

Curriculum Units by
Fellows of the
Yale-New Haven Teachers Institute
Guide
2018

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Preface

In February 2018, teachers from New Haven Public Schools became Fellows of the Yale-New Haven Teachers Institute® to deepen their knowledge of the subjects they teach and to develop new curricular material to engage and educate the students in their school courses. Founded in 1978, the Institute is a partnership of Yale University and the New Haven Public Schools, designed to strengthen teaching and improve learning of the humanities and STEM fields in our community's schools. Through the Institute, Yale faculty members and Public Schools teachers join in a collegial relationship. The Institute is also an interschool and interdisciplinary forum for teachers to work together.

The Teachers Institute has repeatedly received recognition as a pioneering model of university-school collaboration that integrates curriculum development with intellectual renewal for teachers. Between 1998 and 2003 it conducted a National Demonstration Project that showed the approach the Institute had taken for twenty years in New Haven could be tailored to establish similar university-school partnerships under different circumstances in other cities. Based on the success of that Project, in 2004 the Institute announced the Yale National Initiative to strengthen teaching in public schools®, a long-term endeavor to influence public policy on teacher professional development, in part by establishing in states around the country exemplary Teachers Institutes following the approach developed in New Haven and implemented elsewhere. Evaluations have shown that the Institute approach exemplifies the characteristics of high-quality teacher professional development, enhances teacher quality in the ways known to improve student achievement, and encourages participants to remain in teaching in their schools.

Teachers had primary responsibility for identifying the subjects on which the Institute would offer seminars in 2018. Between October and December 2017, teachers who served as Institute Representatives and Contacts canvassed their colleagues in New Haven public schools to determine the subjects they wanted the Institute to address. The Institute then circulated descriptions of seminars that encompassed teachers' interests. In applying to the Institute, teachers described unit topics on which they proposed to work and the relationship of those topics both to Institute seminars and to courses they teach. Their principals verified that their unit topics were consistent with district academic standards and significant for school curricula and plans, and that they would be assigned courses or grade levels in which to teach their units during the following school year.

Through this process two seminars were organized:

- “An Introduction to Income Inequality in America: Economics, History, Law,” led by Yair Listokin, Shibley Family Fund Professor of Law; and
- “Engineering Solutions to 21st-Century Environmental Problems,” led by Jordan Peccia, Thomas E. Golden, Jr. Professor of Environmental Engineering.

Between February and July, Fellows participated in seminar meetings, studied the seminar subject and their unit topics, and attended a series of talks by Yale faculty members.

The curriculum units Fellows wrote are their own; they are presented in a volume for each seminar. The units, which were written in stages over time, contain five elements: content objectives, teaching strategies, examples of classroom activities, lists of resources for teachers and students, and an appendix on the academic standards the unit implements. They are intended primarily for use by Institute Fellows and their colleagues who teach in New Haven.

This *Guide* to the 2018 units contains introductions by the Yale faculty members who led the seminars, followed by synopses written by the authors of the individual units. The Fellows indicate the courses and grade levels for which they developed their units and other places in the school curriculum where the units may be applicable. Copies of the units are deposited in New Haven schools and are online at teachersinstitute.yale.edu. A list of the 224 volumes of units the Institute has published between 1978 and 2018 appears in the back of this *Guide*.

The Yale-New Haven Teachers Institute is a permanently endowed academic unit of Yale University. The New Haven Public Schools, Yale's partner in the Institute, has supported the program annually since its inception.

James R. Vivian

New Haven
August 2018

I. An Introduction to Income Inequality in America: Economics, History, Law

Introduction

Our seminar examined economic inequality in the United States. We discussed inequality's rise in recent decades, debated the harm caused by this rise, and considered policies designed to equalize resources and opportunities.

We spent much of our time considering foundational questions of inequality from a social scientific perspective. These questions included: How do we measure inequality? What causes inequality? Is inequality harmful *per se* or is it merely a symptom of other economic ills? How much harm to the economies of developing countries are we willing to tolerate in order to reduce inequality at home?

The curriculum units motivated by our seminar reflect many of these recurring themes. In confronting these questions, the units use inequality as a lens for enlivening and enriching discussion of a wide range of subjects. As many of the Fellows observed during the seminar, the students of New Haven (and many other districts) need no proof of inequality. They experience inequality every day by attending a school district with such a diverse student body, in a district whose residents span the range of American socioeconomic backgrounds, from the destitute to the intellectual and financial elite.

Because of this familiarity, inequality offers a way to introduce essential topics in the curriculum in a way that engages the students by connecting with their lives. If a lesson helps explain the inequality the students experience directly, then students may be more receptive to the material than if the same lesson were applied to a topic more removed from the students' lives.

Many of the units exploit the inherent interest of the topic as an alternative frame for teaching. William McKinney's unit develops an AP economics course structured around understanding inequality, on the theory that this structure may engage students more than a course with similar lessons structured around a more abstract pursuit of "Pareto efficiency". Aparna Shyam's unit teaches regression analysis to statistics students by having the students investigate the causes of inequality between school districts. Eden Stein's unit teaches fundamental economic concepts, such as the role of money, through unexpected sources such as "The Hunger Games" series of novels and movies. James Brochin encourages the collection of data by students in a journalism class by having students distribute surveys to ascertain popular understandings of the words "middle class" or "American dream." After reading these engaging units, it is easy to understand the Fellows' enthusiasm for this alternative teaching frame.

In debating the causes and consequences of inequality, we repeatedly relied on data to support our assertions and test our hypotheses. Focusing on data helped structure our discussion of a topic that could easily lead in myriad different directions.

This emphasis on data is also reflected in the curriculum units developed by the seminar Fellows. Each of the units integrates data with the lessons of the unit. For example, several of the units developed by Fellows teaching language arts and other humanities subjects provide a new perspective on works of literature or art by using data to provide a more precise and analytical perspective to concerns traditionally developed via narrative. Christine Pidskalny's unit examines the legacy of economic inequality with her "Social Justice Theatre" students by exploring, among other empirical questions, the incredibly strong link between the income of parents and children uncovered in recent economic research. Barbara Sasso provides critical background for her discussion of the drama "A Raisin in the Sun" by providing an empirical sense of the economic stakes of the decisions that form the heart of the play. Carolyn Streets uses a range of economic data to help explain why the class tensions that underly the novel "The Outsiders" can seem insurmountable. And Robert Schwartz reflects on the fading of the American social fabric by referring to a range of data demonstrating dramatically different educational opportunities as a function of parental income and status.

In addition to their inherent interest, all of the units show the potential learning benefits of integrating different modes of understanding from across disciplines to create a robust and stimulating learning environment.

The passions stirred by confronting economic inequality were on regular display in our seminar and animate the curriculum units that follow. It is my hope that future instructors will find the material just as engaging.

Yair Listokin

Curriculum Units

18.01.01

Economic and Other Inequalities In America: The Shrinking Middle Class?

by James P. Brochin

Designed for a large urban high school's upperclassmen in a Journalism class, the unit's central thematic focus is the causes and effects of economic inequality on the middle class. In this country, we believe that everyone has a chance for prosperity, or at least a comforting sense of security: being able to pay our bills, send our children to college, succeed if we try hard enough, being able to afford health care. Taken together, we call this being middle class. Put another way, we call this The American Dream. Some of us aspire to great wealth, a mansion in the Hamptons. For the vast majority of Americans, making it is a simpler aspiration: doing better than our parents, living longer than our parents, being more educated than our parents. My topic is "The Shrinking Middle Class?" Within this topic are various subtopics/questions: 1) What is an accurate definition of "Middle Class?" (Is it defined by an income range or by a state of mind?) 2) What are the effects of periodic economic downturns on ordinary Americans? (confidence, conformity, fear of failure, mental health), 3) What effects do increases in the minimum wage have on the middle class? (decreased poverty, overall confidence in the future, the effect on the overall economy?) My own students are urban and many do not consider themselves, and are not, among the middle class. The topic should resonate.

(Developed for Journalism, grades 9-12; recommended for Economics, Civics, and U.S. History, grades 10-12)

18.01.02

Bringing Humanity to the Dismal Science: A Study of Economics through the Lens of Income Inequality, by William McKinney

This unit examines the AP Microeconomics curriculum and maps how topics taught throughout the year can be examined from an income inequality standpoint. More specifically, the unit defines income inequality and how it is measured, it examines ways of reducing inequality through taxation, tariffs, and wage floors. The primary classroom activities include blog posts and debates, which are included at the end of each of the major units. In each debate, students are expected to apply the microeconomic theory they've learned in class with additional research that ties the topic to the concept of income inequality. Essential questions have been included in the Strategies section that should be used while teaching specific topics to keep income inequality at the forefront of people's minds.

(Developed for AP Microeconomics, grades 10-11; recommended for AP Microeconomics, grades 10-12)

18.01.03**Examining Your Economic Identity and Making a Path for Upward Mobility, by Christi Pidskalny**

A person's starting line for success is due to a series of circumstances that are outside their control. This unit focuses on economic status as a factor of birth that can determine the opportunities that one can access. My students will unpack their economic identity to (1) examine how their economic status affects access to opportunities and (2) determine the choices they have control over that could increase future financial success. Through a careful examination of this facet of their identity, my goal is for students to identify the limitations that are correlated to their economic status and the choices that they can make to level the playing field between themselves and their wealthier counterparts.

(Developed for Social Justice Theatre, grades 11-12; recommended for Social Studies, grades 11-12)

18.01.04**Paths to Prosperity: African Americans in Search of the American Dream, by Barbara A. Sasso**

As English teachers, we often teach novels that reflect the struggles of racism and poverty within the African American community through the twentieth century. Landmark civil rights laws in the 1960's changed the legal landscape of freedom in our country, but equality of opportunity and economic prosperity is still hindered by political policy and racism. It is critically important to reveal these truths to students, especially students in the African American community. However, as teachers, we should also be offering solutions to economic disparity that go beyond angry rhetoric, which are based in logic and are data-driven. What are some concrete ways families and individuals can break the cycle of poverty? What kinds of services should we as a society be fighting for? How does income parity benefit all of us? What are some ways to achieve this, and achieve a society that is more meritorious and efficient? This unit uses the play, *A Raisin in the Sun* as a model. The dreams of the Younger family are posed to students as choices to break out of poverty. Students will research the effects of moving to a good neighborhood, home ownership, college education, and entrepreneurship as economic paths to success.

(Developed for English/Social Justice, grade 10; recommended for English or ELA/African American Literature, ELA/Writing on Social Justice, ELA/Writing on Income Inequality, grades 9-12)

18.01.05**Economic Inequality and Education: Primer, Opportunity, and Outcome, by Robert Schwartz**

Not everyone can be great, but greatness can come from anywhere.

It's a wonderful sentiment, but becoming less and less true. We know the rich get richer and poor poorer, or at least perceive it through media, as well as in a middle class with a lot of internet access but not a lot of direction upward. In this unit we will try and prove that greatness can still come from anywhere. Where does inequality come from? What should we focus on most in order to right the ship in our lifetimes, so that our children benefit? It is important for young people to understand income inequality as a discipline, as a subject to study, as important and relevant to and in their math and English and Social Studies classes. Citing work from prominent economists like Anthony Atkinson and Raj Chetty, this unit simultaneously provides a foundational study of income inequality while arguing for increased equality of outcome for American students through their college graduation.

(Developed for African-American History and Literature, grades 11-12; recommended for Economics, grades 10-12)

18.01.06**Income Inequality Control, by Aparna Shyam**

This intention of this unit plan is to introduce high school students to linear regression in the context of a real-world issue – income inequality. By examining various types of graphs, students will be alerted to the fact that income is unevenly distributed on both a domestic and global scale. They will come up with quantitative variables that might contribute to income inequality and research the variables that interest them in depth. They will use graphing calculator technology to obtain a linear regression equation that describes the relationship between their variable of interest and the level of income inequality in a location, as measured by the Gini coefficient. Specifically, they will assess the linearity of the relationship between their variable of interest and the Gini coefficient by interpreting the correlation coefficient for the scatterplot of their data and examining a plot of residuals. Their ultimate goal will be to come up with a proposal for alleviating income inequality based on their findings.

(Developed for AP Statistics, grades 11-12; recommended for Statistics, grades 8-12)

18.01.07

Economic Inequality: What it is, How It Affects Our Lives, and What We Can Do About It, by Eden C. Stein

This unit introduces the topic of economics and economic inequality to 8th grade students through the use of nonfiction texts, podcasts, and films, and also asks students to examine, interpret and evaluate data independently, thus acquiring one of the most important skills for critical literacy in the 21st century. The recent young adult book, *Economic Inequality: The American Dream Under Siege*, by Coral Celeste Frazer is the central text for this curriculum unit and each student will have a copy of the text to read in class. Students study about the American Dream, and economic mobility as well as how these factors have changed over the past 50 years in the United States. Most importantly, students discover exactly what economic inequality consists of, how it impacts our lives, and what can be done about it. In addition to reading text there are classroom debates and the interpretation of political cartoons. As a culminating project, each student chooses a proposed solution to economic inequality for his or her own topic for an argumentative essay. It is hoped that in addition to teaching valuable skills and content that the unit provides a more educated citizenship for the future of our society.

(Developed for English Language Arts, grade 8; recommended for English Language Arts, grade 8)

18.01.08

The Economics of Inequality, by Carolyn Streets

This unit aims to provide a framework for introducing economic theory as an instructional strategy supporting ELA comprehension skills. Titled *The Economics of Inequality*, the unit will examine the arguments germane to the study of economic inequity gleaned from the seminar titled *An Introduction to Income Inequality in America: Economics, History, and Law* for the 2018 Yale Teachers Institute. Enduring unit goals intend to build student capacity to become literacy-based economists by examining the relational patterns between economic inequality and mobility while reinforcing reading comprehension and writing skills through novel analysis. This approach is unique because currently there is no formalized alignment between English Language Arts standards, Standards in Economics, and economic education. As teachers explore this unit, it is hoped that strategies, especially those that support critical and extended thinking, are used as a springboard for learning. This unit considers a cross-curricular approach as it was designed with the intent for teachers to spark more ideas on how they can enrich their own pedagogy and engage in lesson development using economic literary across other core subjects. It is also hoped that students' enduring understandings are made through text-to-self connections by reflecting on how the economy affects their own lives.

(Developed for ELA, grade 7; recommended for Math and Social Studies, Middle School grade level)

II. Engineering Solutions to 21st-Century Environmental Problems

Introduction

Science and engineering are not the same. Science is the systematic study of the physical and natural world through observation and experiment. Engineering is the application of science and math to solve problems and to design and build things. This seminar focused on problem solving and design to preserve our environment and improve human health. The field of Environmental Engineering leverages subjects including chemistry, physics, mathematics, biology, economics and public health.

While environmental engineers have solved many problems of the 20th century including dramatic improvement in air and water quality, the 21st century poses new problems and challenges. The individual units contained in this volume address these contemporary environmental problems. They include designing and evaluating alternative energy approaches, unraveling the chemistry behind ocean acidification, and developing new approaches for carbon sequestration. A second group of units builds drinking water treatment technologies and considers access to clean water in the developing world. A final two units address the contemporary environmental issues of urban sustainability and indoor air quality.

The units' topics are diverse, but all follow an environmental theme and contain the engineering principles of design and problem solving. Our hope is to enable and empower students to solve 21st century environmental problems through technology and sustainable design.

Jordan Peccia

Curriculum Units

18.02.01

Alternative Energies: Student Designed, Renewable Resource Driven “Power Plants,” by Nicholas Farrell

Global temperatures continue to be affected by the combustion of fossil fuels and the subsequent release of carbon dioxide. This 3-week unit is designed to give 9th grade physical science or environmental science student an introduction to climate change, how humans are influencing it, and what efforts we can make to help limit or prevent it. Topics necessary for this unit include electricity, circuits, greenhouse gases, alternative energies, embodied energy, payback period, and life cycle assessments. This unit functions as a culminating project incorporating all of the topics listed above and challenges students to conduct research, engineer their own alternative energy solutions and prove their efficiency through calculation. Individually or in pairs students must pick an alternative energy, spend a day or more researching it, a day drawing a blueprint for it and creating a materials list, two or three days building model “power plants” to light 3 LEDs, and two to three days writing summary research papers. The quantitative analysis of their models (included in their research papers) and student’s ability to prove their models environmental superiority over fossil fuels will be weighted heavily.

(Developed for Phy-Chem, grade 9; recommended for Environmental Science, grades 9-12)

18.02.02

Ocean Acidification, Imminent Mass Extinction? by Terry M. Bella

“Ocean Acidification, Imminent Mass Extinction?” is a unit for an Earth, Physical, or Environmental Science classroom. This unit is easily included in larger curricula focusing on climate change, the carbon cycle, human impact on Earth, or ocean chemistry. A backdrop for the unit is that ocean acidification may be jeopardizing global primary production because phytoplankton are being forced to adapt to a lower and lower pH. Loss of this piece of the food web has the potential to collapse massive, if not the most massive, ecosystems, hence mass extinction. Past mass extinction events are briefly discussed.

The unit begins by presenting the phenomenon of an ocean pH that is changing and then delves into the chemistry behind the change. The unit also considers the biological consequences of an ocean that is more acidic than it had been in millennia. Furthermore, implications to global carbon cycling are considered as the planet relies on microscopic ocean creatures to sequester carbon and transport it into long term storage. Lastly, the unit presents some recent research into the effects of the increased ocean acidity on an array of different organisms. Student activities are focused on hands on demonstrations

that help students gain an understanding of pH; how pH is affected by carbon dioxide; and how shells are vulnerable to acidic conditions.

(Developed for Phy-Chem, grade 9; recommended for Earth Science, Physical Science, and Environmental Science, grades 9-12)

18.02.03

Engineering Solutions to a Changing Climate, by Lianne Samalot

My first experience teaching climate change came after a unit covering the mechanisms and impacts of climate change. After this unit, I realized students may have a pessimistic outlook on the future. However, in the past humans have successfully reversed some major environmental problems. One example is banning the use of DDT (dichloro-diphenyl-trichloroethane) as an insecticide which caused birds egg shells to be too thin. Another example is a global agreement to stop the use of chlorofluorocarbons (CFC) which caused a hole in the ozone layer. Also the banning of lead in gasoline was another environmental success. The unit presented here is an engineering solutions oriented unit focused on climate mitigation. The mitigation strategies considered are carbon sequestration and alternative energies. This unit will cover the engineering design process with activities to practice this process while learning about carbon sequestration or wind energy. Information provided here includes background on climate change, information on the engineering design process, and different alternative energies or carbon sequestration.

(Developed for College Phy-Chem and Honors Phy-Chem, grade 9; recommended for Environmental Science, grades 9-12)

18.02.04

Humans as Invasive Species: Their Impact on the Environment and Adaptations to Live with the Changes to our Climate, by Michael Sang

This unit is geared for high school biology students. The unit will take place after the students have learned about ecology and population growth. The students will use their prior knowledge on subjects like food webs and balance within ecosystems to understand how small factors can cause great changes.

The unit will start off by considering invasive species and how the introduction of a single new organism into an ecosystem that is already in balance can disrupt the flow of energy. With this in mind, the students will think about how humans have done something similar. We introduced ourselves into new areas and have caused environmental harm. From there, we will study climate-based damage caused by humans and consider the environmental and biological impacts.

Finally, we will design strategies to adapt to a changing planet. This will have the students looking into how the world has changed, and what we can do to cope with the diverse climate-based impacts.

(Developed for Biology, grade 10)

18.02.05

Is This Water Safe to Drink? by Jason Ward

Clean and purified drinking water is a basic human need and over $\frac{3}{4}$ of the Earth's human population has the luxury of having it piped directly into their homes. Unfortunately, that leaves almost 2 billion people worldwide where access to clean water is questionable. This unit will help students understand the risks involved with drinking untreated water and engage them in an engineering project to produce a means of filtering water to make it less risky. The beginning of this unit is designed to first help students understand the risks of drinking dirty water by introducing them to the world of microbial pathogens. Students will learn about some of the most common bacteria, viruses, and protozoa that can be lurking in a potential drinking water source. Then students will learn the basics of water treatment and how water treatment has evolved over the past thousand years. Students will use this knowledge to finally construct and test a water filter of their own design.

The unit was written in partnership with Dr. Jordan Peccia, a professor of Environmental Engineering at Yale University. It is designed for elementary students as young as third grade, but the concept and strategies involved can easily be adapted to learners of any age.

(Developed for STEM Lab, grade 3; recommended for Environmental Engineering, Water Treatment, and Pathogens, grades 3-12)

18.02.06

Water Filtration Engineering in the Elementary Grades, by Carol Boynton

Whatever method we use to get a drink, we don't have to consider the environmental and water quality engineering underlying clean water. Living in the industrialized world, like the United States, we are fortunate - we don't have to worry about the quality of our drinking water. But in many parts of the world, people don't have this luxury. The focus in this six-week curriculum unit is for primary-grade scientists to build an appreciation for the outdoors, impart an understanding of how many people in the world struggle to find clean water, and empower them to solve a problem. Students will spend time learning new concepts and experiencing laboratory and field demonstrations as they move through this curriculum unit on environmental engineering and specifically, water filtration.

The curriculum unit begins with the primary mentor texts, *The River Ran Wild: An Environmental History* by Lynne Cherry and *The Water Princess* by Susan Verde. Classroom activities include learning about water treatment and access, experience carrying water, engineer a working water filter, field trips to the pond, and connecting with an area in need of easier access to clean water.

(Developed for Science/STEM, grade K; recommended for Science/STEM, grades K-3)

18.02.07

Environmental Engineering for Elementary Learners, by Jamie Griffin

This four week curriculum is for elementary learners to explore environmental engineering in urban environments. The unit starts with a broad question of “how can we make our community more sustainable?”, the unit will cover what the field of environmental engineering is, what predictability, mitigation and sustainability are, and how they relate to each other. These principles will be taught as vocabulary and will be supported with the use of anchor charts; students will be expected to use them during discussions. The unit will teach about urban infrastructure and the phenomenon of the Urban Heat Island effect. Students will then learn about and explore the possibilities of alternative energy sources and cities that already implementing green engineering. Students will explore how they can answer the question that was presented to them at the beginning of the unit. Following the engineering design process students will plan changes that they would make to their own city (in our case New Haven, Connecticut). Students will act as environmental engineers to come up with potential solutions to answer the broad question posed at the beginning of the unit.

(Developed for Science/Magnet/STEM in my general education classroom, grade 1; recommended for Science/STEM, grades K-2)

18.02.08

Indoor Air Pollution, by Michael Petrescu

In today’s world, the most debated environmental issues are climate change, pollution, deforestation, acid rain, ozone layer depletion, waste management and genetically modified organisms (GMO’s). However, there is an issue that most people don’t even think about and yet has important effects on human health: the quality of indoor air. A poor indoor air quality (IAQ) has been found responsible for the death of 4.3 million people in 2012, according to the World Health Organization (WHO).

The purpose of this unit is to provide the middle and high school Science teachers with an overview of the main sources of indoor air pollution (breathing and carbon dioxide emissions in highly occupied classrooms, tobacco smoking, use of electronic cigarettes

and emissions of organic compounds resulted from the use of cleaning agents, building materials). Students will explore and study the indoor air compounds that are harmful for human health, identify the sources of indoor air pollution and learn what they can do to reduce that pollution inside classrooms and homes. Teachers will use the concepts of indoor air pollution to expose students to organic and inorganic chemistry and introduce students to the basic nomenclature of organic compounds.

Students will also study and model the concentration of indoor pollutants and find out how much a classroom must be ventilated in order to keep the concentrations of some pollutants (for example carbon dioxide) at a low level.

The unit is intended to be taught in high school Chemistry, Physical and Environmental Science classes, but it can be used also by middle school 7th and 8th grade Science teachers to introduce students to concepts related to indoor air pollution.

The unit will last approximately two weeks.

(Developed for Engineering, grade 8; recommended for Chemistry, grade 10, Physical Science, grade 10, and Environmental Science, grade 11)

**Curriculum Units by Fellows of the
Yale-New Haven Teachers Institute
1978-2018**

2018	
Volume I	An Introduction to Income Inequality in America: Economics, History, Law
Volume II	Engineering Solutions to 21st-Century Environmental Problems
2017	
Volume I	Adapting Literature
Volume II	Watershed Science
2016	
Volume I	Shakespeare and the Scenes of Instruction
Volume II	Literature and Identity
Volume III	Citizenship, Identity, and Democracy
Volume IV	Physical Science and Physical Chemistry
2015	
Volume I	Teaching Native American Studies
Volume II	American Culture in the Long 20th Century
Volume III	Physics and Chemistry of the Earth's Atmosphere and Climate
Volume IV	Big Molecules, Big Problems
2014	
Volume I	Picture Writing
Volume II	Exploring Community through Ethnographic Nonfiction, Fiction, and Film
Volume III	Race and American Law, 1850-Present
Volume IV	Engineering in Biology, Health and Medicine
2013	
Volume I	Literature and Information
Volume II	Immigration and Migration and the Making of a Modern American City
Volume III	Sustainability: Means or Ends?
Volume IV	Asking Questions in Biology: Discovery versus Knowledge

Curriculum Units by Fellows (continued)

2012

- Volume I Understanding History and Society through Visual Art, 1776 to 1914
Volume II The Art of Biography
Volume III Anatomy, Health, and Disease: From the Skeletal System to Cardiovascular Fitness
Volume IV Engineering in the K-12 Classroom: Math and Science Education for the 21st-Century Workforce

2011

- Volume I Writing with Words and Images
Volume II What History Teaches
Volume III The Sound of Words: An Introduction to Poetry
Volume IV Energy, Environment, and Health

2010

- Volume I Interdisciplinary Approaches to Consumer Culture
Volume II The Art of Reading People: Character, Expression, Interpretation
Volume III Geomicrobiology: How Microbes Shape Our Planet
Volume IV Renewable Energy

2009

- Volume I Writing, Knowing, Seeing
Volume II The Modern World in Literature and the Arts
Volume III Science and Engineering in the Kitchen
Volume IV How We Learn about the Brain
Volume V Evolutionary Medicine

2008

- Volume I Controlling War by Law
Volume II Storytelling: Fictional Narratives, Imaginary People, and the Reader's Real Life
Volume III Pride of Place: New Haven Material and Visual Culture
Volume IV Representations of Democracy in Literature, History and Film
Volume V Forces of Nature: Using Earth and Planetary Science for Teaching Physical Science
Volume VI Depicting and Analyzing Data: Enriching Science and Math Curricula through Graphical Displays and Mapping

Curriculum Units by Fellows (continued)

2007

Volume I	American Voices: Listening to Fiction, Poetry, and Prose
Volume II	Voyages in World History before 1500
Volume III	The Physics, Astronomy and Mathematics of the Solar System
Volume IV	The Science of Natural Disasters
Volume V	Health and the Human Machine

2006

Volume I	Photographing America: A Cultural History, 1840-1970
Volume II	Latino Cultures and Communities
Volume III	Postwar America: 1945-1963
Volume IV	Math in the Beauty and Realization of Architecture
Volume V	Engineering in Modern Medicine
Volume VI	Anatomy and Art: How We See and Understand

2005

Volume I	Stories around the World in Film and Literature
Volume II	The Challenge of Intersecting Identities in American Society: Race/Ethnicity, Gender and Nation
Volume III	History in the American Landscape: Place, Memory, Poetry
Volume IV	The Sun and Its Effects on Earth
Volume V	Ecology and Biodiversity Conservation

2004

Volume I	The Supreme Court in American Political History
Volume II	Children's Literature in the Classroom
Volume III	Representations of American Culture, 1760-1960: Art and Literature
Volume IV	Energy, Engines, and the Environment
Volume V	The Craft of Word Problems

2003

Volume I	Geography through Film and Literature
Volume II	Everyday Life in Early America
Volume III	Teaching Poetry in the Primary and Secondary Schools
Volume IV	Physics in Everyday Life
Volume V	Water in the 21st Century

Curriculum Units by Fellows (continued)

2002

Volume I	Survival Stories
Volume II	Exploring the Middle East: Hands-On Approaches
Volume III	War and Peace in the Twentieth Century and Beyond
Volume IV	The Craft of Writing
Volume V	Food, Environmental Quality and Health
Volume VI	Biology and History of Ethnic Violence and Sexual Oppression

2001

Volume I	Medicine, Ethics and Law
Volume II	Art as Evidence: The Interpretation of Objects
Volume III	Reading and Writing Poetry
Volume IV	Race and Ethnicity in Contemporary American Art and Literature
Volume V	Bridges: Human Links and Innovations
Volume VI	Intelligence: Theories and Developmental Origins

2000

Volume I	Women Writers in Latin America
Volume II	Crime and Punishment
Volume III	Constitutional and Statutory Privacy Protections in the 21 st Century
Volume IV	Ethnicity and Dissent in American Literature and Art
Volume V	Sound and Sensibility: Acoustics in Architecture, Music, and the Environment
Volume VI	The Chemistry of Photosynthesis
Volume VII	Bioethics

1999

Volume I	Women's Voices in Fiction
Volume II	Art and Identity in Mexico, from the Olmec to Modern Times
Volume III	Immigration and American Life
Volume IV	Detective Fiction: Its Use as Literature and as History
Volume V	How Do You Know? The Experimental Basis of Chemical Knowledge
Volume VI	Human-Environment Relations: International Perspectives from History, Science, Politics, and Ethics
Volume VII	Electronics in the 20th Century: Nature, Technology, People, Companies, and the Marketplace

Curriculum Units by Fellows (continued)

1998

Volume I	The Use and Abuse of History in Film and Video
Volume II	Cultures and Their Myths
Volume III	Art and Artifacts: The Cultural Meaning of Objects
Volume IV	American Political Thought
Volume V	Reading Across the Cultures
Volume VI	Selected Topics in Contemporary Astronomy and Space Science
Volume VII	The Population Explosion

1997

Volume I	Twentieth Century Latin American Writing
Volume II	American Children's Literature
Volume III	American Maid: Growing Up Female in Life and Literature
Volume IV	Student Diversity and Its Contribution to Their Learning
Volume V	The Blues Impulse
Volume VI	Global Change, Humans and the Coastal Ocean
Volume VII	Environmental Quality in the 21st Century

1996

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1995

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Volume II	Film and Literature
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Volume IV	Coming of Age in Ethnic America
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1994

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1993

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Volume V	Environmental Science

1992

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Volume II	Writing and Re-writings of the Discovery and Conquest of America
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1991

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Volume III	Afro-American Autobiography
Volume IV	Recent American Poetry: Expanding the Canon
Volume V	Adolescence/Adolescents' Health
Volume VI	Global Change

1990

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Volume II	Contemporary American Drama: Scripts and Performance
Volume III	The U.S. National Parks Movement
Volume IV	American Family Portraits (Section I)
Volume V	American Family Portraits (Section II)
Volume VI	Genetics
Volume VII	What Makes Airplanes Fly? History, Science and Applications of Aerodynamics

Curriculum Units by Fellows (continued)

1989

Volume I	American Communities, 1880-1980
Volume II	Poetry
Volume III	Family Ties in Latin American Fiction
Volume IV	Detective Fiction: Its Use as Literature and History
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Volume VI	Crystals in Science, Math, and Technology
Volume VII	Electricity

1988

Volume I	The Constitution in Public Schools
Volume II	Immigrants and American Identity
Volume III	Autobiography in America
Volume IV	Responding to American Words and Images
Volume V	Hormones and Reproduction
Volume VI	An Introduction to Aerodynamics

1987

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Volume II	Epic, Romance and the American Dream
Volume III	Writing About American Culture
Volume IV	The Writing of History: History as Literature
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1986

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Volume II	Writings and Re-Writings of the Discovery and Conquest of America
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Volume IV	The Process of Writing
Volume V	The Measurement of Adolescents, II
Volume VI	Fossil Fuels: Occurrence; Production; Use; Impacts on Air Quality

1985

Volume I	Poetry
Volume II	American Musical Theater
Volume III	Twentieth Century American Fiction, Biography, and Autobiography

Curriculum Units by Fellows (continued)

Volume IV	History as Fiction in Central and South America
Volume V	Odysseys: Nineteenth and Twentieth-Century African-American History Through Personal Narrative
Volume VI	Time Machines: Artifacts and Culture
Volume VII	Skeletal Materials-Biomineralization
Volume VIII	The Measurement of Adolescents

1984

Volume I	Elements of Architecture, Part II
Volume II	Greek Civilization
Volume III	Hispanic Minorities in the United States
Volume IV	The Oral Tradition
Volume V	American Adolescents in the Public Eye
Volume VI	Geology and the Industrial History of Connecticut

1983

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Volume II	Greek and Roman Mythology
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Volume IV	America in the Sixties: Culture and Counter-Culture
Volume V	Drama
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Volume VII	Medical Imaging

1982

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Volume II	Autobiography
Volume III	The Constitution in American History
Volume IV	An Unstable World: The West in Decline?
Volume V	Society and Literature in Latin America
Volume VI	The Changing American Family: Historical and Comparative Perspectives
Volume VII	Human Fetal Development

1981

Volume I	The "City" in American Literature and Culture
Volume II	An Interdisciplinary Approach to British Studies
Volume III	Human Sexuality and Human Society
Volume IV	Writing Across the Curriculum
Volume V	The Human Environment: Energy
Volume VI	Computing

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1980

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Volume III	Drama
Volume IV	Language and Writing
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Volume VI	The Present as History
Volume VII	Problem Solving

1979

Volume I	The Stranger and Modern Fiction: A Portrait in Black and White
Volume II	Themes in Twentieth Century American Culture
Volume III	Remarkable City: Industrial New Haven and the Nation, 1800-1900
Volume IV	Language and Writing
Volume V	Strategies for Teaching Literature
Volume VI	Natural History and Biology

1978

Volume I	Language and Writing
Volume II	20th Century Afro-American Culture
Volume III	20th Century American History and Literature
Volume IV	Colonial American History and Material Culture