowledge of the facts forming the basis of this certification;
3. That I make this certification for compliance with Sacramento County Office of Education policies only; and
4. That I deem the charter petition to be complete.

Name: Kevin Dobson, Lead Petitioner

Signature: *Kevin Dobson*

Date: 2/25/2022

School Name: Capital College & Career Academy

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