WISCONSIN STANDARDS for
Business and Information Technology

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Section I

Wisconsin's Approach to Academic Standards

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Foreword

Career and Technical Education (CTE) has significant value for all students – from introducing them to the world of work to providing specific technical skills. CTE helps students to find relevance, application and understanding of the core subjects.

Career and Technical Education needs to be recognized for the numerous ways it adds value to our students' education and success. As we strive to prepare every Wisconsin student to be college and career ready, it is CTE that provides our greatest opportunity for creating a skilled, knowledgeable and productive future workforce. CTE programs are critical for a student to develop contemporary knowledge and skills for the world of work or for postsecondary coursework. In many schools, CTE also provides articulated courses and work-based learning opportunities, as well as Career and Technical Student Organization connections for students.

To clearly identify what students should know and be able to demonstrate as productive workers, the Wisconsin Department of Public Instruction created the **Wisconsin Standards for Business and Information Technology**. This resource provides a framework for aligning business and information technology curriculum, instruction and assessment.

The standards within this resource will strengthen CTE's multiple pathways for students to become college and career ready while still in high school. We need to ensure students are exposed to a variety of career development experiences from kindergarten through 12th grade. By adopting the standards within this resource, business and information technology programs will continue offering relevant, rigorous and authentic learning experiences that meet the students' needs and future ambitions. Career and Technical Education should be part of any comprehensive effort to improve student achievement and success while preparing college and career ready graduates. This continued commitment has great economic implications for our future!

Tony Evers, PhD
State Superintendent

Acknowledgements

A special thanks to the Career and Technical Education (CTE) Standards Revision Leadership Teams for taking on this important project that will shape the classrooms of today and tomorrow. These workgroups are comprised of specific content area work teams; a stakeholder subgroup, representing administrators, counselors, directors of instruction; and DPI CTE Team members who took on the daunting task of reviewing each content area, as well as the **Wisconsin Common Career Technical Standards**.

Thanks to the many staff members across the division and other teams at DPI who have also contributed their time and talent to this project.

Finally, a special thanks to Wisconsin educators, businesspeople, parents and citizens who provided comment and feedback to drafts of these standards.

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Additional acknowledgements
The following individuals and groups contributed to the completion of this project through feedback and vetting of one or more sections of the document or standards.
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- 6th-8th grade Instructional Math Team, Osceola Middle School
- Introduction to Business & Marketing Education Fall 2012 ITBE 300/500 Students, University of Wisconsin-Whitewater
- Business, Marketing and Information Technology Program Instructors, Wisconsin Technical College System (WTCS)
- Wisconsin Business Education Association Members
- Wisconsin Administrators of Business, Information Technology and Marketing Occupations (WAMBO, aka WTCS Program)
- Wisconsin Future Business Leaders of America Executive Board 2012-13

Purpose of the Document

Career and Technical Education (CTE) programs include planned courses of high-quality academic content and technical competencies and skills which focus on programs of study and prepare students for successful college and career readiness.

The aim of this guide is to improve CTE for students and for communities. To assist Wisconsin educators and stakeholders in understanding and implementing the **Wisconsin Standards for Career and Technical Education**, the Wisconsin Department of Public Instruction (DPI) has developed standards in the areas of Agriculture, Food and Natural Resources; Business and Information Technology; Family and Consumer Sciences; Health Science; Marketing, Management and Entrepreneurship; and Technology and Engineering. These materials are intended to provide direction in the development of course offerings and curriculum in school districts across Wisconsin.

This publication provides a vision for student success and guiding principles for teaching and learning. Program leaders will find the guide valuable for making decisions about:
- program structure and integration;
- curriculum redesign;
- staffing and staff development;
- scheduling and student grouping;
- facility organization;
- learning spaces and materials development;
- resource allocation and accountability; and
- collaborative work with other units of the school, district and community.

A Guide to Wisconsin Career and Technical Education & Business and Information Technology Standards

Wisconsin Career and Technical Education (CTE) programs (Agriculture, Food and Natural Resources; Business and Information Technology; Family and Consumer Sciences; Health Science; Marketing, Management and Entrepreneurship; and Technology and Engineering) have a rich history and foundation of preparing young adults for the next steps in their lives—postsecondary education and the world of work. Through ties to business, industry and community, CTE programs provide perspectives and partnerships necessary to educate the entire student. Along with CTE's relationships, the standards outlined in this document set a new direction for the knowledge and skills necessary for successful transition to postsecondary programs leading to and/or direct entry into high-wage, high-demand and highly skilled careers. When paired with the Common Core State Standards, Wisconsin students now have access to increasingly rigorous and relevant content to ensure college and career readiness.

Each set of Career and Technical Education standards contains two distinct sections:
1. **Wisconsin Common Career Technical Standards**
2. Standards for the specific discipline

The Shift from Model Academic Standards (1998) to State Standards (2013)
The Model Academic Standards published in 1998 were developed in such a way as to highlight what every student should know and be able to do in a particular content area by the end of grade 4, 8 or 12. In focusing on every student, these standards did not necessarily lend themselves to providing a proficiency level or mastery of industry expectations in a specific career pathway particularly for the purpose of career and technical education.

This new set of standards provides CTE programs an opportunity to develop a single course for exploring a career pathway; as well as developing programs and pathways which include a sequence of courses that have an expectation of proficiency and mastery of skills for students who concentrate in CTE. These standards also serve as a framework to align existing course content to identify gaps and inform curricular decisions. However, the full scope of a set of standards should not be used as a measure of a course or program's completeness. Rather, distinctive conversations and informed decisions with involvement of multiple stakeholders, including business/industry and postsecondary representation, should be made regarding what is and what is not covered in a course, a sequence of courses or a program. Where one district may focus, due to local and community needs or other influences, on a single pathway, another may fully develop multiple pathways. These standards provide a foundation for a variety of applications in each of Wisconsin's districts.

The standards also shift from looking at knowledge and skills acquired by the end of certain grade levels to grade bands of knowledge and skills that should be acquired during a student's route through each level of their education. Grade bands of PK-5, 6-8 and 9-12 align to typical elementary, middle and high school levels.
- Grade band PK-5 performance indicators represent knowledge and skills that should be integrated throughout the elementary curriculum. Career and technical education teachers in districts are an excellent resource to assist in the development of curriculum and activities.
- Career and technical education should be part of the core curriculum for all middle school students. Awareness, exploration and building foundational skills for career pathways occur in middle school. The performance indicators in grade band 6-8 showcase these foundational skills with an emphasis on career development.
- Career and technical education at the high school level must go beyond awareness and exploration. Students should be developing specific knowledge and skills that are transferrable to other coursework, a job-site or postsecondary options. Performance indicators for grades 9-12 align specifically to industry standards and expectations for career clusters and pathways.

Wisconsin Common Career Technical Standards
In working with business, industry and education professionals from around the state in the development of standards for each of the individual CTE areas, discussions around common elements, skills, knowledge and dispositions led to the identification of a set of **Wisconsin Common Career Technical Standards**. At relatively the same time, national level conversations were also taking place. As part of the Common Career Technical Core outlined by the National Association of State Directors of Career and Technical Education Consortium (NASDCTEc), a set of Career Ready Practices emerged. These Career Ready Practices can easily be seen within the **Wisconsin Common Career Technical Standards**.

Wisconsin Standards for Business and Information Technology
The learning priorities and performance indicators contained within each set of discipline standards consists of knowledge and skills specific to the respective disciplines and their related jobs and careers. These are, of course, critical as students develop and pursue their career goals.

The educators and stakeholders writing the **Wisconsin Standards for Business and Information Technology** took direction from many resources including, but not limited to:
- American School Counselor Association National Standards for Students
- Career Clusters Knowledge and Skill Statements
- CISCO's IT Essentials Benchmarks
- Computer Science Teacher Association's PK-12 Computer Science Standards
- International Society for Technology in Education Standards
- Jump$tart Coalition for Personal Financial Literacy
- Mid-continent Research for Education and Learning Standards and Benchmarks
- National Business Education Association 2007 Edition Standards
- National Career Development Guidelines
- National Content Standards for Entrepreneurship Education
- National Council for Economic Education Standards
- National Endowment for Financial Education (NEFE)
- Wisconsin's Model Academic Standards for Personal Financial Literacy

Aligning for Student Success

To build and sustain schools that support every student in achieving success, educators must work together with families, community members and business partners to connect the most promising practices in the most meaningful contexts. Currently, statewide initiatives focus on high school graduation, Response to Intervention (RtI) and the *Common Core State Standards for English Language Arts, Disciplinary Literacy and Mathematics*. Now the release of the **Wisconsin Standards for Career and Techncial Education** brings to light another set of important academic standards for school districts to implement. While these initiatives are often viewed as separate efforts, each of them is connected to a larger vision of every child graduating college and career ready. The graphic below illustrates how these initiatives function together for a common purpose. Here, the vision and set of guiding principles form the foundation for building a supportive process for teaching and learning rigorous and relevant content. The following sections articulate this integrated approach to increasing student success in Wisconsin schools and communities.

Relationship Between Vision, Principles, Process, Content
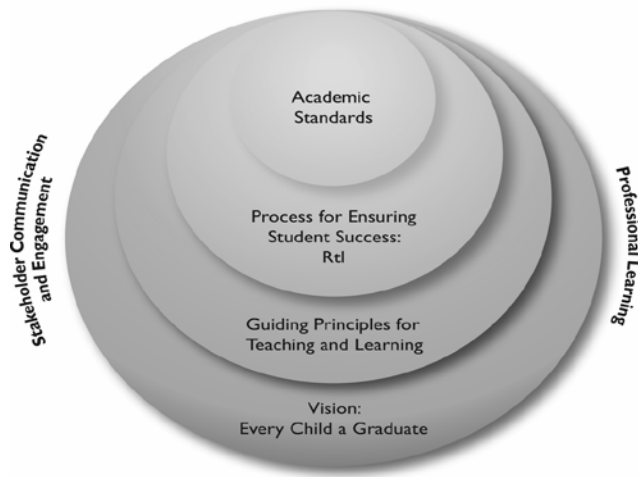
A Vision: Every Child a Graduate

In Wisconsin, we are committed to ensuring every child is a graduate who has successfully completed a rigorous, meaningful, 21st century education that will prepare him or her for careers, college and citizenship. Though the public education system continues to earn nation-leading graduation rates, a fact we can be proud of, one in ten students drop out of school, achievement gaps are too large and overall achievement could be even higher. This vision for every child a graduate guides our beliefs and approaches to education in Wisconsin.

Guided By Principles

All educational initiatives are guided and impacted by important and often unstated attitudes or principles for teaching and learning. *The Guiding Principles for Teaching and Learning* emerge from research and provide the touchstone for practices that truly affect the vision of every child a graduate prepared for college and career. When made transparent, these principles inform what happens in the classroom, direct the implementation and evaluation of programs and most importantly, remind us of our own beliefs and expectations for students.

Ensuring a Process for Student Success

To ensure that every child in Wisconsin graduates prepared for college and career, schools need to provide high quality instruction, balanced assessment and collaboration reflective of culturally responsive practices. The Wisconsin Response to Intervention (RtI) framework helps to organize the components of a system designed to support student learning. Below, the three essential elements of high quality instruction, balanced assessment and collaboration interact within a multi-level system of support to ensure each student receives what he or she needs to access higher levels of academic and behavioral success.

At the school or district level, programs, initiatives and practices related to high quality instruction, balanced assessment and collaboration can be more powerful when organized or braided to function systemically to support all students. The focus must be on a comprehensive approach to student learning.

Connecting to Content: The Common Core State Standards

Within this vision for increased student success, rigorous, internationally benchmarked academic standards provide the content for high quality curriculum and instruction and for a balanced assessment system aligned to those standards. With the adoption of the CCSS, Wisconsin has the tools to build world-class curriculum, instruction and assessments for greater student learning. The CCSS articulate what we teach so that educators can focus on how instruction can best meet the needs of each student. When implemented within a multi-level system of support, the CCSS can help to ensure that every child will graduate prepared for college, work and a meaningful life.

Wisconsin's Vision for RtI

COLLABORATION

BALANCED ASSESSMENT

CULTURALLY RESPONSIVE PRACTICES

HIGH QUALITY INSTRUCTION

MULTI-LEVEL SYSTEM OF SUPPORT

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Section II

Wisconsin's Approach to Career and Technical Education and
Business and Information Technology Education

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What is Contemporary Career and Technical Education?

There are multiple components to consider when developing contemporary Career and Technical Education (CTE) programs. The standards outlined in this document provide an important foundation to prepare individuals for a wide range of careers. Effective CTE programs are dynamic and require utilization of varied resources and involvement from multiple stakeholders. The discussion that follows highlights the multi-faceted nature of CTE and outlines the critical components that drive the development of effective CTE programs.

A National Vision for CTE
- The National Association of State Directors of Career and Technical Education Consortium (NASDCTEc) has identified five guiding principles that should drive the development of quality CTE programs. Wisconsin supports these principles as spelled out in the NASDCTEc's *Reflect, Transform, Lead: A New Vision for Career and Technical Education*. These principles provide that Career and Technical Education is:
- critical to ensuring that the United States leads in global competitiveness;
- actively partnering with employers to design and provide high-quality, dynamic programs;
- preparing students to succeed in further education and careers;
- delivered through comprehensive programs of study aligned to The National Career Clusters framework; and
- a results-driven system that demonstrates a positive return on investment.

CTE in Wisconsin
Career and Technical Education is both a collection of educational programs or content areas as well as a system of preparing students to be career and college ready. Contemporary CTE programs are delivered primarily through six specific content areas; these include:
- Agriculture, Food and Natural Resources
- Business and Information Technology
- Family and Consumer Sciences
- Health Science
- Marketing, Management and Entrepreneurship
- Technology and Engineering

Not all Wisconsin school districts offer programs in all of these content areas, but all should be offering CTE through a systemic approach that prepares students to be college and career ready.

At the elementary level, CTE content and concepts should be integrated throughout the curriculum. Teachers can effectively use CTE concepts in instruction and activities to develop foundational skills and also create a connection to the world of work. At the middle and high school levels, all students should have access to CTE courses and programs while also participating in activities prescribed by the Wisconsin Comprehensive School Counseling Model. High quality CTE programs incorporate rigorous academic and technical standards, as well as critical workplace skills – such as problem solving, communication and teamwork – to ensure career and college success for its students. The Program of Study components provide a framework for building and maintaining a high quality, contemporary CTE program, but one can also recognize such quality programs by the presence of three distinct and crucial elements – rigorous academics and technical skill attainment, work-based learning and Career and Technical Student Organizations (CTSOs). The diagram and description that follows on the next page illustrates the quality components of Career and Technical Education programs.

Rigorous Academics and Technical Skill Attainment

CTE programs prepare students for high-skill, family-sustaining jobs that typically require high levels of core academic skills as well as various technical skills. Consequently, CTE students must be held to high academic standards; often this includes course and performance expectations exceeding typical graduation requirements. CTE students benefit from a source of relevance for their academic instruction. They see the connection between their academic knowledge and skill instruction and their future occupational and career goals.

Of course, at the heart of CTE is the attainment of technical skills that are required for potential high-skill, high-wage jobs. Where circumstances and resources allow, CTE programs provide opportunities for high school students to attain the highest level of skills possible within their desired career pathway. This is done through courses taught by high school CTE teachers and/or through partnerships with neighboring districts, employers, technical colleges and postsecondary institutions or other organizations.

Some of the specific means of achieving rigorous academics and technical skill attainment include:

- *Partnerships/Advisory Committees* – These typically include representatives of area businesses within the given program's career area as well as representatives from related postsecondary training and education programs. They may also include parents, students and program alumni. They can provide recommendations on program changes and improvements, as well as serve as advocates for the program.
- *Transcripted or Dual Enrollment Options* – Opportunities such as these allow students to earn both high school and college credit concurrently. Various options are available for CTE students include advanced standing and transcripted coursework taught at the student's high school, as well as Youth Options and Advanced Placement (AP) courses.
- *Equivalency Credit Options* – These provide opportunities for students to earn credits required for high school graduation through CTE courses proven to have sufficient academic content.
- *Work-Based Learning* – See separate section below
- *Career and Technical Student Organizations* – See separate section below

Work-Based Learning

A vital part of comprehensive career and technical education programs is a structured work-based learning experience. One goal of education is preparing students to successfully enter the workforce. The best way to achieve this goal is for students to spend time in a work setting. Many factors will influence the work-based learning options that can be offered.

Work Place Visits, Employer/Employee Dialogues and Job Shadowing – At the very least, students should participate in work place visits and tours as well as hear presentations and have a dialogue with employers and employees to see how their school-based learning is relevant to the work place. Job shadowing – during which students spend several hours observing one or more employees at a work place – is an even better way to expose students to the work place.

Paid Work Experience – Ideally, students will have opportunities for paid work experience in a job related to their program of study and connected with one or more courses in which the student is currently enrolled. Such experiences should include a training agreement that spells out the expectations for everyone involved including the student, employer, teacher and parents. One of the critical elements of the training agreement is a list of the skills and knowledge the student is expected to develop through their paid work experience. Examples of structured, existing work experience programs in Wisconsin are the Employability Skills Certificate, State Certified Skills Coop programs and Youth Apprenticeship.
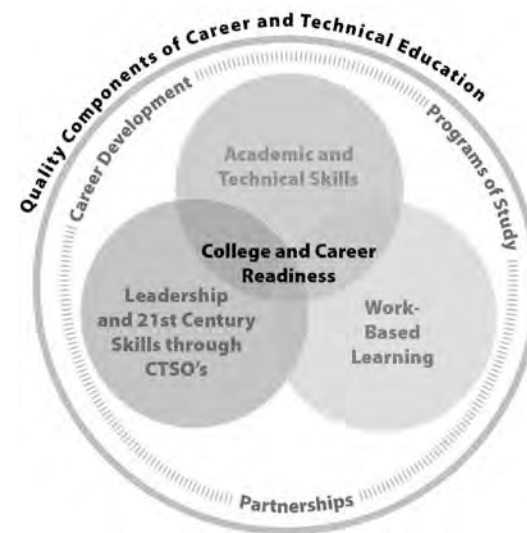
Leadership Certificate – An option for many students includes the Wisconsin Youth Leadership Certificate. This certificate is comprised of leadership skills and attitudes that are honed through community and school volunteer or service experiences, leadership positions and volunteer or unpaid workplace encounters.

The more time students spend in the workplace and the broader the experiences, the better prepared they will be. These students will also be better prepared to plan and make decisions about their futures. Work-based learning allows students to put into action the knowledge and skills learned at school.

Career and Technical Student Organizations

Career and Technical Student Organizations (CTSOs) are the third critical element found in the best contemporary CTE programs. Through CTSOs, students match their skill level against those of other students and established industry standards. In addition, CTSOs allow students to develop civic responsibility, leadership and 21st century skills.

Wisconsin has six state and nationally recognized CTSOs that are intra-curricular in that they are connected directly to the classroom through curriculum, activities and community resources. All CTSOs include leadership development elements and competitive events where students demonstrate technical and leadership skills. CTSOs prepare young people to become productive citizens and leaders in their communities and their careers. This is done through school activities as well as regional, state and national leadership conferences and competitions. Students grow and develop through these events and receive recognition for the work they have done and the skills they have developed. CTSOs provide an exceptional extension of CTE instruction. Wisconsin's recognized CTSOs include:

An Association of Marketing Students	An Association of Technology and Engineering Students	An Association of Business and Information Technology Students	An Association of Health Science Students	An Association of Family and Consumer Students	An Association of Agricultural Education Students

The Powerful Outcomes of Quality CTE

Beyond the technical knowledge and skills developed by CTE students, the overall outcomes of students who have enrolled in a CTE course – and in particular students who have taken a sequence of courses in a CTE program of study (called CTE concentrators) – are exceptionally positive. Approximately two-thirds of Wisconsin students have taken at least one CTE course. These students have a higher graduation rate (84.2%) than students who have not taken a CTE course (81.8%). CTE concentrators have an even higher graduation rate (95.7%). In addition, within a year after graduation, CTE concentrators report overwhelming positive outcomes with approximately 95% either working, attending postsecondary education or engaged in training programs.*

CTE and Programs of Study – Expanding Student Opportunities

Such positive outcomes as those noted show how CTE programs expand student opportunities. To support quality CTE programs, it is critical to foster partnerships, implement Programs of Study and promote career development through academic and career planning. CTE students develop a strong base of academic knowledge and skills that better prepare them to enter nearly any postsecondary program and pursue any career pathway compared to students who have not taken CTE courses. The relevance created by CTE and programs of study opens up additional opportunities and prepares students to pursue those opportunities when they graduate from high school. Students who select and pursue a program of study through CTE, based on identified career goals, will be in the best position for all job and career opportunities that arise in their future,including those they have never considered or those not yet in existence. ***Quality CTE programs are at the forefront of preparing college and career ready graduates.***

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   *Statistics from 2011 Wisconsin Career and Technical Education Enrollment Report (CTEERS) data.

Delivering Career and Technical Education through Career Clusters and Pathways

Career Clusters Framework
One of the keys to improving student achievement is providing students with relevant contexts for studying and learning. Career Clusters do exactly this by linking school-based learning with the knowledge and skills required for success in the workplace. The National Career Clusters Framework was developed by the National Association of State Directors for Career and Technical Education Consortium (NASDCTEc). This framework is comprised of 16 Career Clusters and related 79 Career Pathways to help students of all ages explore different career options and better prepare for further education and career. Each Career Cluster represents a distinct grouping of occupations and industries based on the knowledge and skills they require. They provide an important organizing tool for schools to develop more effective programs of study (POS) and curriculum.

> **CTE is delivered through comprehensive programs of study aligned to the National Career Clusters framework**
> *"Programs of Study aligned to the National Career Clusters framework…should be the method of delivery of all CTE. A rigorous and comprehensive program of study delivered by qualified instructors is a structured sequence of academic and CTE courses that leads to a postsecondary credential. We must be willing to take bold steps necessary to jumpstart dramatic change in our nation's education and workforce preparation systems. The dichotomous silos of academics versus CTE must be eliminated and their supporting infrastructures must be re-imagined to meet the needs of the economy. As the lines of economies blur, so too must the lines that currently separate CTE and academic education."*
> *~**Reflect, Transform, Lead: A New Vision for Career and Technical Education, NASDCTEc***

In Wisconsin, the Career Clusters and Pathways have been embraced by CTE programs to provide a context for learning the skills specific to a career. Furthermore, the nationally recognized 10 components framework (see the Wisconsin Program of Study Implementation Guide for details) delineates promising practices necessary to fully implement programs of study. Programs of Study are designed to produce higher levels of achievement in a number of measurable arenas, including academic and technical attainment, high school completion, postsecondary transitions to career and education and attainment of a formal postsecondary credential. They also contribute to increased student proficiency in vital areas such as creativity and innovation, critical thinking and problem solving.

Delivering CTE through Career Clusters
Delivering CTE through Career Clusters and Pathways means acknowledging three sets of standards (nationally-developed **Common Career Technical Core, Wisconsin Common Career Technical Standards and the Wisconsin Standards for Career and Technical Education**), their relationship to each other and how they can be used collectively to deliver quality instruction. It means shifting the way we approach curriculum and instruction to allow for a strategic approach for implementing these standards in a school or district. This section will outline the relationship that exists between these standards.

In our ever-changing society, many CTE programs are transitioning from helping students prepare for an entry-level job to helping students prepare for a career. As part of that transition, national organizations, such as the NASDCTEc, individual states and even industry-based organizations, have created different sets of standards for student learning in CTE programs. The result is an assortment of standards that vary in quality and specificity from one state to the next. In response, Wisconsin has made a concerted effort to outline these standards and their use for educators as they develop curriculum and programs of study.

Educating students is about the preparation for postsecondary options along with transferable skills that balance current business and industry needs and future career trends. CTE brings students, educators and employers together to develop and strengthen the relationship between what is being taught in the classroom and its application in the workplace. Having a skilled workforce and a vibrant economy depends on CTE programs that can deliver high quality

education and training. Because of this, understanding each of the following sets of standards and how they can impact classroom instruction is imperative and will need to be a priority for Wisconsin's CTE educators.

Common Career Technical Core
Recognizing the need for more consistency in today's global marketplace, in the spring of 2010, NASDCTEc united around a vision to develop a shared set of standards that meet a quality benchmark for students in CTE programs, regardless of where they live or which delivery system they use. The **Common Career Technical Core (CCTC)** has been developed to align with other college and career ready standards efforts, such as the Common Core State Standards in English Language Arts and Mathematics, while also articulating industry expectations for each of the 16 Career Clusters. The CCTC begins with a set of overarching **Career Ready Practices (CRP)** that apply to all programs of study. The **Career Ready Practices** include 12 statements that address the knowledge, skills and dispositions that are important to becoming career ready.

While the Common Core State Standards for English Language Arts and Mathematics define the academic knowledge and skills students need to succeed, there are additional standards that individuals must achieve if they are to be truly career ready. For example, employability skills such as team work and time management, as well as the career specific skills, have not been referenced in the Common Core State Standards. These are skills that individuals must possess in order to be successful in the workplace.   These skills make up the **Career Ready Practices** outlined in the CCTC.

The nationally-developed **Common Career Technical Core** contains standards developed for each cluster and pathway. These standards are meant to showcase the knowledge and skills students should have at the **end of the pathway.** These standards provide a mechanism for districts and states to collaborate to provide seamless educational opportunities for students across a **program of study** beginning at the secondary level. Most programs of study will require postsecondary or industry-developed skills beyond what is provided at the secondary level.
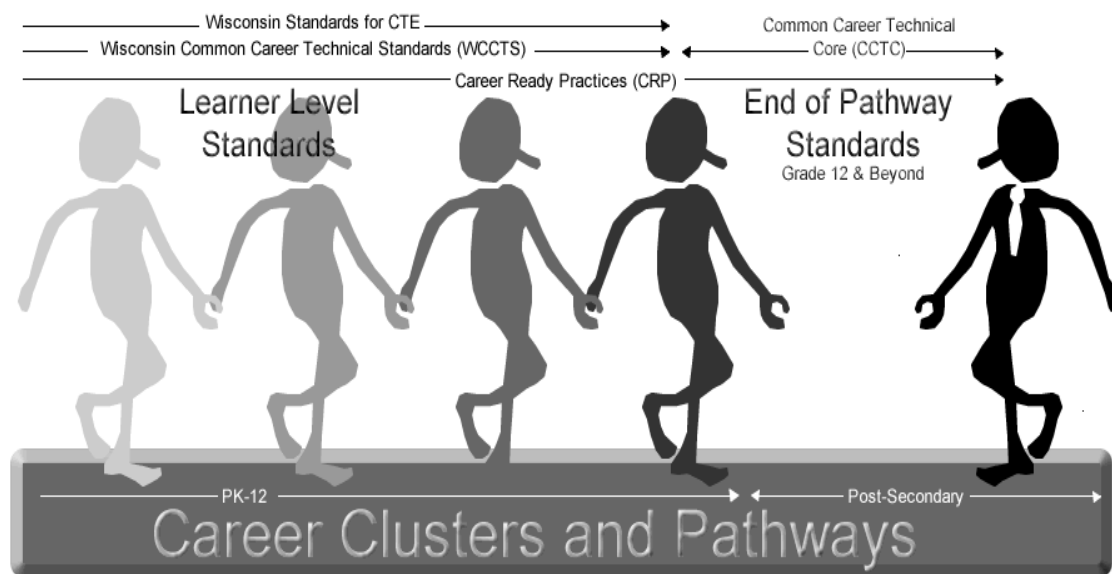
*As depicted in this graphic, there is a continuum or progression that students travel in their PK-12 career. The path begins with learner-level standards such as the **Wisconsin Common Career Technical Standards** and the **Wisconsin Standards for CTE**. As students graduate from high school and move seamlessly into postsecondary options, the focus moves to the end-of-pathway standards such as the Common Career Technical Core (CCTC-national). The Career Ready Practices (CRP-national) act as overarching concepts that students need to know and be able to do throughout their educational experiences.*

Wisconsin Common Career Technical Standards

The development of the **Wisconsin Common Career Technical Standards (WCCTS)** occurred at the state level at the same time as the national **Common Career Technical Core (CCTC)**. The Wisconsin standards writing teams identified six areas that have been further developed into standards that should be addressed across all six CTE content areas. These standard areas are Career Development; Creativity, Critical Thinking, Communication and Collaboration; Environment, Health and Safety; Global and Cultural Awareness; Information, Media and Technology; and Leadership. The intended outcome of the WCCTS revolves around creating a set of standards that transcend CTE across the state and across all CTE content areas. To read more about the WCCTS, see Wisconsin's Approach to Common Career Technical Standards in Section III of this document. The WCCTS, along with the **Wisconsin Standards for CTE** form a strong foundation by which students move toward the completion of a program of study. The WCCTS and the Career Ready Practices in the CCTC correlate as shown below:

6 Wisconsin Common Career Technical Standards*					
Career Development Has a focus on personal and social, academic, career content and employability skills	**Creativity, Critical Thinking, Communication and Collaboration** Has a focus on creativity and innovative problem solving, critical thinking used to formulate and defend judgments, to communicate and collaborate to accomplish tasks and develop solutions	**Environment, Health & Safety** Has a focus on interrelationships of health, safety and environmental systems and the impacts of these systems on organizational performance for continuous improvement	**Global & Cultural Awareness** Has a focus on solutions and initiatives related to global issues and the benefits of working in diverse settings on diverse teams	**Information, Media and Technology** Has a focus on information and media literacy to improve productivity, solve problems and create opportunities	**Leadership** Has a focus on applying leadership skills in real-world, family, community and business and industry applications
12 Career Ready Practices**					
Attend to personal health and financial well-being	Apply appropriate academic and technical skills	Consider environmental, social and economic impacts of decisions	Work productively in teams while using cultural global competence	Employ valid and reliable research strategies	Act as a responsible and contributing citizen and employee
Plan education and career paths aligned to personal goals	Communicate clearly and effectively with reason			Use technology to enhance productivity	Model integrity, ethical leadership and effective management
	Demonstrate creativity and innovation				
	Utilize critical thinking to make sense of problems and preserve in solving them				

  *See Section III

 **See http://www.careertech.org/careertechnical-education/cctc/

Wisconsin Standards for Career and Technical Education (CTE)

The **Wisconsin Standards for Career and Technical Education** are sets of standards in each of the six content areas of Agriculture, Food and Natural Resources; Business and Information Technology; Family and Consumer Sciences; Health Science; Marketing, Management and Entrepreneurship; and Technology and Engineering. The **Wisconsin Standards for CTE** are written at the **learner level** and provide instruction and assessment at the PK-12 level, that, when coupled with postsecondary education and training, leads to the mastery of end-of-pathway standards. Therefore, the **Wisconsin Standards for CTE** align to **Career Clusters and Pathways** and provide an excellent foundation for students **toward meeting the end-of-pathway** expectations.

In Summary
Career Clusters and Pathways provide an organizational structure for developing Programs of Study while building connections to current labor market information and future workforce demands. As noted previously, Programs of Study used within CTE help to create relevance for students in all subject areas. This relevance translates into improved student engagement in the learning process and more in-depth comprehension and skill development. Further, the **Wisconsin Common Career Technical Standards (WCCTS**) and the **Career Ready Practices** serve as the foundation for career readiness that ensures students have flexibility to change career paths as their interests, passions and circumstances change while considering changes in the current and projected job market. In our dynamic and unpredictable world, Career Clusters and Pathways, along with **Wisconsin Standards for CTE** to include the WCCTS, provide a measure of stability and certainty on which to build a successful future.

The Importance of Career and Technical Education

By meeting the current needs and anticipating the future demands of the economy, CTE is critical to our nation's economic success.† Quality CTE programs have planned course sequences of high quality academic core content and technical skills that provide students with skills necessary for successful transition to postsecondary education or work in addition to a desire for life-long learning in global society.

CTE has grown and evolved to become a focus in schools, workforce and government. The importance and need for career and technical education in our society should be at the forefront of career decision making for the following reasons:

- CTE organizes both academics and career education into a practical program for workforce preparation, elevating the level of rigorous, challenging and applicable coursework leading to more informed preparation.
- CTE in schools promotes the wide variety of postsecondary options to help individuals choose and recognize pathways that will provide the most successful level and type of training for their future goals in postsecondary education, military or work, while understanding the need for lifelong learning and career development.
- CTE provides opportunities to develop 21st century and employability skills, exposure to work and mentoring from employers and connections with postsecondary education.
- CTE creates a positive, thoughtful learning environment for self-discovery, innovation and leadership to more lifelong career satisfaction and success.
- CTE recognizes the diverse needs, behaviors, backgrounds, environments and preferences of students by creating an approach for individual guidance and preparation for goals, plans and dreams.
- CTE is dynamic, flexible and responsive to the changes and advances of technology, education, the workforce and the economy by incorporating methods, ideas and resources to keep CTE relevant and contemporary.

CTE has a positive impact on student achievement and transitions. Programs help students find their passion, boost their confidence and empower them to succeed. Because CTE demonstrates a positive return on investment, CTE is a trusted, long-standing partner with the employer community.†

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† "Reflect, Transform, Lead: A New Vision for Career Technical Education." National Association of State Directors of Career Technical Education Consortium (NASDCTEc), 2010.

The Importance of Business and Information Technology in Wisconsin and Our Communities

Historically, business education has been one of the most popular elective areas at the high school level. High school graduates consistently identify business as the largest major field of study at the collegiate level. † Business and Information Technology (B&IT) in Wisconsin has a rich history of strong programs building on community and postsecondary collaboration. Through these collaborative efforts, high schools will continue to prepare today's students for tomorrow's challenges. B&IT, delivered through real-world simulations and problem-based and inquiry-based techniques, provides knowledge and skills to students in many career clusters and pathways.

B&IT is relevant and engaging
Wisconsin students who concentrate in the area of Business and Information Technology graduate at a rate over 96%.‡ Cooperative Education and Youth Apprenticeships intentionally incorporate curriculum associated with B&IT. While not all students will benefit directly from work-based programs while in high school, the skills and knowledge that are developed will support student achievement beyond high school.   B&IT programs readily incorporate career development and assist students in identifying their interests and abilities to hone their career ambitions. Students who concentrate in Business and Information Technology are more likely to further their education at a college or university. ‡

B&IT is important to the economy
Business and Information Technology content comes from primarily six of the sixteen career clusters: Business Management and Administration; Arts, AV and Communication; Finance; Marketing; Hospitality and Tourism; and Information Technology. It is imperative that students in Wisconsin's high schools have access to Business and Information Technology programs since the business support area will have the largest number of openings in the future†   and computer/information technology is projected to grow faster than the average for all other jobs. †

B&IT prepares for college and careers
During the 2011-2012 school year, nearly half of the Wisconsin Technical College System transcripted credit agreements in place in Wisconsin high schools were associated with a business-related course.э Numerous opportunities exist for students to earn college credit through B&IT related examination programs, advanced standing, retroactive credit, credit for prior learning and work-based learning programs. Additionally, a variety of industry certifications in the areas of Business and Information Technology are available to students. These certifications may help students advance within their chosen career by setting students apart from other job applicants through documented proof of skills.

B&IT goes beyond the classroom
Numerous examples of students being engaged beyond the classroom can be found in a variety of work-based learning options from job shadowing opportunities to local cooperative education and State Certified Skills Certificates or Youth Apprenticeships and capstone experiences. Real-world experiences support the integration of B&IT into the educational experience for all students such as simulations with local community mentoring to school based enterprises exemplified through on-campus financial institutions that provide on-site student employability options while also promoting financial literacy for all students.   B&IT students conduct themselves as professionals both in and out of the classroom. The opportunities for youth to grow year round can also be recognized in the area of B&IT as a number of summer enrichment programs are available through local colleges, non-profit foundations and private endeavors. Additionally, as part of the largest business student organization in the world, Future Business Leaders of America (FBLA) provides a network in Wisconsin of over 6,500 high school and middle school students. The goals of FBLA are to:
- develop competent, aggressive business leadership;
- strengthen the confidence of students in themselves and their work;
- create more interest in and understanding of American business enterprise;
- encourage members in the development of individual projects that contribute to the improvement of home, business and community;

- develop character, prepare for useful citizenship and foster patriotism;
- encourage and practice efficient money management;
- encourage scholarship and promote school loyalty;
- assist students in the establishment of occupational goals; and
- facilitate the transition from school to work.

B&IT is interdisciplinary and collaborative
The National Standards for Business Education coincide with core academic standards and meet the requirements for 21st century skills.   B&IT courses are saturated with economic, communication, technology and mathematical skills.   Courses also encompass skills from science, social studies, art and research and inquiry. B&IT courses also hold opportunities for students to receive equivalency credits for graduation and college entrance. B&IT knowledge and skills strengthen students' performance in all subjects and in careers. A focus on technology integration is an important part of the educational process of preparing students for academic success in our K-12 system. The refinement and mastery of technology skills are vital to success in core academic subjects and in careers. The importance of Business and Information Technology has been recognized by all education stakeholders to support academic achievement, promote postsecondary educational attainment and opening doors to career success.

B&IT creates students who care
Business and Information Technology education provides an educational experience that supports multiple aspects of student growth. Student experiences in B&IT programs support concepts that have a real-world focus with a global awareness of current trends and issues. Mentorship opportunities both in and outside of the classroom support student engagement in the learning process and encourage youth to also mentor others in need.   B&IT incorporates experiences for students to work with others. Collaboration and leadership are imperative to the multi-faceted opportunities available beyond the high school classroom.   A student that participates in Business and Information Technology coursework is able to develop essential knowledge and skills to support individual growth in both digital citizenship and ethics that are necessary for success in the 21st century.

In summary
B&IT education is an interdisciplinary STEM subject that provides multifaceted opportunities for students to become prepared for careers and for postsecondary education. B&IT programs have the potential to elevate the performance of students and provide foundational knowledge and skills for all careers.

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†U.S. Department of Labor, Bureau of Labor Statistics. (2010). Occupational Outlook Handbook 2010-2011. Retrieved from http://www.bls.gov/oco.

‡ Wisconsin Department of Public Instruction, CTEERS concentrator graduate follow-up report. Retrieved from http://www.dpi.wi.gov/cte/veershome.html.

ɘ Wisconsin Technical College System, School to Work Reports. http://systemattic.wtcsystem.edu/reports/STW/.

Work-Based Learning in Business and Information Technology Programs

Since a goal of Career and Technical Education programs is to prepare all students to be college and career ready, providing work-based learning opportunities is an important step to becoming career ready. Engaging in work-based learning experiences allows students to apply knowledge, leadership and technical skills to real-world projects and problems alongside professionals. Business and Information Technology students who participate in programs such as the State Certified Business/IT program and Youth Apprenticeship Finance or Information Technology programs increase individual qualifications that are necessary for a student to continue employment in a desired career area.

Business and Information Technology students seek a clear connection between their future career(s) and their classroom experiences. The opportunity to explore and experience the world of work is beneficial to career decision-making. These experiences provide students with a firsthand look at what knowledge, skills and aptitudes are needed to be successful in their chosen industry. Work-based learning is a key to a successful economy.

Some work-based education programs provide an opportunity for students to earn postsecondary credits concurrently while earning high school credit. This may occur through local agreements between a high school and college (such as a technical college or university) or through a more comprehensive agreement at the state or national level.

> **Today, most career pathways require some form of postsecondary education, whether it is an entry-level job, a management position for a mid-career professional or perhaps even a shift from practicing a profession to teaching others. A particular job might require a certificate, a two-year degree, a four-year degree, a doctorate or even a handful of courses to hone in on a particular piece of knowledge or a skill.[†]**

Wisconsin Future Business Leaders of America (FBLA) and Work-Based Learning
Recognized as integral to the success of work-based learning programs, FBLA is an important part in the success of Business and Information Technology students. Through a proven system of developing leadership skills, positive attitudes and a sense of community pride, FBLA serves as a vehicle to transition students into careers. FBLA prepares students for future careers by introducing them to the corporate culture. FBLA emphasizes respect for the dignity of work, high standards, ethics and high-quality skills. It is an extremely effective instructional tool that connects Business and Information Technology classrooms with opportunities in postsecondary education and careers.

Work-Based Learning Options and Implementation in Business and Information Technology

Job Shadowing
Job shadowing is a career exploration strategy. As such, it is most appropriate at the middle school level. Middle school is the time for students to explore the broad range of occupations so that later on they will be able to narrow their career interests. High school students who have not narrowed their career interests by tenth grade may also find job shadowing to be a useful activity.

Service Learning
Service-learning is a teaching method that engages students in solving problems within their schools and communities as part of their academic studies. In Wisconsin, service-learning is defined as "a teaching and learning method which fosters civic responsibility and links classroom learning and applied learning in communities." The strongest service-learning experiences occur when the service is intentionally immersed in ongoing learning and is a natural part of the curriculum that extends into the community.

Local Cooperative Education Program
A local co-op program involves paid work for a local credential. Students can earn a high school credit for their co-op experience and possible postsecondary credit. The number of required work hours is determined by the local school district and the program is administered by the local school district. Typically a local co-op is one year in length and can include all Career and Technical Education content areas.

School Based Enterprise
School-Based Enterprises (SBE) are effective educational tools in helping to prepare students for the transition from school to work or college. For many students, a SBE may provide the first work experience; for others, they provide an opportunity to build management, supervision and leadership skills. SBE activities help students increase their skills in management, problem solving, business operations, time management and working in teams. SBE opportunities in Business and Information Technology (B&IT) include, but are not limited to, school stores, yearbook development and credit unions in schools.

Youth Leadership Skill Standards Program
The Youth Leadership Certificate is a set of competencies to recognize a student's mastery and exhibition of leadership skills valued by employers, communities and organizations. The certificate earned by the student will be issued by the State of Wisconsin and becomes a part of the student's portfolio and resume.

Employability Skills Certificate Program
The Employability Skills Certificate Program is a set of competencies developed for all students in order to recognize a student's mastery of employability skills valued by employers, to help students explore career interests and to provide a state credential of student mastery.

State Certified Cooperative Education Skill Standards Program
Wisconsin's Cooperative Education Skill Standards Certificate Program is designed in partnership with business, industry and labor representatives and educators around the integration of school-based and work-based learning and appropriate career development experiences. The program is designed to provide paid work experience for junior and senior high school students which contribute substantially to their educational and occupational development. Students learn technical tasks and employability skills validated by business and industry representatives in cooperation with high school, technical college and university instructors.

Business and Information Technology students can choose a business/information technology skill standards program. Other business related skills standards programs that may be considered are e-commerce and entrepreneurship.

Wisconsin Youth Apprenticeship
Wisconsin's Youth Apprenticeship program is part of a statewide School-to-Work initiative supported by the Wisconsin Department of Workforce Development (DWD). It is designed for high school juniors and seniors who want hands on learning in an occupational area at a worksite along with classroom instruction. The program requires a minimum of 900 hours (450 each year) of paid experience. In mentored on-the-job training, the mentor serves as a guide and sponsor of the Youth Apprentice and encourages the student's progress in the workplace. The DWD issues a Certificate of Occupational Proficiency to students who successfully complete the program.

The Youth Apprenticeship area has several choices for Business and Information Technology students to choose from including Finance; Graphic Arts/Printing; Health Information Management; Hospitality, Lodging & Tourism; Information Technology; and Transportation, Distribution and Logistics.

In Closing

Career and Technical Education programs use contemporary concepts and strategies to prepare students for college and career readiness. Today's 21st century workplace requires people with the leadership, teamwork and communication skills to perform effectively. Work-based learning programs have proven successful in developing these skills in students of all ages and backgrounds.

† http://careerreadynow.org/docs/CRPC_4pagerB.pdf

Career and Technical Student Organizations in Business and Information Technology Programs

Wisconsin Future Business Leaders of America (FBLA) has a long tradition of success in schools across the state beginning with the first chapter in 1942 and the first State Leadership Conference held during the 1953-1954 school year. Wisconsin FBLA is affiliated with Future Business Leaders of America-Phi Beta Lambda, Inc. representing the largest business career student organization in the world. College and careerfocused students build skills through FBLA competition, conferences and business mentoring. Multiple levels of membership are available at the middle level, high school level, collegiate level and professional level. It is an integral component of middle and high school business education programs which also include classroom instruction and work-based learning. FBLA can make teaching more effective by providing invaluable experiences in group dynamics that enable students to accept themselves within the total group situation.

Wisconsin FBLA Mission
Wisconsin FBLA's mission is to bring business and education together in a positive working relationship through innovative leadership and career development programs.

FBLA is an integral part of career and technical education in Wisconsin schools. Being an integral part means FBLA is a tool of instruction that reinforces through activities what the student learns in the classroom and/or on the job. Integrated chapter activities improve the effectiveness of every educational program and help the student become more prepared to make the transition from school to work and/or postsecondary education. FBLA provides, as an integral part of the instructional program, additional integrated learning opportunities for students in business and/or business-related fields to develop vocational and career supportive competencies and to promote civic and personal responsibilities. Projects involving FBLA-PBL members include professional, civic, service, career development and social awareness activities.

Attributes and Values
The driving goal of Wisconsin FBLA is to train future business leaders to be contributing members of society. Members benefit from leadership and training, contact made through networking and opportunities to apply their knowledge through business-related activities. They learn to lead and participate actively in group discussions, preside at meetings and conferences, work effectively within teams and engage in practical problem-solving and decision-making. But members are not the only benefactors in the organization. Advisers, businesspersons and community members who support FBLA have the opportunity to share their hard-earned expertise and to experience the satisfaction that comes from helping others accomplish their goals. Sponsors who give of their time and resources are preparing those individuals who will someday inherit the reins of leadership.

College and Career Ready
Wisconsin FBLA members participate in a broad range of projects and ventures both on and off campus. They initiate business ventures, support school activities, organize community service projects, attend state and national leadership conferences, participate in fund-raisers and create publications. Members gain a competitive advantage in the business world by interacting with local companies and their executives. Students also have the opportunity to win accolades on the state and national levels. Through participation in these activities, students are better prepared for a postsecondary education, a future career and for life. To be prepared for both college and careers, Wisconsin FBLA members take advantage of numerous opportunities that connect experiences to national career clusters in Arts, A/V Technology & Communications; Business Management & Administration; Finance; Government and Public Administration; Human Services; Information Technology; Law, Public Safety, Corrections & Security; Marketing; and STEM (Science, Technology, Engineering & Mathematics).

Wisconsin FBLA Competitive Events

Wisconsin FBLA boasts over sixty competitive events that provide opportunities for members to participate in events designated for individuals, teams and chapters. All FBLA competitive events are aligned to the National Business Education Standards and encompass **Wisconsin Standards for Business and Information Technology**. Since competition is recognized as a major part of the free enterprise system, FBLA-PBL sponsors a National Leadership Conference (NLC) which begins with competition at the regional and state levels. Wisconsin is divided into seven regions with Regional Leadership Conferences being held each year the first Saturday in February. The State Leadership Conference is a two-day conference held each year in April. Winners from each Regional Leadership Conference may participate in the competitive events at the state level. State winners are eligible to advance to the National Leadership Conference. In addition to the competitive events, each conference includes business meetings, election of officers, special-interest sectionals, awards programs and other planned activities.

Leadership Opportunities

Students have the opportunity to serve as officers on the local, regional, state and national levels. Members who aspire leadership roles gain the experience of running a campaign, going through officer training and playing an important role in the development of the annual Program of Work for the year—not to mention the experience of developing a chapter in its activities and acting as an ambassador for the organization. Chapter activities can also provide for the development of leadership, development of a strong work ethic, promotion of standards of excellence, encouragement of broader educational experiences and encouragement of cooperative efforts. Annual fall leadership labs and conferences are available at multiple locations across the state as well as across the country. These events engage both middle level and high school level members to learn more about FBLA while participating in workshops, business tours, mentorship by business and community speakers, networking activities with members from other chapters and chapter development activities.

Community Service Opportunities

Wisconsin FBLA members have a unique opportunity to engage their high school peers, family and community members to reach one common goal that makes a difference in the lives of others. Wisconsin FBLA provides the foundation for students to champion community service projects with local businesses and charitable organizations. FBLA's charity of choice is the March of Dimes and in the nearly 40 years FBLA-PBL has been united with the March of Dimes, FBLA-PBL has consistently ranked as the top organization fund-raising partner, raising over $15 million dollars.   Wisconsin FBLA has consistently contributed toward this national community partner's fight against premature birth. In addition to community service programs organized by the national officer team, Wisconsin FBLA empowers state executive board members and local chapter officers to develop a Program of Work to emphasize the following three areas associated with FBLA: education, service and progress. Local chapters annually develop a variety of experiences that reflect the needs of the local school and community.

In Summary

An important reason for the success FBLA shares is that all members, advisers and business partners believe in the organization and in each other. Career and Technical Student Organizations, like FBLA, provide valuable opportunities for students to develop leadership skills, present chances to get involved in communities and give back and showcase students' skills and abilities through competition.   These opportunities, along with related classroom instruction, support young men and women in preparing for their future endeavors.

Section III

Wisconsin Common Career Technical Standards

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Wisconsin's Approach to Common Career Technical Standards

With the release of the Wisconsin Standards for Career and Technical Education (CTE), Wisconsin CTE teachers have access to the foundational knowledge and skills needed to educate students for successful entry into hundreds of high-wage, high-demand occupations and careers. Vetted by business, industry and education professionals, these standards guide Wisconsin schools, teachers and community partners toward development and continuous improvement of world class CTE courses and programs.

The learning priorities and performance indicators contained within each set of CTE standards consists of knowledge and skills specific to the respective disciplines and its related jobs and careers. These are, of course, critical as students develop and pursue their career goals. In addition, knowledge and skills exist that are common to the pursuit of jobs and careers in any field. It is this set of common career knowledge and skills that are contained in the *Wisconsin Common Career Technical Standards*.

The Wisconsin Common Career Technical Standards (WCCTS) include the CTE related knowledge and skills that all students should have to be college and career ready and they provide a foundation on which the discipline-specific CTE standards are built. In some cases, discipline-specific standards will be similar to the WCCTS, but those discipline-specific standards will have a depth or nature that is specific to that discipline and its related jobs and careers.

These WCCTS, which are included as an additional section in each of the discipline-specific CTE standards documents, have been developed from a broad collection of potential standards using a "workplace" lens. In other words, when determining common standards for all CTE areas, their relevance to being successful and valued as an employee in a wide range of career clusters and pathways has been considered. From this perspective, six areas for the WCCTS emerged: **Creativity, Critical Thinking, Communication and Collaboration; Career Development; Environment, Health and Safety; Global and Cultural Awareness; Information, Media and Technology**; and **Leadership**.

Numerous existing sets of standards and standards-related documents have been used in developing the Wisconsin Common Career Technical Standards. These include:
- 21st Century Skills
- Career Cluster Essential Knowledge and Skills Statements
- Wisconsin Employability Skills Certificate
- Wisconsin Youth Leadership Skill Certificate
- National Career Development Association Career Development Standards
- Wisconsin Comprehensive School Counseling Model
- NASDCTEc Common Career Technical Core Initiative

In addition to the Wisconsin Common Career Technical Standards, personal financial literacy and entrepreneurial knowledge and skills are an important part of a student's education. These areas were not included as part of the WCCTS since Wisconsin educators and schools use the Model Academic Standards for Personal Financial Literacy and *Wisconsin's Vision for Entrepreneurial Education* which adapts the *National Content Standards for Entrepreneurs*. Educators should reference these two sets of standards for inclusion in CTE curriculum where appropriate.

As with all the standards, the Wisconsin Common Career Technical Standards may be taught and integrated through a variety of classes and experiences. Each district, school and program area should determine the means by which students meet these standards. Through the collaboration of multiple stakeholders, these foundational standards will set the stage for high-quality, successful, contemporary CTE courses and programs throughout Wisconsin's PK-12 systems.

Standard Structure
The **Wisconsin Standards for Career and Technical Education**, including the **Wisconsin Common Career Technical Standards**, each follow a similar structure.

Standard Coding

Standard Formatting

Performance Indicator by Grade Band: Measurable degree to which a standard has been developed and/or met

Discipline
Content Area
Standard: Broad statement that tells what students are expected to know or be able to do

Learning Priority: Breaks down the broad statement into manageable learning pieces

Wisconsin Common Career Technical Standards (WCCTS)			
Content Area: 4C/Creativity, Critical Thinking, Communication and Collaboration			
Standard: 4C1: Students will think and work creatively to develop innovative solutions to problems and opportunities.			
	Performance Indicators (By Grade Band)		
Learning Priority	PK-5	6-8	9-12
4C1.a: Develop original solutions, products, and services to meet a given need.	4C1.a.1.e: Recognize that there can be multiple ways to solve a problem.	4C1.a.4.m: Analyze elements of a problem to develop creative solutions.	4C1.a.7.h: Develop original ways to solve a given problem.
	4C1.a.2.e: Explain how human needs and desires drive innovation.	4C1.a.5.m: Explain how a recently developed product or service fulfills a human need or desire.	4C1.a.8.h: Design a product or service that could fulfill a human need or desire.
	4C1.a.3.e: Explain how a solution to one problem may or may not work for a related problem or situation.	4C1.a.6.m: Describe how past experiences can inform current problem solving.	4C1.a.9.h: Apply past experiences to current problems in developing innovative solutions.

Grade Bands
Grade bands of PK-5, 6-8 and 9-12 align to typical elementary, middle and high school levels.
- Grade band PK-5 performance indicators represent knowledge and skills that should be integrated throughout the elementary curriculum. Career and technical education teachers in districts can be an excellent resource to assist in the development of curriculum and activities.
- Career and technical education should be part of the core curriculum for all middle school students. Awareness, exploration and building foundational skills for career pathways occur in middle school. The performance indicators in grade band 6-8 showcase these foundational skills with an emphasis on career development.
- Career and technical education at the high school level must go beyond awareness and exploration. Students should be developing specific knowledge and skills that are transferrable to other coursework, a job-site or postsecondary options. Performance indicators for grades 9-12 align specifically to industry standards and expectations for career clusters and pathways.

Wisconsin Common Career Technical Standards (WCCTS)
Content Area: 4C/Creativity, Critical Thinking, Communication and Collaboration

Standard: 4C1: Students will think and work creatively to develop innovative solutions to problems and opportunities.

	Performance Indicators (By Grade Band)		
Learning Priority	**PK-5**	**6-8**	**9-12**
4C1.a: Develop original solutions, products and services to meet a given need.	**4C1.a.1.e:** Recognize that there can be multiple ways to solve a problem.	**4C1.a.4.m:** Analyze elements of a problem to develop creative solutions.	**4C1.a.7.h:** Develop original ways to solve a given problem.
	4C1.a.2.e: Explain how human needs and desires drive innovation.	**4C1.a.5.m:** Explain how a recently developed product or service fulfills a human need or desire.	**4C1.a.8.h:** Design a product or service that could fulfill a human need or desire.
	4C1.a.3.e: Explain how a solution to one problem may or may not work for a related problem or situation.	**4C1.a.6.m:** Describe how past experiences can inform current problem solving.	**4C1.a.9.h:** Apply past experiences to current problems in developing innovative solutions.
4C1.b: Work creatively with others to develop solutions, products and services.	**4C1.b.1.e:** Recognize that an individual's background and experiences influence their perspective of problems and solutions.	**4C1.b.4.m:** Explain how multiple people can develop better solutions than an individual.	**4C1.b.7.h:** Incorporate the skills and experiences of others to develop a new solution to a problem.
	4C1.b.2.e: Participate with a group to develop new ideas.	**4C1.b.5.m:** Explain how multiple people and perspectives can develop better ideas than an individual.	**4C1.b.8.h:** Work as part of a team to design a product or service that could fulfill a human need or desire.
	4C1.b.3.e: Explain the value of multiple perspectives in solving problems and recognizing opportunities.	**4C1.b.6.m:** Explain how multiple people and perspectives can improve an existing product or process better than an individual.	**4C1.b.9.h:** Work as part of a team to improve an existing product or process.

Standard: 4C2: Students will formulate and defend judgments and decisions by employing critical thinking skills.			
	Performance Indicators (By Grade Band)		
Learning Priority	**PK-5**	**6-8**	**9-12**
4C2.a: Develop effective resolutions for a given problem, decision or opportunity using available information.	**4C2.a.1.e:** Differentiate between problems and symptoms.	**4C2.a.5.m:** Analyze symptoms to identify the root cause of a problem.	**4C2.a.11.h:** Determine the information needed to address an identified problem.
	4C2.a.2.e: Explain problems, decisions and opportunities faced by individuals and communities.	**4C2.a.6.m:** Develop multiple resolutions for a given problem, decision or opportunity.	**4C2.a.12.h:** Contrast the benefits and drawbacks of various proposed resolutions to a given situation.
	4C2.a.3.e: Explain the negative aspects of making decisions without adequate information and/or thought.	**4C2.a.7.m:** Identify problems that became worse due to poorly thought out or poorly informed solutions.	**4C2.a.13.h:** Predict how an action could result in unintended consequences, both positive and negative.
	4C2.a.4.e: Describe the concept of systems thinking.	**4C2.a.8.m:** Explain how implementation of a solution or action may affect one or more corresponding systems.	**4C2.a.14.h:** Analyze the impact of a decision using a systems thinking model.
		4C2.a.9.m: Explain how different resolutions may be appropriate under different circumstances.	**4C2.a.15.h:** Determine the best resolution for a problem, decision or opportunity based on given criteria.
		4C2.a.10.m: Explain the process for choosing an action or making a decision.	**4C2.a.16.h:** Defend an action taken or a decision implemented.
4C2.b: Develop and implement a resolution for a new situation using personal knowledge and experience.	**4C2.b.1.e:** Describe how past experience relates to new situations.	**4C2.b.3.m:** Analyze problems to determine what past experiences might be related and relevant.	**4C2.b.5.h:** Apply past experience to develop a course of action for a new situation.
	4C2.b.2.e: Describe how knowledge learned in one class can be used in other classes and situations.	**4C2.b.4.m:** Analyze a problem to determine how it relates to existing knowledge.	**4C2.b.6.h:** Use existing knowledge to develop a resolution for a new situation, problem or opportunity.

Standard: 4C3: Students will communicate and collaborate with others to accomplish tasks and develop solutions to problems and opportunities.			
	Performance Indicators (By Grade Band)		
Learning Priority	**PK-5**	**6-8**	**9-12**
4C3.a: Communicate thoughts and feelings with others using verbal and non-verbal language.	**4C3.a.1.e:** Discuss a shared experience with others.	**4C3.a.5.m:** Conduct a shared dialogue with others on a common problem or task.	**4C3.a.9.h:** Develop a mutually acceptable response to a question or problem.
	4C3.a.2.e: Identify a person's emotions based on expressions and body language.	**4C3.a.6.m:** Predict how a person's emotions may influence his/her communication.	**4C3.a.10.h:** Distinguish between what a person says and what their expressions and body language indicate.
	4C3.a.3.e: Describe various ways people communicate with each other without using words.	**4C3.a.7.m:** Explore non-verbal and non-written means of communication.	**4C3.a.11.h:** Communicate effectively in the presence of a language barrier.
	4C3.a.4.e: Demonstrate effective listening skills.	**4C3.a.8.m:** Implement effective listening skills in resolving a situation.	**4C3.a.12.h:** Utilize effective listening skills in creating consensus in a group.
4C3.b: Work collaboratively with others.	**4C3.b.1.e:** Describe various ways of generating ideas in a group setting.	**4C3.b.4.m:** Use idea generating practices as part of a group.	**4C3.b.7.h:** Participate in group processes to generate consensus.
	4C3.b.2.e: Complete an assignment as part of a group.	**4C3.b.5.m:** Describe ways to facilitate group collaboration.	**4C3.b.8.h:** Lead group processes to generate consensus.
	4C3.b.3.e: Compare the impact of face-to-face discussion with the use of technology for communication.	**4C3.b.6.m:** Demonstrate the use of various tools to communicate effectively with an individual or a group.	**4C3.b.9.h:** Incorporate the use of technology to productively plan, implement and evaluate a solution, process or procedure.
4C3.c: Use interpersonal skills to resolve conflicts with others in an ethical manner.	**4C3.c.1.e:** Compare and contrast ways of resolving conflicts with another person.	**4C3.c.4.m:** Resolve a conflict with another person with assistance.	**4C3.c.7.h:** Resolve conflicts productively with individuals as they arise.
	4C3.c.2.e: Describe ways of resolving conflicts within a team or group.	**4C3.c.5.m:** Contribute to resolving conflicts that occur within a team or group.	**4C3.c.8.h:** Lead a team or group through a conflict resolution process to reach a productive outcome.
	4C3.c.3.e: Explain ways in which an act might be considered ethical or unethical.	**4C3.c.6.m:** Explore the ethical considerations of a current or historical action or decision.	**4C3.c.9.h:** Defend personal ethics applied to common conflicts that arise during group interactions and team activities.

Wisconsin Common Career Technical Standards (WCCTS)

Content Area: CD/Career Development

Standard: CD1: Students will consider, analyze and apply an awareness of self, identity and culture to identify skills and talents.

Learning Priority	Performance Indicators (By Grade Band)		
	PK-5	**6-8**	**9-12**
CD1.a: Identify person strengths, aptitudes and passions.	**CD1.a.1.e:** Identify individual likes and dislikes related to utilizing skills and abilities.	**CD1.a.2.m:** Assess personal strengths, aptitudes and passions related to potential future careers.	**CD1.a.3.h:** Evaluate various occupations and career pathways to identify personal, academic and career goals based on personal strengths, aptitudes and passions.
CD1.b: Demonstrate effective decision-making, problem solving and goal setting.	**CD1.b.1.e:** Recognize consequences of decisions and choices.	**CD1.b.3.m:** Develop effective coping skills for dealing with problems.	**CD1.b.5.h:** Use a decision-making and problem-solving model.
	CD1.b.2.e: Define a goal and describe why it is important to have goals.	**CD1.b.4.m:** Identify long and short-term goals.	**CD1.b.6.h:** Develop an action plan to set and achieve realistic goals.
CD1.c: Interact effectively with others in similar and diverse teams.	**CD1.c.1.e:** Identify when it is appropriate to listen and when it is appropriate to speak.	**CD1.c.5.m:** Distinguish between appropriate and inappropriate behavior in a team setting.	**CD1.c.9.h:** Assess cultural differences and work effectively with people from a range of social and cultural backgrounds.
	CD1.c.2.e: Recognize personal boundaries, rights and privacy needs.	**CD1.c.6.m:** Conduct oneself in a respectable manner which acknowledges the personal boundaries, rights and privacy of others.	**CD1.c.10.h:** Critique different ideas and values while leveraging social and cultural differences to increase innovation, new ideas and quality of work.
	CD1.c.3.e: Demonstrate cooperative behavior in groups.	**CD1.c.7.m:** Display cooperative behavior and identify personal strengths and assets in groups.	**CD1.c.11.h:** Evaluate how the personal strengths and assets of others contribute to a cooperative group atmosphere.
	CD1.c.4.e: Describe what it means to show respect and appreciation for individual and cultural differences.	**CD1.c.8.m:** Show respect and appreciation for individual and cultural differences in groups.	**CD1.c.12.h:** Assess how respect and appreciation for individual and cultural differences impacts group processes.
CD1.d: Apply a range of relevant decision-making strategies.	**CD1.d.1.e:** Define what a decision is and how decisions can be made.	**CD1.d.3.m:** Evaluate the positive and negative implications of personal decisions.	**CD1.d.5.h:** Predict the outcome of various decisions on personal, social and career success.
	CD1.d.2.e: Demonstrate when, where and how to seek help with solving problems and making decisions.	**CD1.d.4.m:** Apply decision-making strategies to personal and team interactions.	**CD1.d.6.h:** Evaluate the impact of personal decision-making strategies on specific outcomes.

Standard: CD2: Students will identify the connection between educational achievement and work opportunities in order to reach personal and career goals.			
	Performance Indicators (By Grade Band)		
Learning Priority	**PK-5**	**6-8**	**9-12**
CD2.a: Apply academic experiences to the world of work, inter-relationships and the community.		**CD2.a.1.m:** Practice balancing school, studies, co-curricular activities, leisure time and family life.	**CD2.a.3.h:** Evaluate how performance and connections within the learning community enhance future opportunities.
		CD2.a.2.m: Describe a diverse range of opportunities available beyond high school.	**CD2.a.4.h:** Determine those opportunities that best support attainment of a specific career goal.
CD2.b: Assess attitudes and skills that contribute to successful learning in school and across the life span.	**CD2.b.1.e:** Set realistic expectations for work and achievement.	**CD2.b.4.m:** Assess changes due to influences and shifts in regional, national and global economies related to career opportunities.	**CD2.b.7.h:** Interpret and analyze the impact of current education, training and work trends on life, learning and career plans.
	CD2.b.2.e: Establish challenging academic goals.	**CD2.b.5.m:** Apply academic information from a variety of sources to enhance career preparedness and lifelong learning.	**CD2.b.8.h:** Assess education and training opportunities to acquire new skills necessary for career advancement.
	CD2.b.3.e: Explore local and regional labor market and job growth information.	**CD2.b.6.m:** Research local and regional labor market and job growth information to analyze career opportunities.	**CD2.b.9.h:** Analyze local and regional labor market and job growth information to select a career pathway for potential advancement.

Standard: CD3: Students will create and manage a flexible and responsive individualized learning plan to meet their career goals.			
	Performance Indicators (By Grade Band)		
Learning Priority	**PK-5**	**6-8**	**9-12**
CD3.a: Investigate the world of work in order to gain knowledge of self in order to make informed career decisions.	**CD3.a.1.e:** Locate, evaluate and interpret career information.	**CD3.a.5.m:** Demonstrate the ability to use technology to retrieve and manage career information that inspires educational achievement.	**CD3.a.10.h:** Analyze how career plans may be affected by personal growth, external events and changes in motivations and aspirations.
	CD3.a.2.e: Discuss and explain behaviors and decisions that reflect interests, likes and dislikes.	**CD3.a.6.m:** Build an ongoing awareness of personal abilities, skills, interests and motivation and determine how these fit with chosen career pathway.	**CD3.a.11.h:** Apply academic and employment readiness skills in work-based learning situations such as internships, shadowing and/or mentoring experiences.
	CD3.a.3.e: Give examples of positive personal characteristics (e.g., honesty, dependability, responsibility, integrity and loyalty).	**CD3.a.7.m:** Develop an individual learning plan to enhance educational achievement and attain career goals based on a career pathway.	**CD3.a.12.h:** Evaluate changes in local, national and global employment trends, societal needs and economic conditions related to career planning.
	CD3.a.4.e: Identify career opportunities of interest; match personal interests and aptitudes.	**CD3.a.8.m:** Choose career opportunities that appeal to personal career goals.	**CD3.a.13.h:** Recognize how chance opportunities integrate with learning and career goals.
		CD3.a.9.m: Use assessment results in educational planning including career awareness.	**CD3.a.14.h:** Implement an individual learning plan to maximize academic ability and achievement.
CD3.b: Examine and evaluate opportunities that could enhance life and career plans and articulate plan to guide decisions and actions.	**CD3.b.1.e:** Describe why people work and how aspects of the work environment affect lifestyle.	**CD3.b.2.m:** Describe educational levels (e.g., work-based learning, certificate, two-year, four-year and professional degrees) and performance skills needed to attain personal and career goals.	**CD3.b.4.h:** Implement strategies for responding to transition and change with flexibility and adaptability.
		CD3.b.3.m: Demonstrate openness to exploring a wide range of occupations and career pathways.	**CD3.b.5.h:** Evaluate the relationship between educational achievement and career development.

Learning Priority	Performance Indicators (By Grade Band)		
	PK-5	**6-8**	**9-12**
CD3.c: Employ career management strategies to achieve future career success and satisfaction.	**CD3.c.1.e:** Explain how good nutrition, adequate rest and physical activity affect energy levels and productivity in school and at work.	**CD3.c.3.m:** Identify work values and needs.	**CD3.c.5.h:** Determine how principles of equal opportunity, equity, respect, inclusiveness and fairness, affect career planning and management.
	CD3.c.2.e: Demonstrate the ability to seek assistance (e.g., with problems at school or work) from appropriate resources, including other people.	**CD3.c.4.m:** Define adaptability and flexibility in the world of work.	**CD3.c.6.h:** Discuss how adaptability and flexibility, especially when initiating or responding to change, contributes to career success.
Standard: CD4: Students will identify and apply employability skills.			
CD4.a: Identify and demonstrate positive work behaviors and personal qualities needed to be employable.	**CD4.a.1.e:** Identify behaviors that demonstrate self-discipline, self-worth, positive attitude and integrity.	**CD4.a.3.m:** Demonstrate self-discipline, self-worth, positive attitude and integrity.	**CD4.a.6.h:** Evaluate how self-discipline, self-worth, positive attitude and integrity displayed in a work situation affect employment status.
		CD4.a.4.m: Demonstrate flexibility and willingness to learn new knowledge and skills.	**CD4.a.7.h:** Assess how flexibility and willingness to learn new knowledge and skills affect employment status.
			CD4.a.8.h: Apply communication strategies when adapting to a culturally diverse environment.
	CD4.a.2.e: Describe positive work-qualities typically desired in each of the career cluster's pathways.	**CD4.a.5.m:** Identify positive work-qualities typically desired in each of the career cluster's pathways.	**CD4.a.9.h:** Use positive work-qualities typically desired in each of the career cluster's pathways.
			CD4.a.10.h: Manage work roles and responsibilities to balance them with other life roles and responsibilities.
CD4.b: Demonstrate skills related to seeking and applying for employment to find and obtain a desired job.	**CD4.b.1.e:** Identify the qualities employers may seek in a candidate.	**CD4.b.2.m:** Identify the components of a job description.	**CD4.b.5.h:** Use multiple resources to locate job opportunities.
		CD4.b.3.m: Use technology to assist in career exploration and job-seeking activities.	**CD4.b.6.h:** Prepare a resume, cover letter, employment application.

	Performance Indicators (By Grade Band)		
Learning Priority	**PK-5**	**6-8**	**9-12**
		CD4.b.4.m: Compare and contrast personal attributes with employment needs and trends.	**CD4.b.7.h:** Employ critical thinking and decision-making skills to exhibit qualifications to a potential employer in an interview.
CD4.c: Identify and exhibit traits for retaining employment.	**CD4.c.1.e:** Recognize the appropriate behavior and communication skills necessary in adult interactions.	**CD4.c.2.m:** Demonstrate the behavior and etiquette appropriate to interactions with adults.	**CD4.c.4.h:** Model behaviors that demonstrate reliability and dependability.
		CD4.c.3.m: Distinguish between appropriate behaviors in a social vs. professional setting.	**CD4.c.5.h:** Maintain appropriate dress and behavior for the job to contribute to a safe and effective workplace/jobsite.
			CD4.c.6.h: Complete required employment forms and documentation.
			CD4.c.7.h: Summarize key activities necessary to retain a job in an industry.
CD4.d: Develop positive relationships with others.	**CD4.d.1.e:** Define what it means to be respectful and non-judgmental.	**CD4.d.3.m:** Interact with others in a respectful and non-judgmental manner.	**CD4.d.5.h:** Participate in co-curricular and community activities to enhance the school experience.
	CD4.d.2.e: Define cooperation.	**CD4.d.4.m:** Use cooperative behavior in helping peers accomplish goals and tasks.	**CD4.d.6.h:** Evaluate the best method to assist co-workers in accomplishing goals and tasks.
			CD4.d.7.h: Examine the skills required to enable students to successfully transition to post-secondary opportunities.
			CD4.d.8.h: Use a systematic approach to academic and career planning for students to achieve their learning, socio-cultural and work goals.

Wisconsin Common Career Technical Standards (WCCTS)
Content Area: EHS/Environment, Health and Safety

Standard: EHS1: Students will identify the importance and interrelationships of health, safety and environmental systems and evaluate the impacts of these systems on organizational performance for continuous improvement.

	Performance Indicators (By Grade Band)		
Learning Priority	**PK-5**	**6-8**	**9-12**
EHS1.a: Assess the interdependency among natural and human-built systems, including social, ecological and economic health.	**EHS1.a.1.e:** Recognize and describe various types of natural and human-built systems.	**EHS1.a.5.m:** Describe the process of change, flow of energy and the importance of diversity in natural and human-built systems.	**EHS1.a.9.h:** Assess systems dynamics, including constant change and carrying capacity within social, ecological and economic systems.
	EHS1.a.2.e: Describe how social, ecological and economic systems have benefits and consequences.	**EHS1.a.6.m:** Compare ways in which social, ecological and economic systems have been managed.	**EHS1.a.10.h:** Evaluate the societal, ecological and economic costs and benefits of allocating resources in various ways.
			EHS1.a.11.h: Identify strategies to maintain societal, ecological and environmental health.
	EHS1.a.3.e: Describe how personal choices impact natural and human-built systems.	**EHS1.a.7.m:** Analyze the impact of personal choices regarding natural and human-built systems on future actions.	**EHS1.a.12.h:** Evaluate the impact of personal choices on the interactions or interdependency between natural and human-built systems.
	EHS1.a.4.e: Identify and give examples of short-term and long-term solutions to a problem.	**EHS1.a.8.m:** Evaluate the advantages and disadvantages of short-term and long-term solutions and the impacts on social, ecological and economic environments.	**EHS1.a.13.h:** Assess how the human-built environment can be designed or modified to promote ecological and economic health and provide a better quality of life.
EHS1.b: Engage in systems thinking and inquiry processes that identify problems while analyzing the impacts of decisions made now and in the future.	**EHS1.b.1.e:** Engage in a decision-making process that includes selecting and using data, suggesting possible alternatives, predicting consequences and defending the decision.	**EHS1.b.3.m:** Evaluate consequences of a variety of approaches on social, ecological and environmental systems.	**EHS1.b.5.h:** Formulate a plan of action that addresses a current issue that considers the impact on social, economic and ecological systems now and in the future.
	EHS1.b.2.e: Identify questions that require skilled investigation to solve current social, economic and ecological problems.	**EHS1.b.4.m:** Plan investigations to collect information, make predic-tions and offer explanations about the social, economic, and ecological questions asked.	**EHS1.b.6.h:** Communicate the results of an investigation of current issues' effects on social, economic and ecological systems.

Learning Priority	Performance Indicators (By Grade Band)		
	PK-5	**6-8**	**9-12**
EHS1.c: Develop solutions to social, economic and ecological problems without compromising the ability of future generations to meet their needs.	**EHS1.c.1.e:** Identify examples of how personal actions can influence social, economic and ecological systems.	**EHS1.c.4.m:** Give examples of education, economic and governmental institutions' and individuals' influence on social, economic and ecological systems.	**EHS1.c.7.h:** Analyze political, educational, economic and governmental influences on systems and identify the roles individuals play within the systems.
	EHS1.c.2.e: Identify local or regional social, economic and ecological issues.	**EHS1.c.5.m:** Explain the political, legal or economic reasons for resolving local, state and national social, economic or ecological issues.	**EHS1.c.8.h:** Explain the factors that contribute to the development of social, economic and ecological systems issues and policies.
	EHS1.c.3.e: Identify short-term and long-term solutions to a problem.	**EHS1.c.6.m:** Develop a plan for personal contribution toward improving or maintaining some part of the social, economic or ecological system.	**EHS1.c.9.h:** Formulate a plan to maintain or improve some part of the local or regional social, economic or ecological system.
EHS1.d: Implement personal and jobsite safety rules and regulations to maintain and improve safe and healthful working conditions and environments.	**EHS1.d.1.e:** Identify health and safety considerations in the classroom along with individual responsibility for maintaining conditions.	**EHS1.d.4.m:** Identify the relationships between school and community conditions with regard to personal and environmental health and safety.	**EHS1.d.7.h:** Assess workplace conditions with regard to personal and environmental health and safety.
	EHS1.d.2.e: Identify different types of jobs and how safety and health systems operate.	**EHS1.d.5.m:** Recognize and use systems in school and in the community that protect and enhance personal, environmental health and safety.	**EHS1.d.8.h:** Identify different workplace systems that protect and enhance personal and environmental health and safety.
	EHS1.d.3.e: Explain the origin of rules and laws to promote health and safety in school and work.	**EHS1.d.6.m:** Discuss employee rights and responsibilities and how to apply them in a workplace setting.	**EHS1.d.9.h:** Describe employee rights and responsibilities to maintain workplace health and safety, including compliance with rules and laws.

Wisconsin Common Career Technical Standards (WCCTS)
Content Area: GCA/Global and Cultural Awareness

Standard: GCA1: Students will propose solutions and initiatives related to global issues.

	Performance Indicators (By Grade Band)		
Learning Priority	**PK-5**	**6-8**	**9-12**
GCA1.a: Evaluate the effects of diversity encountered through interactions with people in or from other parts of the community, state, nation and world.	**GCA1.a.1.e:** List ways in which people are different from one another.	**GCA1.a.4.m:** Explain reasons people are different based on where in the world they live.	**GCA1.a.7.h:** Interpret how differences will affect people's interactions in their own communities and when traveling to other regions and countries.
	GCA1.a.2.e: List ways in which communities are different from one another.	**GCA1.a.5.m:** Describe reasons why communities develop differently.	**GCA1.a.8.h:** Explain the differences between communities located near one another as well as between nations.
	GCA1.a.3.e: Identify historical examples of large ethnic groups emigrating to a new country or community.	**GCA1.a.6.m:** Describe the effects of diverse groups moving into the same community.	**GCA1.a.9.h:** Predict the effects of a new group of people moving into an existing community.
GCA1.b: Explain how events in one part of the world affect nations, communities and individuals in other parts of the world.	**GCA1.b.1.e:** Summarize events taking place in various parts of the world.	**GCA1.b.4m:** Explain how an event in one part of the world caused an effect in another part of the world.	**GCA1.b.7.h:** Predict how a recent global event could affect community and self.
	GCA1.b.2.e: Discuss how personal differences can contribute to conflict between individuals.	**GCA1.b.5.m:** Describe how personal conflicts can lead to larger scale conflicts between groups of people.	**GCA1.b.8.h:** Describe events where conflicts escalated to become national or global conflicts.
	GCA1.b.3.e: Summarize challenges and crises taking place in various parts of the world.	**GCA1.b.6.m:** Explain how diversity can affect challenges and crises.	**GCA1.b.9.h:** Describe how diversity has impacted local, national or global challenges.
GCA1.c: Explain how diverse groups of people can work together to overcome local, national, regional and global crises.	**GCA1.c.1.e:** Identify ways in which diversity has led to innovation and opportunity.	**GCA1.c.4.m:** Discuss examples of diverse groups working together to make the world better.	**GCA1.c.7.h:** Explain how diverse groups could work collectively to resolve a local problem or challenge.
	GCA1.c.2.e: Give examples of nations collaborating.	**GCA1.c.5.m:** Discuss examples of diverse nations collaborating to make the world better.	**GCA1.c.8.h:** Analyze how diversity has contributed to successful resolution of global challenges.
	GCA1.c.3.e: Describe how diverse groups of people can work together.	**GCA1.c.6.m:** Explain how diverse nations can accomplish tasks a single nation could not.	**GCA1.c.9.h:** Predict how diverse nations may work together in addressing current global challenges and issues.

Standard: GCA2: Students will assess the benefits and challenges of working in diverse settings and on diverse teams.			
	Performance Indicators (By Grade Band)		
Learning Priority	**PK-5**	**6-8**	**9-12**
GCA2.a: Work effectively with diverse individuals in a variety of settings and contexts.	**GCA2.a.1.e:** Identify different ways people learn.	**GCA2.a.3.m:** Explain how people differ in the way they see the world and their experiences.	
	GCA2.a.2.e: List ways in which people are different from one another.	**GCA2.a.4.m:** Describe ways to collaborate in the presence of language, personality and cultural differences.	**GCA2.a.6.h:** Collaborate with others in the presence of language, personality and cultural differences.
		GCA2.a.5.m: Demonstrate mutual respect and open dialogue with individuals representing diverse cultures, beliefs and lifestyles.	**GCA2.a.7.h:** Collaborate with diverse individuals to accomplish tasks in personal, school, work and community contexts.
GCA2.b: Develop innovative solutions and initiatives as part of a diverse team.	**GCA2.b.1.e:** List differences between self and others on a team.	**GCA2.b.4.m:** Describe the value of traits, beliefs and experiences of others that differ from self.	**GCA2.b.7.h:** Develop ideas for using awareness of diversity to create new opportunities.
	GCA2.b.2.e: Identify benefits of working with someone with a diverse background or set of experiences.	**GCA2.b.5.m:** Demonstrate ability to learn from and work collaboratively with individuals representing diverse cultures, beliefs and lifestyles.	**GCA2.b.8.h:** Synthesize the experiences of a diverse group to develop innovative solutions to a given problem.
	GCA2.b.3.e: Identify how groups comprised of individuals from diverse backgrounds may approach situations differently than those of similar backgrounds.	**GCA2.b.6.m:** Contrast the capabilities of diverse teams with those of homogeneous teams.	

Wisconsin Common Career Technical Standards (WCCTS)

Content Area: IMT/Information, Media and Technology Skills

Standard: IMT1: Students will access, interpret and evaluate information from a variety of sources in order to inform and support premises, arguments, decisions, ideas and initiatives.

Learning Priority	Performance Indicators (By Grade Band)		
	PK-5	**6-8**	**9-12**
IMT1.a: Choose appropriate sources of data and information for a given purpose.	**IMT1.a.1.e:** Give examples of various sources of data and information.	**IMT1.a.3.m:** Compare and contrast the benefits and drawbacks of various information sources.	**IMT1.a.6.h:** Justify the selection of various information sources for a given purpose.
	IMT1.a.2.e: Discuss how individual and group biases can affect how information is portrayed.	**IMT1.a.4.m:** Explain how information can be portrayed differently by groups with varying purposes and perspectives.	**IMT1.a.7.h:** Explain the level of objectivity for a given source of information.
		IMT1.a.5.m: Use information sources to support an argument, idea or initiative.	**IMT1.a.8.h:** Model how raw data can be applied differently to support opposing arguments or premises.
IMT1.b: Determine the relevance, validity and timeliness of data and information.	**IMT1.b.1.e:** Describe the concepts of raw data and information.	**IMT1.b.4.m:** Distinguish the differences between raw data and information.	**IMT1.b.7.h:** Use raw data and information appropriately to support an argument, idea or initiative.
	IMT1.b.2.e: Discuss various electronic and non-electronic sources of data and information.	**IMT1.b.5.m:** Demonstrate ability to gather information from electronic and non-electronic sources.	**IMT1.b.8.h:** Compare and contrast validity of information from electronic and non-electronic sources.
	IMT1.b.3.e: Describe the concepts of relevance, validity and timeliness as they relate to data and information.	**IMT1.b.6.m:** Analyze various sources of data and information for relevance, validity and timeliness.	**IMT1.b.9.h:** Defend a position or decision using relevant, valid and timely data and information.
IMT1.c: Select relevant information necessary for making decisions and solving problems.	**IMT1.c.1.e:** Explain the concepts of relevance and reliability as they relate to data and information.	**IMT1.c.3.m:** Evaluate the relevance and reliability of various sources of information.	**IMT1.c.5.h:** Defend a solution or conclusion using appropriate data and information.
	IMT1.c.2.e: Identify various sources of information.	**IMT1.c.4.m:** Contrast the appropriateness of data and information from different sources for different purposes.	**IMT1.c.6.h:** Interpret and select appropriate information to develop a resolution for a given situation.

Learning Priority	Performance Indicators (By Grade Band)		
	PK-5	6-8	9-12
IMT1.d: Apply data and information to communicate ideas and create new opportunities.	**IMT1.d.1.e:** Identify different ways to communicate data and information.	**IMT1.d.3.m:** Demonstrate how information analysis can be used to identify entrepreneurial opportunities.	**IMT1.d.6.h:** Defend a proposal for a new product or service based on data and information analysis.
		IMT1.d.4.m: Incorporate information from multiple sources to communicate a new idea or support an argument.	**IMT1.d.7.h:** Synthesize data and information from multiple sources to identify new trends.
	IMT1.d.2.e: Collect and review data and information from multiple sources.	**IMT1.d.5.m:** Apply a system for tracking and accessing data and information from multiple sources.	**IMT1.d.8.h:** Manage and share stored data and information for a specific purpose.
Standard: IMT2: Students will apply information literacy skills to access and evaluate media to design and produce media products.			
IMT2.a: Analyze media messages to determine biases and objectivity.	**IMT2.a.1.e:** Identify various types of media.	**IMT2.a.4.m:** Explain the benefits and drawbacks of various forms of media.	**IMT2.a.7.h:** Defend the selection of various media formats for a given purpose.
	IMT2.a.2.e: Discuss how individual and group biases can affect how information is portrayed.	**IMT2.a.5.m:** Explain how media content is portrayed differently by groups with varying purposes and perspectives.	**IMT2.a.8.h:** Compare and contrast the level of objectivity for given media sources.
	IMT2.a.3.e: Discuss how individual and group biases can affect how information is received.	**IMT2.a.6.m:** Explain how information is manipulated in media depending on the intended audience.	**IMT2.a.9.h:** Portray information in different ways to account for different audiences.
IMT2.b: Prepare media products in order to communicate a specific message.	**IMT2.b.1.e:** Identify common principles of graphic design and advertising.	**IMT2.b.2.m:** Create media products using common principles of graphic design.	**IMT2.b.4.h:** Create media products to communicate a given message to different audiences.
		IMT2.b.3.m: Explain how various elements of media combine to deliver a desired message.	**IMT2.b.5.h:** Compare and contrast the elements of media products and how each helps deliver a desired message.

Standard: IMT3: Students will use available information and communication technology to improve productivity, solve problems and create opportunities.			
	Performance Indicators (By Grade Band)		
Learning Priority	**PK-5**	**6-8**	**9-12**
IMT3.a: Adopt new technological tools to increase personal and organizational productivity.	**IMT3.a.1.e:** Explore and use data management tools.	**IMT3.a.5.m:** Apply the use of data management tools in daily activities.	**IMT3.a.9.h:** Adapt and refine technology to continuously improve management of data in daily activity.
	IMT3.a.2.e: Explore and use communication tools.	**IMT3.a.6.m:** Demonstrate the ability to use electronic communication technology.	**IMT3.a.10.h:** Integrate technological tools to efficiently create and manage correspondence in daily activity.
	IMT3.a.3.e: Explore and use productivity tools.	**IMT3.a.7.m:** Apply the use of technological tools for managing calendars, schedules and work flow.	**IMT3.a.11.h:** Adapt and refine technology to continuously improve personal and organizational productivity.
	IMT3.a.4.e: Discuss how technology can serve as a positive and negative distraction.	**IMT3.a.8.m:** Explain how technology can detract from personal and organizational productivity.	**IMT3.a.12.h:** Manage use of technology to reduce negative impacts on productivity.
IMT3.b: Select and use communication and information technology to help solve problems and provide opportunities.	**IMT3.b.1.e:** Describe the nature of problems and how they can have multiple elements.	**IMT3.b.4.m:** Apply communication and information technology to the various elements of a problem.	**IMT3.b.7.h:** Use communication and information technology to effectively solve a given problem.
	IMT3.b.2.e: Discuss the impact of communication and information technology.	**IMT3.b.5.m:** Explain how communication and information technology have helped address national and global problems.	**IMT3.b.8.h:** Explain how communication and information technology could help address a current national or global problem.
	IMT3.b.3.e: Describe the nature of opportunities.	**IMT3.b.6.m:** Use communication and information technology to pursue a new opportunity.	**IMT3.b.9.h:** Assess the use of communication and information technology to create new opportunities.

Wisconsin Common Career Technical Standards (WCCTS)

Content Area: LE/Leadership

Standard: LE1: Students will apply leadership skills in real-world, family, community and business and industry applications.

	Performance Indicators (By Grade Band)		
Learning Priority	**PK-5**	**6-8**	**9-12**
LE1.a: Implement leadership skills to accomplish team goals and objectives.	**LE1.a.1.e:** Identify the various roles of leaders within organizations and give examples of positive leadership skills.	**LE1.a.5.m:** Exhibit skills such as empowerment, risk-talking, communication, focusing on results, decision-making, problem solving and investment in individuals when leading a group in solving a problem.	**LE1.a.10.h:** Exhibit skills such as compassion, service, listening, coaching, developing others, team development.
	LE1.a.2.e: Create a community of trust, giving space for different opinions and ideas to help students develop plans and prioritize tasks.	**LE1.a.6.m:** Consider issues related to self, team, community, diversity, environment and global awareness when leading others.	**LE1.a.11.h:** Demonstrate skills such as enthusiasm, creativity, conviction, mission, courage, concept, focus, principle-centered living and change when interacting with others in general.
	LE1.a.3.e: Describe effective leadership and teamwork skills and identify ways to participate in civic activities in school, family or the community.	**LE1.a.7.m:** Participate in civic and community leadership and teamwork opportunities to enhance skills to develop leadership potential.	**LE1.a.12.h:** Exhibit skills such as innovation, intuition, adaptation, life-long learning and coach-ability to develop leadership potential over time.
	LE1.a.4.e: Describe leadership in relation to trust, positive attitude, integrity, willingness and commitment to accept key responsibilities in a group project.	**LE1.a.8.m:** Explain leadership in relation to trust, positive attitude, integrity, willingness and commitment to accept key responsibilities in a group project.	**LE1.a.13.h:** Create a sense of trust, positive attitude, integrity, willingness and commitment in order to accept key responsibilities in a group project.
		LE1.a.9.m: Build interest, guide and influence decisions organize efforts and involve members of a group.	**LE1.a.14.h:** Apply parliamentary procedure to an appropriate situation.
LE1.b: Employ teamwork skills to achieve collective goals and use team members/ talents effectively.	**LE1.b.1.e:** Work with a group to meet objectives while including all members.	**LE1.b.4.m:** Involve of all members during group discussions.	**LE1.b.7.h:** Capitalize on team members' individual talents and skills in a project.
			LE1.b.8.h: Apply conflict management skills to help facilitate solutions.

Learning Priority	Performance Indicators (By Grade Band)		
	PK-5	**6-8**	**9-12**
	LE1.b.2.e: Demonstrate commitment and a positive attitude toward team goals.	**LE1.b.5.m:** Demonstrate teamwork skills through working cooperatively with group members, group leader and others, both in the school and in the community, to achieve group objective.	**LE1.b.9.h:** Evaluate and apply teamwork processes that provide team building, consensus, continuous improvement, respect for the opinions of others, cooperation, adaptability and conflict resolution.
	LE1.b.3.e: Outline plans to improve teamwork.	**LE1.b.6.m:** Demonstrate a positive attitude and a commitment toward achieving team goals.	**LE1.b.10.h:** Demonstrate the ability to negotiate and adapt effectively to changes in projects and work activities to meet timelines.
LE1.c: Identify the role of community service and service learning in family, community and business and industry.	**LE1.c.1.e:** Identify the roles and responsibilities of citizenship.	**LE1.c.3.m:** Analyze the roles and responsibilities of citizenship.	**LE1.c.6.h:** Assess the roles and responsibilities of citizenship and formulate an activity or event to showcase community service.
	LE1.c.2.e: Describe involvement in a civic activity.	**LE1.c.4.m:** Select and develop a community service activity/event.	**LE1.c.7.h:** Plan a community service event, participate in the event and evaluate its impact.
		LE1.c.5.m: Show organizational skills necessary to be a successful leader and citizen and practice those skills in real-life situations.	**LE1.c.8.h:** Plan and participate in activities that rate skills necessary to be a successful leader and citizen.
			LE1.c.9.h: Advocate for issues on the local, state and international level.
			LE1.c.10.h: Identify components and structure of community-based organizations.
			LE1.c.11.h: Participate in the development of a program of work/strategic plan and work to implement the organization's goals.

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Section IV

Wisconsin Standards for Business and Information Technology

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Wisconsin Standards for Business and Information Technology

Curriculum opportunities related to Business and Information Technology support career growth within the 16 areas identified by the U.S. Department of Education's Career Clusters and transcend every career setting. Regardless of a student's future endeavors as an employee and/or as an entrepreneur, the **Wisconsin Standards for Business and Information Technology** address increased academic, technical and employability knowledge and skills that are critical for students to be college and career ready. Within business related learning priorities across multiple content area standards, the following career clusters are specifically emphasized: Arts, AV and Communications; Business Management and Administration; Finance; Marketing; Hospitality and Tourism; and Information Technology. The effective delivery of Career and Technical Education through Business and Information Technology content area standards can be best observed through quality programs that provide local communities access to the following educational experiences:

- Work-Based Learning Programs such as State Certified Skills Cooperative Education Certificate or YA;
- Career and Technical Student Organization such as Future Business Leaders of America; and
- classroom delivery of learning priorities that document the integration of academic and technical skills.

Courses in Business and Information Technology

Elementary, middle level and high school programs that are taught by licensed Business and Information Technology teachers provide the ability for students to build their academic capacity through rigorous curriculum offerings. Students that are introduced to basic knowledge and skills at early grade levels can effectively engage in exploratory middle level course work in preparation for a careerfocused high school academic plan that leads to college and career readiness through postsecondary options.

Local districts that desire to develop programs of study across career clusters must work to ensure a balanced approach to the multiple aspects of coursework available within Business and Information Technology. The following areas are identified within the National Center for Educational Statistics (NCES) course codes:

- Computer and Information Sciences--Subject Area 10;
- Communication and Audio/Visual Technology--Subject Area 11; and,
- Business and Marketing--Subject Area 12.

The **Wisconsin Standards for Business and Information Technology** are broken into two areas: Business Standards and Information Technology Standards. Each of these areas is interdependent on the other; however, for ease of use by classroom teachers, the standards have been set up in this manner. These sections are further delineated as follows:

Business Standards		Information Technology Standards
Accounting and Finance	Entrepreneurship	Digital and Graphic Communication
Business Calculations	Global Business	Information Technology Foundations
Business Communications	Management	Networking
Business Law and Ethics	Marketing	Programming
Economics	Personal Finance	

The following chart outlines a curriculum alignment of the content area standards into a variety of course types that may be developed within local school districts.

Note: The chart identifies the primary standard source (P) for a specific type of course. Additionally, the secondary standard sources (s) may also be used to complement the primary standard source within a type of course. The types of courses listed are not inclusive of all Business and Information Technology courses. School districts may have a variety of names for these types of courses.

P=Primary source/s=secondary source

Type of Course	Wisconsin Common Career Technical Standards						Business Standards										Information Technology Standards			
	Global Awareness	Life & Career Skills, Career Development, & Employability Skills	Information, Media & Technology	Sustainability, Environmental, & Safety	Leadership	Communication, Creativity, Collaboration, & Critical Thinking	Accounting & Finance	Business Calculations	Business Communication	Business Law & Ethics	Economics	Entrepreneurship	Global Business	Management	Marketing	Personal Finance	IT Foundations	Digital & Graphic Communications	Networking	Programming
Accounting	s	s	s		s	s	**P**	s		s	s		s	s	s	s	s			
Business Communication	s	s	s		s	s			**P**	s							s			
Business Law	s	s	s	s	s	s	s		s	**P**	s						s			
Business Math	s	s	s		s	s	s	**P**		s	s					**P**	s			
Computer Applications (elem, middle, high school levels)		s	s		s	s			**P**	s							**P**	s	s	
Computer Literacy (elem, middle, high school levels)		s	s		s	s			s	s							**P**	**P**	**P**	s
Desktop Publishing		s	s		s	s			**P**	s					s		**P**	**P**		
Digital/Software Devel.		s	s		s	s			s	s					s		s			**P**
Economics	s	s	s	s	s	s	s	s		s	**P**					s	s			
Employability Skills		s	s	s	s	s			**P**	s		s		s		s	s			
Entrepreneurship	s	s	s	s	s	s	s	s	s	**P**	s	**P**	s	**P**	**P**		s			
Global Business	s	s	s	s	s	s	s	s	s	s	**P**	s	**P**	s	s		s			
Graphic Design		s	s		s	s			**P**	s						s	**P**	**P**		
Introduction to Business (middle, high school levels)	s	s	s	s	s	s	s	s	s	s	**P**	**P**	s	**P**	**P**		**P**			
Keyboarding (elem, middle, high school levels)		s	s		s	s			**P**	s							**P**	s		
Leadership/Coop	s	s	s	s	s	s	s	s		s	**P**				s		s			
Management	s	s	s	s	s	s	s	s	s	**P**	s	**P**	s	**P**	**P**		s			
Marketing	s	s	s	s	s	s	s		s	s	s	**P**	s	**P**	**P**		s	s		
Multimedia (elem, middle, high school levels)		s	s		s	s			s	s					s		**P**	**P**		
Networking/IT Essentials		s	s		s	s			s	s							**P**	s	**P**	s
Personal Finance	s	s	s	s	s	s	s	**P**	s	s	s	**P**	s		s	**P**	s			
Publications		s	s		s	s			**P**	s					s		**P**	**P**		
Web Page Design		s	s		s	s			**P**	s					s		**P**	**P**		s

Program Structure

The progression of instruction related to the **Wisconsin Standards for Business and Information Technology** should be developed throughout the PK-12 system as reflected by the learning priorities that are identified within the three grade bands featured in this document. The leadership of a Business and Information Technology licensed teacher at each of the grade levels can be critical to the fluidity of standards development across the PK-12 grade bands, provide flexibility of delivery options, support best practices that are researched based within content instruction, develop additional resources with other academic classroom teachers in related areas of instruction and develop a collaborative relationship with elementary classroom teachers who are teaching fundamental skills to only their own students.

A variety of program structures may be used by local districts to deliver **Wisconsin Standards for Business and Information Technology** to students including, but not limited to the following:

Grades PK-5	Grades 6-8	Grades 9-12

1. Computer Applications, Keyboarding and Economic Foundations delivered through dedicated courses.
 	
2. Foundational skills in the above named areas are incorporated into elementary level course work in multiple disciplines.
	1. A dedicated career exploration program that integrates course work that introduces and/or expands upon Computer Applications, Keyboarding, Basic Business and A/V Technology & Communications.
	
	2. Exploratory units in foundational elective programs that support career development and skills needed across content areas.
	
	3. Elective course options for students in Career and Technical Education subjects, including Business and Information Technology.
		1. An integrated sequence of courses within Business and Information Technology that develops course work related to Programs of Study in multiple career pathways associated with Career Clusters.
		
		2. A balanced Business and Information Technology Program that supports student career development in:
		  a. Accounting and Financial Foundations;
		  b. Business, Management and Marketing;
		  c. Communication and Audio/Visual Technology; and
		  d. Computer and Information Sciences.
		
		3. A Career Cluster Academy program that provides dedicated curriculum and resources that feature capstone coursework, postsecondary credit attainment and/or industry connections through certifications.

Delivery of Business and Information Technology Courses

Business and Information Technology courses should be delivered as a coherent sequence within a pathway. Pathway knowledge builds on foundation knowledge and skills. These courses should include differentiated instruction to meet the needs of all learners.

These are multiple ways that students access Business and Information Technology courses within the K-12 system:
- Face-to-Face Classroom Instruction
- Digital Learning (models may include blended, hybrid and online distance learning at multiple grade levels)

- ▪ Transcripted Credit (partnering with local Technical College or University should be strongly considered)
- ▪ Youth Options
- ▪ Work-Based Learning (State Certified Skill Standards, Youth Apprenticeship, etc.)

In Wisconsin, each district determines the best setting for courses within the school. When developing a balanced Business and Information Technology program, consideration should be given to how a local program can support current local, state and national initiatives.   Standards associated with a quality program in Business and Information Technology should be used for program self-evaluation, improvement and goal-setting. Areas of particular interest include quality educators, curriculum instruction and student assessment, parent and community involvement and program planning.

Standard Structure
The **Wisconsin Standards for Career and Technical Education**, including the **Wisconsin Common Career Technical Standards**, each follow a similar structure.

Standard Coding
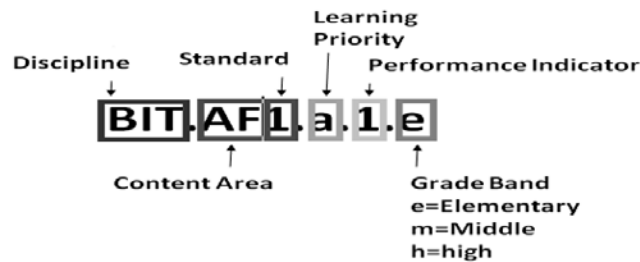
Performance Indicator by Grade Band:
Measurable degree to which a standard has been developed and/or met

Standard Formatting

Discipline
Content Area
Standard: Broad statement that tells what students are expected to know or be able to do

Learning Priority: Breaks down the broad statement into manageable learning pieces

Business & Information Technology
Content Area: BCA/Business Calculations
Standard: BIT.BCA1: Analyze and use appropriate operations to solve business and personal mathematical problems.

Learning Priority	Performance Indicators (By Grade Band)		
	K-5	6-8	9-12
BCA1.a: Perform financial calculations.	BCA1.a.1.e: Define terms related to financial statements.	BCA1.a.3.m: Calculate checkbook balance and bank reconciliation.	BCA1.a.5.h: Calculate gross or net sales, gross profit or loss, cost of inventory, operating expenses, net profit or loss, total assets, liabilities, owner's equity, and cash flow.
	BCA1.a.2.e: Identify various personal financial statements (i.e., budgets, etc.).	BCA1.a.4.m: Estimate mark down percentages and costs.	BCA1.a.6.h: Calculate and analyze sales computations (net sales, markup percentages, markdown percentages, sale prices, discounts).

Grade Bands
Grade bands of PK-5, 6-8 and 9-12 align to typical elementary, middle and high school levels.
- Grade band PK-5 performance indicators represent knowledge and skills that should be integrated throughout the elementary curriculum. Career and technical education teachers in districts are an excellent resource to assist in the development of curriculum and activities.
- Career and technical education should be part of the core curriculum for all middle school students. Awareness, exploration and building foundational skills for career pathways occur in middle school. The performance indicators in grade band 6-8 showcase these foundational skills with an emphasis on career development.
- Career and technical education at the high school level must go beyond awareness and exploration. Students should be developing specific knowledge and skills that are transferrable to other coursework, a job-site or postsecondary options. Performance indicators for grades 9-12 align specifically to industry standards and expectations for career clusters and pathways.

Wisconsin Standards for Business and Information Technology (B&IT)

Business / Content Area: AF/Accounting and Finance

Standard: BIT.AF1: Students will apply generally accepted accounting principles while performing the functions of the accounting cycle.

Learning Priority	Performance Indicators (By Grade Band)		
	PK-5	**6-8**	**9-12**
AF1.a: Identify current structures and regulations affecting accounting principles and their effects on businesses.			**AF1.a.1.h:** Describe the current and historical regulatory environment of the accounting profession.
			AF1.a.2.h: Describe how current events impact the accounting profession.
			AF1.a.3.h: Describe and explain the conceptual framework of accounting and generally accepted accounting principles (GAAP) and assumptions.
			AF1.a.4.h: Distinguish between the accrual basis of accounting and the cash basis of accounting and discuss the impact each has on financial statements.
			AF1.a.5.h: Apply current regulatory practices to the accounting cycle.
AF1.b: Analyze the effects of changes in assets.	**AF1.b.1.e:** Recognize items a business owns.	**AF1.b.2.m:** Define assets.	**AF1.b.4.h:** Journalize and post accounts receivable transactions.
		AF1.b.3.m: List and identify various assets.	**AF1.b.5.h:** Determine cost of inventory (periodic and perpetual).
			AF1.b.6.h: Identify cost of property and all other assets.
			AF1.b.7.h: Calculate and record depreciation and depletion.

	Performance Indicators (By Grade Band)		
Learning Priority	**PK-5**	**6-8**	**9-12**
AF1.c: Analyze the effects of changes in liabilities.	**AF1.c.1.e:** Recognize items a business owes.	**AF1.c.2.m:** List and identify various liabilities.	**AF1.c.4.h:** Journalize and post accounts payable transactions.
		AF1.c.3.m: Define liabilities.	**AF1.c.5.h:** Differentiate the difference between current liabilities, long-term liabilities and their impact on financial statements.
			AF1.c.6.h: Determine the initial valuation on long-term debt instruments and their impact on financial statements.
			AF1.c.7.h: Calculate the cost of borrowed funds.
AF1.d: Analyze the effects of changes in owner's equity.	**AF1.d.1.e:** Define revenue.	**Af1.d.3.m:** Explain how revenue is earned.	**AF1.d.5.h:** Journalize and post transactions related to equity accounts.
	AF1.d.2.e: Define expense.	**AF1.d.4.m:** Explain how expenses are incurred.	**AF1.d.6.h:** Demonstrate appropriate accounting techniques used to account for investments and withdrawals by owners.
			AF1.d.7.h: Interpret financial data to determine the revenue of a business.
			AF1.d.8.h: Distinguish between capital expenditures and revenue expenditures.
			AF1.d.9.h: Discuss the concept of dividends and how they affect a business.

Standard: BIT.AF2: Students will develop and analyze working knowledge of financial reports.			
	Performance Indicators (By Grade Band)		
Learning Priority	**PK-5**	**6-8**	**9-12**
AF2.a: Prepare and analyze financial reports for different forms of business ownership.		**AF2.a.1.m:** Prepare a budget for a business.	**AF2.a.2.h:** Discuss the forms of ownership and the equity accounts used for each form.
			AF2.a.3.h: Use real-life examples to demonstrate the various types of ownership.
			AF2.a.4.h: Prepare financial statements for sole proprietorship, partnership and corporate ownership models.
			Af2.a.5.h: Compare and contrast debt and equity financing and explain the impact on the financial statements.
			AF2.a.6.h: Prepare financial statements for service and merchandising business.
			AF2.a.7.h: Create financial reports using spreadsheet and accounting software.
			AF2.a.8.h: Prepare a trial balance to check the accuracy of a ledger.
			AF2.a.9.h: Forecast revenue and costs.
			AF2.a.10.h: Track and make adjustments to budget performance.
			AF2.a.11.h: Prepare and analyze cash flow statement.

	Performance Indicators (By Grade Band)		
Learning Priority	**PK-5**	**6-8**	**9-12**
AF2.b: Assess the financial condition and operating results of a company while interpreting financial statements.			**AF2.b.1.h:** Describe the information provided in each statement and how they articulate with each other.
			AF2.b.2.h: Recognize the primary areas of analysis (trend analysis, profitability, capital structure) and explain the information that can be obtained from each type of analysis.
			AF2.b.3.h: Perform horizontal and vertical analysis of the income statement and balance sheet.
			AF2.b.4.h: Identify, explain and describe the ethical implications of common methods of manipulating financial statements and ratios.
			AF2.b.5.h: Analyze financial data to make short-term and long-term decisions.
Standard: BIT.AF3: Students will apply payroll and tax theories and procedures.			
AF3.a: Prepare payroll.			**AF3.a.1.h:** Write checks, make deposits and complete check stubs for payroll.
			AF3.a.2.h: Use manual and computerized systems to prepare payroll for a business.
			AF3.a.3.h: Calculate earnings: hourly rate, salary basis and commission basis.
			AF3.a.4.h: Calculate employer's payroll taxes for social security, Medicare, federal unemployment and state unemployment.
			AF3.a.5.h: Reconcile a bank statement.

	Performance Indicators (By Grade Band)		
Learning Priority	**PK-5**	**Learning Priority**	**PK-5**
AF3.b: Analyze how employer taxes impact business operations.			**AF3.b.1.h:** Prepare employer-related tax forms.
			AF3.b.2.h: Journalize and post tax entries using a variety of journals and ledgers.
			AF3.b.3.h: Describe the composition of taxable income and calculate tax.
			AF3.b.4.h: Identify and apply strategies for minimizing taxable business income.

When developing course content related to Accounting and/or Finance refer to additional standards, learning priorities and performance indicators associated with Business Law and Ethics, Global Business, Business Calculations, Economics, Management, Personal Finance and Marketing.

Wisconsin Standards for Business and Information Technology (B&IT)

Business / Content Area: BCA/Business Calculations

Standard: BIT.BCA1: Students will analyze and use appropriate operations to solve business and personal mathematical problems.

Learning Priority	Performance Indicators (By Grade Band)		
	PK-5	**6-8**	**9-12**
BCA1.a: Perform financial calculations.	**BCA1.a.1.e:** Define terms related to financial statements.	**BCA1.a.3.m:** Calculate checkbook balance and bank reconciliation.	**BCA1.a.5.h:** Calculate gross or net sales, gross profit or loss, cost of inventory, operating expenses, net profit or loss, total assets, liabilities, owner's equity and cash flow.
	BCA1.a.2.e: Identify various personal financial statements (i.e., budgets, etc.).	**BCA1.a.4.m:** Estimate mark down percentages and costs.	**BCA1.a.6.h:** Calculate and analyze sales computations (net sales, markup percentages, markdown percentages, sale prices, discounts).
BCA1.b: Analyze personal financial documents.	**BCA1.b.1.e:** Define finances.	**BCA1.b.6.m:** Recognize financial document terms and proper calculation of those terms.	**BCA1.b.11.h:** Determine and evaluate loan payments, finance charges, simple and compound interest, reconcile bank statement, installment payments.
	BCA1.b.2.e: Perform simple computations correctly.	**BCA1.b.7.m:** Categorize deductions and earnings to predict net pay.	**BCA1.b.12.h:** Compute gross and net earnings, payroll deductions, taxes, net pay.
	BCA1.b.3.e: Explain the purpose of financial statements.	**BCA1.b.8.m:** Categorize income and expense items for proper calculation.	**BCA1.b.13.h:** Prepare a budget with income and expenses.
	BCA1.b.4.e: Identify when to use personal financial statements.	**BCA1.b.9.m:** Estimate profit and loss in a budget.	**BCA1.b.14.h:** Compare budgeted costs to actual costs.
	BCA1.b.5.e: Identify items to include in a budget.	**BCA1.b.10.m:** Recognize relationships among numbers.	**BCA1.b.15.h:** Predict reasonable estimations.
BCA1.c: Select and use standard math principles.	**BCA1.c.1.e:** Determine the correct mathematical processes to use for various problem situations and use formulas when appropriate.	**BCA1.c.6.m:** Solve problems that involve percents, ratios, averages and proportions and use appropriate conversions.	**BCA1.c.9.h:** Generate fractions to decimals and percents to ratios and use to formulate estimations, computations and applications.
	BCA1.c.2.e: Select and use appropriate tools when solving problems.	**BCA1.c.7.m:** Convert decimals, fractions, percents, etc. with the use of technology.	**BCA1.c.10.h:** Compute decimals, fractions, percents, ratios, etc. both with and without the use of technology.

	Performance Indicators (By Grade Band)		
Learning Priority	**PK-5**	**6-8**	**9-12**
	BCA1.c.3.e: Solve problems that involve whole numbers, decimals and fractions and use appropriate conversions.	**BCA1.c.8.m:** Use data patterns to solve problems.	**BCA1.c.11.h:** Use probability concepts to solve problems involving uncertainty.
	BCA1.c.4.e: Add, subtract, multiply and divide whole numbers, decimals and fractions without the use of technology.		
	BCA1.c.5.e: Recognize, describe and predict patterns of data.		
BCA1.d: Use algebraic procedures.	**BCA1.d.1.e:** Recognize changes in patterns.	**BCA1.d.4.m:** Differentiate patterns of data.	**BCA1.d.7.h:** Analyze and predict patterns of data.
	BCA1.d.2.e: Use mathematical operations for simple calculations.	**BCA1.d.5.m:** Apply the correct order of operations.	**BCA1.d.8.h:** Construct algebraic equations using the correct order of operations.
	BCA1.d.3.e: Identify algebraic symbols in mathematical calculations.	**BCA1.d.6.m:** Use algebraic symbols to solve problems.	**BCA1.d.9.h:** Generate equations using variable information.
Standard: BIT.BCA2: Students will use international standards of measurement when solving business problems.			
BCA2.a: Access and collect currency rate information.	**BCA2.a.1.e:** Recognize US currency.	**BCA2.a.4.m:** Recognize currency terms from the global economy.	**BCA2.a.7.h:** Calculate exchange rate from U.S. dollars to international currency and back.
	BCA2.a.2.e: Properly count US currency and coin.	**BCA2.a.5.m:** Identify online resources to convert currencies.	**BCA2.a.8.h:** Select and use online resources to convert currencies.
	BCA2.a.3.e: Recognize that both domestic and international currency exists.	**BCA2.a.6.m:** Determine a positive or negative exchange rate when compared to US currency.	**BCA2.a.9.h:** Compare exchange rates for purchasing power evaluation.
BCA2.b: Compare and contrast number systems.	**BCA2.b.1.e:** Identify U.S. customary units of measure.	**BCA2.b.4.m:** Compute U.S. customary units of measure.	**BCA2.b.7.h:** Explain U.S. customary units of measure.
	BCA2.b.2.e: Identify metric units of measure.	**BCA2.b.5.m:** Compute metric units of measure.	**BCA2.b.8.h:** Explain metric units of measure.
	BCA2.b.3.e: Measure U.S. customary and metric units accurately.	**BCA2.b.6.m:** Convert smaller measurement units to larger units and back.	**BCA2.b.9.h:** Convert U.S. customary units of measurement to metric and back.

Standard: BIT.BCA3: Students will analyze and explain statistical data in charts, tables and graphs.			
	Performance Indicators (By Grade Band)		
Learning Priority	**PK-5**	**6-8**	**9-12**
BCA3.a: Create and analyze spreadsheets.	**BCA3.a.1.e:** Use a spreadsheet program to calculate simple data.	**BCA3.a.3.m:** Calculate data using formulas and functions.	**BCA3.a.5.h:** Construct formulas and equations.
	BCA3.a.2.e: Compute math functions using spreadsheets.	**BCA3.a.4.m:** Calculate common mathematical functions (mean, median, mode, average, sum, etc.).	**BCA3.a.6.h:** Compare and contrast spreadsheet data for statistical analysis.
BCA3.b: Illustrate and evaluate graphical data.	**BCA3.b.1.e:** Identify major components of charts and graphs.	**BCA3.b.3.m:** Prepare and produce charts and graphs.	**BCA3.b.5.h:** Examine and interpret tables, charts and graphs to make comparisons, predictions and inferences.
	BCA3.b.2.e: Recognize current and emerging technologies to construct and display data graphically.	**BCA3.b.4.m:** Apply current and emerging technologies to construct and display data graphically/digitally.	**BCA3.b 6.h:** Use current and emerging technologies to construct and interpret data graphically.
BCA3.c: Calculate probability using the appropriate probability distribution.		**BCA3.c.1.m:** Experiment with situations to determine probability.	**BCA3.c.3.h:** Use technology to calculate probability.
		BCA3.c.2.m: Analyze probability results to make an informed decision.	**BCA3.c.4.h:** Assess situations and predict outcomes based on probability.

Wisconsin Standards for Business and Information Technology (B&IT)

Business / Content Area: BC/Business Communications

Standard: BIT.BC1: Students will communicate in a clear, concise, accurate and courteous manner on personal and professional levels.

Learning Priority	Performance Indicators (By Grade Band)		
	PK-5	**6-8**	**9-12**
BC1.a: Practice efficient and effective spoken communication skills.	**BC1.a.1.e:** Express needs and wants verbally.	**BC1.a.5.m:** Organize thoughts to reflect logical thinking.	**BC1.a.10.h:** Lead logical and complex discussions.
	BC1.a.2.e: Participate in group discussions and role-playing.	**BC1.a.6.m:** Model effective communication group discussions and role-playing.	**BC1.a.11.h:** Participate in an effective group discussions/role-playing defending both sides of an issue.
	BC1.a.3.e: Introduce self to other individuals.	**BC1.a.7.m:** Make introductions in a variety of situations.	**BC1.a.12.h:** Introduce others in a variety of situations.
	BC1.a.4.e: Ask appropriate questions.	**BC1.a.8.m:** Determine when more information is needed and ask appropriate questions.	**BC1.a.13.h:** Ask questions with confidence to elicit more information.
		BC1.a.9.m: Demonstrate basic interview skills in a mock interview.	**BC1.a.14.h:** Demonstrate appropriate interviewing techniques (attire, questions, etc.) in mock employment interviews.
BC1.b: Select language, visuals and method of delivery appropriate to the situation.	**BC1.b.1.e:** Compose and speak simple responses to questions.	**BC1.b.4.m:** Respond to questions directly and appropriately.	**BC1.b.7.h:** Compose and speak complex responses to questions for both sides of a question or issue.
	BC1.b.2.e: Identify word usage in a sentence.	**BC1.b.5.m:** Demonstrate awareness to language bias.	**BC1.b.8.h:** Use standard English when speaking; avoiding the use of expletive, slang, jargon and technical terms.
	BC1.b.3.e: Demonstrate correct spelling, grammar, word usage and legible writing.	**BC1.b.6.m:** Demonstrate correct spelling, grammar, word usage and legible writing.	**BC1.b.9.h:** Use proper techniques when delivering a formal presentation including analyzing the use of fillers.
BC1.c: Plan and present speeches/presentations individually and as a member of a group.	**BC1.c.1.e:** Give a short speech.	**BC1.c.6.m:** Give a speech in front of a small group.	**BC1.c.11.h:** Give a presentation in professional attire to a large group of people using visual aids to enhance the presentation.
	BC1.c.2.e: Write a short story as a member of a group and perform it.	**BC1.c.7.m:** Use digital collaboration tools to plan with group members.	**BC1.c.12.h:** Complete a group project using digital collaboration and present findings.

Learning Priority	Performance Indicators (By Grade Band)		
	PK-5	6-8	9-12
	BC1.c.3.e: Attend a digital conference.	**BC1.c.8.m:** Actively participate in a digital conference presentation.	**BC1.c.13.h:** Create and deliver a digital conference and/or presentation.
	BC1.c.4.e: Be an active member at a group meeting.	**BC1.c.9.m:** Attend a school board or community-based meeting.	**BC1.c.14.h:** Preside at meetings and demonstrate basic parliamentary procedure.
	BC1.c.5.e: Describe what an impromptu speech is.	**BC1.c.10.m:** Present a brief informative impromptu speech.	**BC1.c.15.h:** Deliver a persuasive impromptu presentation.
Standard: BIT.BC2: Students will apply basic social communication in both personal and professional settings.			
BC2.a: Formulate a positive self-image by exhibiting professional and ethical behavior in the work environment.	**BC2.a.1.e:** Follow classroom rules.	**BC2.a.3.m:** Describe strategies for communicating with co-workers.	**BC2.a.6.h:** Present and role-play strategies for communicating with managers, co-workers and customers/clients.
	BC2.a.2.e: Describe responsible digital citizenship.	**BC2.a.4.m:** Develop a responsible social media image.	**BC2.a.7.h:** Use negotiation strategies to resolve a conflict.
		BC2.a.5.m: Participate in an interview.	**BC2.a.8.h:** Participate in and evaluate practice interviews.
BC2.b: Examine business customs and etiquette of various cultures.	**BC2.b.1.e:** Recognize nonverbal messages.	**BC2.b.4.m:** Give examples of nonverbal messages that have different meanings.	**BC2.b.7.h:** Research and participate in a presentation on the customs and cultures of a different country.
	BC2.b.2.e: Demonstrate appropriate manners.	**BC2.b.5.m:** Demonstrate appropriate manners and etiquette when interacting with diverse people.	**BC2.b.8.h:** Compare and contrast cultures of diverse corporate organizations.
	BC2.b.3.e: List reasons why customers are happy or unhappy with a store/product.	**BC2.b.6.m:** Analyze situations in which communication can positively/negatively impact customer service.	**BC2.b.9.h:** Participate in group discussions/role play customer service problem resolution.
BC2.c: Use proper etiquette to communicate with others.	**BC2.c.1.e:** Create and send an email.	**BC2.c.2.m:** Demonstrate proper etiquette while communicating digitally.	**BC2.c.3.h:** Compare and contrast methods of presenting information and choose the best format for a given situation.

Standard: BIT.BC3: Students will use current technology to enhance the effectiveness of communication.			
	Performance Indicators (By Grade Band)		
Learning Priority	**PK-5**	**6-8**	**9-12**
BC3.a: Use digital messaging technologies to send and receive basic messages.	**BC3.a.1.e:** Submit work electronically.	**BC3.a.3.m:** Submit work via email, digital drop box, etc.	**BC3.a.5.h:** Compose and evaluate formal and informal digital correspondence.
	BC3.a.2.e: Use basic keyboarding and computer functions.	**BC3.a.4.m:** Create professional email to request information.	**BC3.a.6.h:** Evaluate messages and select the appropriate technology for transmitting them.
BC3.b: Demonstrate appropriate etiquette when using a two-way communication device.	**BC3.b.1.e:** Recognize the multiple ways that mobile technologies are used in society (business and personal).	**BC3.b.5.m:** Use mobile technology by sending digital pictures, videos and text messages, etc.	**BC3.b.9.h:** Use advanced mobile technology by viewing and/or participating in digital conferences.
	BC3.b.2.e: Role-play answering a two-way communication device in the classroom.	**BC3.b.6.m:** Use a two-way communication device to receive and place appropriate personal calls.	**BC3.b.10.h:** Use a two-way communication device to receive and place appropriate business calls.
	BC3.b.3.e: Project a positive first impression over a two-way communication device.	**BC3.b.7.m:** Identify nature of call and meet caller's needs.	**BC3.b.11.h:** Communicate effectively with caller.
	BC3.b.4.e: Recognize proper etiquette when using a two-way communication device.	**BC3.b.8.m:** Practice proper etiquette when using a two-way communication device.	**BC3.b.12.h:** Demonstrate the consistent use of proper etiquette when using a two-way communication device.
BC3.c: Comprehend the rules of safe and appropriate conduct while communicating digitally.	**BC3.c.1.e:** Discuss rules of safe and appropriate conduct while communicating digitally.	**BC3.c.2.m:** Discuss dangers of Internet predators.	**BC3.c.3.h:** Prevent, problem solve and respond to difficult situations digitally.
			BC3.c.4.h: Give presentation on appropriate digital conduct.
BC3.d: Use asynchronous (different time, different place) and synchronous (same time, different place) collaboration tools to facilitate group work.	**BC3.d.1.e:** Explore a digital resource.	**BC3.d.3.m:** Compose, deliver and publish documents digitally.	**BC3.d.6.h:** Create and publish a web-based video.
	BC3.d.2.e: Participate in a virtual field trip to complete a group project.	**BC3.d.4.m:** Collaborate with students via the Internet to complete a group project.	**BC3.d.7.h:** Collaborate with students and business people via the Internet to acquire information.
		BC3.d.5.m: Participate in a digital conference.	**BC3.d.8.h:** Discuss the benefits of digital conferencing as an alternative to face-to-face collaboration.
BC3.e: Demonstrate the ability to use and operate electronic message technologies, voice input and voice recognition tools.	**BC3.e.1.e:** Use a digital resource to input data via voice.	**BC3.e.2.m:** Create a digital voice resource for a class project.	**BC3.e.3.h:** Use voice input and recognition tools to attend a meeting or have a group discussion.

Standard: BIT.BC4: Students will locate, assess and use information from a variety of print and digital sources.			
	Performance Indicators (By Grade Band)		
Learning Priority	**PK-5**	**6-8**	**9-12**
BC4.a: Demonstrate efficient means of using technology to locate print and digital information to aid in research, analysis, decision making and verifying information.	**BC4.a.1.e:** Perform digital searches using multiple sources to find accurate results to access printed text and other electronic resources.	**BC4.a.4.m:** Write a brief research paper using print and digital resources.	**BC4.a.7.h:** Use digital libraries and other resources to find information to write a research paper with correctly cited sources and a formatted reference page.
	BC4.a.2.e: Use the LMC to find topic specific printed materials.	**BC4.a.5.m:** Use digital resources to find a news article related to a given topic.	**BC4.a.8.h:** Participate in a digital discussion board related to a given topic.
	BC4.a.3.e: Use various search engines to locate a topic specific graphic.	**BC4.a.6.m:** Evaluate the effectiveness of a search and recommend changes to increase its efficiency.	**BC4.a.9.h:** Investigate possible motives of authors of information to determine authenticity.
BC4.b: Determine authority and validity of sources/resources and demonstrate proper citation of sources.	**BC4.b.1.e:** Describe why it is not right to copy other people's work.	**BC4.b.4.m:** Explain ownership and use of digitally generated information.	**BC4.b.7.h:** Document properly both print and digital sources to avoid plagiarism.
	BC4.b.2.e: Use digital resource tools to cite sources correctly.	**BC4.b.5.m:** Evaluate digital sources to determine authorship, validity and relevance.	**BC4.b.8.h:** Plan, research and write business-specific reports that incorporate graphic aids.
	BC4.b.3.e: Recognize why sources of text and images need to be cited.	**BC4.b.6.m:** Present researched information in a meaningful format citing sources of text and images.	**BC4.b.9.h:** Cite sources of digital resources in proper format.
Standard: BIT.BC5: Students will plan and write documents that are appropriate for the situation, purpose and audience.			
BC5.a: Apply correct spelling, grammar, word and number usage and punctuation to a given situation.	**BC5.a.1.e:** Identify the parts of speech.	**BC5.a.5.m:** Recognize the different kinds of sentences.	**BC5.a.9.h:** Recognize how the parts of speech function in sentences.
	BC5.a.2.e: Expand vocabulary as needed when reading at grade level.	**BC5.a.6.m:** Expand vocabulary as needed to continue reading at grade level.	**BC5.a.10.h:** Proofread, edit and revise written work using vocabulary specific to various topics.
	BC5.a.3.e: Read and follow directions.	**BC5.a.7.m:** Write simple and compound sentences effectively.	**BC5.a.11.h:** Recognize and write effective and grammatically correct complex sentences and paragraphs.
	BC5.a.4.e: Apply correct grammar and spelling in written formats.	**BC5.a.8.m:** Recognize grammar/spelling mistakes and use proofreader's marks to correct the errors.	**BC5.a.12.h:** Proofread and edit business documents to ensure they are clear, correct, concise and consistent.

Learning Priority	Performance Indicators (By Grade Band)		
	PK-5	PK-5	PK-5
BC5.b: Develop and use a writing process appropriate to the situation.	BC5.b.1.e: Identify steps in the writing process.	BC5.b.4.m: Identify factors affecting the readability of text.	BC5.b.16.h: Edit and revise written work to improve content and effectiveness.
	BC5.b.2.e: Compose a personal message.	BC5.b.5.m: Compose an appropriate message for specific audiences.	BC5.b.17.h: Compose a variety of business documents for various situations.
	BC5.b.3.e: Write a thank you note.	BC5.b.6.m: Recognize when a direct, indirect or persuasive message is used.	BC5.b.18.h: Develop direct, indirect and persuasive messages for appropriate situations.
		BC5.b.7.m: Define biased language.	BC5.b.19.h: Avoid biased language (gender, sex, race, etc.).
		BC5.b.8.m: Define sender vs. receiver in communication.	BC5.b.20.h: Analyze the receiver of the communication to determine appropriate message style.
		BC5.b.9.m: Develop a meeting agenda.	BC5.b.21.h: Document and format minutes from a business meeting.
		BC5.b.10.m: Determine the difference between a formal and informal report.	BC5.b.22.h: Develop formal and informal reports.
		BC5.b.11.m: Compose a personal business letter.	BC5.b.23.h: Compose a business letter.
		BC5.b.12.m: Develop a letter of application/cover letter.	BC5.b.24.h: Write a formal application letter for job opportunities.
		BC5.b.13.m: Outline the parts of a resume.	BC5.b.25.h: Create a digitally accessible and print version of a resume.
		BC5.b.14.m: Write a thank you letter/email for a specific event.	BC5.b.26.h: Complete employment application forms.
		BC5.b.15.m: Develop a portfolio containing career research materials.	BC5.b.27.h: Write a follow-up (thank you) letter/email for job opportunities.
			BC5.b.28.h: Develop a digital portfolio containing career research materials for a least one career pathway.

Standard: BIT.BC6: Students will listen discriminately and respond appropriately to oral communication.			
	Performance Indicators (By Grade Band)		
Learning Priority	**PK-5**	**6-8**	**9-12**
BC6.a: Demonstrate proper listening techniques.	**BC6.a.1.e:** Describe traits of an active listener.	**BC6.a.5.m:** Determine if more information is needed and ask suitable questions.	**BC6.a.9.h:** Formulate judgments about the ideas under discussion and support those judgments with convincing evidence.
	BC6.a.2.e: Summarize a classroom discussion.	**BC6.a.6.m:** Take complete and accurate notes.	**BC6.a.10.h:** Listen carefully to separate fact from opinion.
	BC6.a.3.e: Listen attentively to guest speakers.	**BC6.a.7.m:** Interview people to learn about a topic and write a summary.	**BC6.a.11.h:** Identify and overcome barriers to enhance active listening.
	BC6.a.4.e: Take simple notes.	**BC6.a.8.m:** Take notes in an outline form.	**BC6.a.12.h:** Direct courteous attention to multiple speakers within a group to obtain key facts.
BC6.b: Assess and respond to verbal and nonverbal messages.	**BC6.b.1.e:** Recognize various nonverbal signals.	**BC6.b.2.m:** Participate in a debate.	**BC6.b.4.h:** Demonstrate effective negotiation skills.
		BC6.b.3.m: Interpret nonverbal signals appropriately.	**BC6.b.5.h:** Respond appropriately to nonverbal signals.

When developing course content related to Business Communications refer to additional standards, learning priorities and performance indicators associated with Business Law and Ethics and IT Foundations.

Wisconsin Standards for Business and Information Technology (B&IT)

Business / Content Area: BLE/Business Law and Ethics

Standard: BIT.BLE1: Students will assess the legal system in which they live and work.

Learning Priority	Performance Indicators (By Grade Band)		
	PK-5	**6-8**	**9-12**
BLE1.a: Analyze the sources of law.	**BLE1.a.1.e:** Define and give examples of rules and laws and why they are important.	**BLE1.a.5.m:** Describe the branches of government.	**BLE1.a.10.h:** Summarize each branch of the federal and state government and explain the importance of each.
	BLE1.a.2.e: Give examples of a constitution.	**BLE1.a.6.m:** Outline how a constitution safeguards and limits an individual's rights.	**BLE1.a.11.h:** Compare and contrast the United States Constitution with the Wisconsin Constitution.
	BLE1.a.3.e: Explain the consequences of not having rules and laws.	**BLE1.a.7.m:** Explain why laws are developed at the federal and state levels.	**BLE1.a.12.h:** Explain how laws are developed at the federal and state levels.
	BLE1.a.4.e: Give examples of people who have the power and authority to make and enforce rules and laws in the school and community.	**BLE1.a.8.m:** Describe why citizens are obligated to follow rules and laws.	**BLE1.a.13.h:** Summarize the basic freedoms guaranteed by the Bill of Rights and describe key amendments of the United States Constitution.
		BLE1.a.9.m: Summarize the consequences of not following rules and laws.	**BLE1.a.14.h:** Interpret statutory law and identify the purposes of statutory law.
			BLE1.a.15.h: Explain the role of precedent in the legal system.
			BLE1.a.16.h: Define administrative agencies and regulations; explain where administrative agencies get their power and how they create regulations.
BLE1.b: Summarize the structure of the court system.	**BLE1.b.1.e:** Describe situations that may result in the need for a court system.	**BLE1.b.4.m:** Explain the function of the court system.	**BLE1.b.7.h:** Argue the importance of the court system.
	BLE1.b.2.e: Identify parties in a courtroom setting.	**BLE1.b.5.m:** Describe the roles of courtroom personnel.	**BLE1.b.8.h:** Summarize the roles of the professionals in legal proceedings, such as judges, lawyers and paralegals.

Learning Priority	Performance Indicators (By Grade Band)		
	PK-5	6-8	9-12
	BLE1.b.3.e: Identify local court locations.	BLE1.b.6.m: Describe the different levels of the court system.	BLE1.b.9.h: Illustrate the basic structure of the federal, state, county and local court system.
			BLE1.b.10.h: Explain the differences between cases that fall within the jurisdiction of the federal, state and county court system.
			BLE1.b.11.h: Compare the role and structure of the federal appellate court and the state appellate court.
BLE1.c: Illustrate the legal process in civil and criminal cases and how each differs.	BLE1.c.1.e: Define crime.	BLE1.c.2.m: Differentiate civil and criminal law.	BLE1.c.6.h: Compare and contrast the steps in a civil law suit with the steps in a criminal prosecution.
		BLE1.c.3.m: Compare and contrast the classification of crimes.	BLE1.c.7.h: Explain litigation and generate methods for resolving disputes other than litigation.
		BLE1.c.4.m: Explain the elements that make up a criminal act.	BLE1.c.8.h: Compare procedural and substantive law.
		BLE1.c.5.m: Discuss situations that could result in a lawsuit.	BLE1.c.9.h: Analyze different business-related crimes.
			BLE1.c.10.h: Differentiate between negligence and intentional torts.
Standard: BIT.BLE2: Students will interpret laws associated with business organizations, agency law and employment law.			
BLE2.a: Summarize the characteristics of owning and operating a business.	BLE2.a.1.e: Describe the responsibilities of owning a business.	BLE2.a.5.m: Explain how and why people start a new business.	BLE2.a.11.h: Analyze the process for starting and operating a sole proprietorship.
	BLE2.a.2.e: Explain partnership.	BLE2.a.6.m: Describe how partnerships are created.	BLE2.a.12.h: Distinguish among the different types of partners, such as silent, dormant and secret; describe the powers and duties of each type of partner.
	BLE2.a.3.e: Identify well-known corporations.	BLE2.a.7.m: Compare and contrast the legal liability implications of ownership related to the different forms of business.	BLE2.a.13.h: Identify how the partnership may be dissolved by the partners, operation of the law and by the order of the court.

Learning Priority	PK-5	6-8	9-12
	BLE2.a.4.e: Identify store or restaurant chains.	**BLE2.a.8.m:** Explain regulations relating to the operation of business.	**BLE2.a.14.h:** Summarize why a corporation is a legal entity.
		BLE2.a.9.m: Discuss the forms of business and identify local community examples.	**BLE2.a.15.h:** Illustrate the steps in forming a corporation.
		BLE2.a.10.m: Explain the function and purpose of a franchise.	**BLE2.a.16.h:** Summarize the functions of the board of directors and officers of a corporation.
			BLE2.a.17.h: Describe the ways a corporation may be terminated.
			BLE2.a.18.h: Summarize the role of franchises in the business environment.
BLE2.b: Summarize the role of agency law and assess why it is important in business operations.			**BLE2.b.1.h:** Explain the different types of agents.
			BLE2.b.2.h: Compare and contrast an agent and other business individuals. (i.e., independent contractors, brokers, bailees, etc.).
			BLE2.b.3.h: Analyze agency relationships and illustrate ways agency relationships may be created.
			BLE2.b.4.h: Summarize the duties an agent owes to the principal and the duties the principal owes the agent.
			BLE2.b.5.h: Analyze how an agent can become liable to a third party in a contract.
BLE2.c: Analyze the role of employment law.	**BLE2.c.1.e:** Describe the requirements of various jobs.	**BLE2.c.5.m:** Examine employment at will.	**BLE2.c.10.h:** Explain the wrongful discharge exceptions to employment at will.

	Performance Indicators (By Grade Band)		
Learning Priority	**PK-5**	**6-8**	**9-12**
	BLE2.c.2.e: Describe the rights and responsibilities of employees.	**BLE2.c.6.m:** Identify ways laws protect working adults and minors.	**BLE2.c.11.h:** Summarize legislation that regulates employee rights and employment conditions.
	BLE2.c.3.e: List the rights and responsibilities of employers.	**BLE2.c.7.m:** Predict the legal basis for termination.	**BLE2.c.12.h:** Examine justified and unjustified discrimination practices.
	BLE2.c.4.e: Define labor union.	**BLE2.c.8.m:** Explain how a labor union operates.	**BLE2.c.13.h:** Examine the history of labor unions.
		BLE2.c.9.m: Examine the employer-employee relationship.	**BLE2.c.14.h:** Summarize legislation that addresses labor union activities.
Standard: BIT.BLE3: Students will evaluate the legal implications of contract law, law of sales and consumer law.			
	BLE3.a.1.e: Define contract.	**BLE3.a.4.m:** Identify and explain various types of contracts.	**BLE3.a.7.h:** Explain the required elements of a contract.
	BLE3.a.2.e: Outline various parts of a simple contract.	**BLE3.a.5.m:** Identify contractual capacity.	**BLE3.a.8.h:** Explain a minor's contractual capacity.
	BLE3.a.3.e: Explain the importance of a contract.	**BLE3.a.6.m:** Evaluate contractual rights and responsibilities.	**BLE3.a.9.h:** Explain how contractual rights and duties are created through offer and acceptance.
			BLE3.a.10.h: Describe the types of consideration and justify the exceptions to the requirements of consideration.
BLE3.a: Analyze contract law as it relates to sales and consumer law.			**BLE3.a.11.h:** Compare and contrast bilateral and unilateral; express and implied; and oral and written contracts (including substantial performance, promissory estoppel and quasi contracts).
			BLE3.a.12.h: Summarize options to discharge a contract.
			BLE3.a.13.h: Explain breach of contract and defend the remedies available when a contract is breached.

Learning Priority	Performance Indicators (By Grade Band)		
	PK-5	**6-8**	**9-12**
BLE3.b: Interpret the legal issues involved with the sales of goods and consumer protection as they relate to contract and consumer law.	**BLE3.b.1.e:** Describe a consumer.	**BLE3.b.5.m:** Discuss the rights and responsibilities of consumers.	**BLE3.b.9.h:** Assess warranty types and describe how each may be excluded or modified.
	BLE3.b.2.e: Indicate the difference between goods and services.	**BLE3.b.6.m:** Contrast goods from services and real property.	**BLE3.b.10.h:** Summarize the differences between a sale of goods and other transactions relating to goods.
	BLE3.b.3.e: Define sales.	**BLE3.b.7.m:** Examine the Uniform Commercial Code.	**BLE3.b.11.h:** Interpret the Uniform Commercial Code (UCC) and defend why states have adopted it.
	BLE3.b.4.e: Identify goods that are produced in the local community and Wisconsin.	**BLE3.b.8.m:** Examine consumer law legislation that regulates consumer credit.	**BLE3.b.12.h:** Summarize legislation that regulates consumer credit and consumer protection.
			BLE3.b.13.h: Evaluate the statute of limitations.
Standard: BIT.BLE4: Students will analyze the legal aspects of property law.			
BLE4.a: Evaluate laws and legal rules associated with personal property.	**BLE4.a.1.e:** Define personal property.	**BLE4.a.3.m:** Distinguish between the classifications of property.	**BLE4.a.6.h:** Compare the types of property and assess why property distinctions are important.
	BLE4.a.2.e: Identify types of personal property.	**BLE4.a.4.m:** Examine the different ways to acquire property.	**BLE4.a.7.h:** Analyze the various methods property is acquired.
		BLE4.a.5.m: Analyze the various ways of holding ownership to property.	**BLE4.a.8.h:** Evaluate forms of co-ownership of personal property.
			BLE4.a.9.h: Illustrate common bailments.
			BLE4.a.10.h: Outline the standard of care bailees are required to exercise over bailed property.
BLE4.b: Evaluate laws and legal rules associated with real property.	**BLE4.b.1.e:** Define property.	**BLE4.b.4.m:** Show how property can be transferred.	**BLE4.b.7.h:** Compare and contrast liens, licenses and easements.
	BLE4.b.2.e: Explain a lease.	**BLE4.b.5.m:** Categorize the various types of leases.	**BLE4.b.8.h:** Illustrate the method of transferring title (deeding) to real property.

	Performance Indicators (By Grade Band)		
Learning Priority	**PK-5**	**6-8**	**9-12**
	BLE4.b.3.e: Describe a landlord.	**BLE4.b.6.m:** Outline the rights and duties of landlords and tenants.	**BLE4.b.9.h:** Describe the kinds of rental relationships that landlords and tenants may create.
			BLE4.b.10.h: Compare and contrast a lease and a deed.
			BLE4.b.11.h: Analyze the rights and duties of landlords and tenants when terminating a lease.
BLE4.c: Evaluate laws and legal rules associated with intellectual property.		**BLE4.c.1.m:** Define intellectual property.	**BLE4.c.4.h:** Analyze the concept of intellectual property.
		BLE4.c.2.m: Illustrate the different types of intellectual property.	**BLE4.c.5.h:** Summarize the types of intellectual property that are created and protected by law.
		BLE4.c.3.m: Examine the laws that protect intellectual property rights.	**BLE4.c.6.h:** Assess how intellectual property rights can be terminated or can be lost.
			BLE4.c.7.h: Describe the sources of intellectual property law and defend their principal features.
Standard: BIT.BLE5: Students will communicate how ethical issues impact the business environment.			
BLE5.a: Summarize the importance of social responsibility in all areas of business.	**BLE5.a.1.e:** Discuss the importance of a business providing jobs to local communities.	**BLE5.a.4.m:** Define corporate social responsibility.	**BLE5.a.9.h:** Explain the role of good corporate citizenship and its impact on society.
	BLE5.a.2.e: List ways in which a business' actions could have both positive and negative impacts on a community.	**BLE5.a.5.m:** Discuss methods in which a corporation can demonstrate social responsibility.	**BLE5.a.10.h:** Critique the impact of environmental responsibility on a business and its effect on society.
	BLE5.a.3.e: Describe what it means to be responsible.	**BLE5.a.6.m:** Explain the importance of a business paying taxes.	**BLE5.a.11.h:** Illustrate how a business could become involved with its community.
		BLE5.a.7.m: Identify ways in which businesses become involved with community projects.	**BLE5.a.12.h:** Distinguish between business ethics and social responsibility.

	Performance Indicators (By Grade Band)		
Learning Priority	**PK-5**	**6-8**	**9-12**
		BLE5.a.8.m: Distinguish between business and personal ethics.	**BLE5.a.13.h:** Illustrate the long-term impact of corporate social responsibility to the environment.
			BLE5.a.14.h: Analyze government regulations that are a direct result of corporate social irresponsibility and unethical business practices.
BLE5.b: Explain and relate the function of a code of ethics in business.	**BLE5.b.1.e:** Explain why a business should not use false advertising methods.	**BLE5.b.2.m:** Describe the consequences of false advertising practices.	**BLE5.b.7.h:** Compare and contrast the impact of false advertising methods and the importance of Truth in Packaging and Truth in Selling (i.e. price fixing, bait and switch, pyramid schemes, etc.).
		BLE5.b.3.m: Explain the ethical responsibilities of multiple roles within a business structure.	**BLE5.b.8.h:** Recognize industrial espionage and its impact on the business environment.
		BLE5.b.4.m: Analyze ethical scenarios and their solutions that a business may encounter.	**BLE5.b.9.h:** Compare various codes of ethics and their relevance to the corporate structure.
		BLE5.b.5.m: Analyze a personal code of ethical behavior.	**BLE5.b.10.h:** Communicate the impact of unethical marketing practices on society.
		BLE5.b.6.m: Diagram ideas to guide ethical decision making.	**BLE5.b.11.h:** Scrutinize historical scandals in which a company lacked having a code of ethics and the consequences of its actions.
			BLE5.b.12.h: Evaluate the ethical and legal implications of a business not abiding by a code of ethical behavior (i.e. employee hiring, evaluation, health and safety, sexual harassment, discrimination and privacy).

	Performance Indicators (By Grade Band)		
Learning Priority	**PK-5**	**6-8**	**9-12**
BLE5.c: Communicate ethical concerns that relate to increased global competition (i.e., bribery, corruption, questionable labor practices, human rights violations, product dumping, etc.).	**BLE5.c.1.e:** Discuss ethical behavior that is important in all cultures.	**BLE5.c.5.m:** Distinguish between international ethics and international law.	**BLE5.c.10.h:** Compare and contrast the ethical systems of different cultures.
	BLE5.c.2.e: Identify values that people share on a global level.	**BLE5.c.6.m:** Contrast how the interpretation of ethics may vary between cultures.	**BLE5.c.11.h:** Analyze the impact of "dumping" when discussing imports and exports.
	BLE5.c.3.e: Define compassion.	**BLE5.c.7.m:** Identify groups to whom international businesses are responsible.	**BLE5.c.12.h:** Synthesize international case studies that include unethical practices.
	BLE5.c.4.e: Define justice.	**BLE5.c.8.m:** List current ethical issues in the global business environment.	**BLE5.c.13.h:** Recognize the ethical considerations of bribery, corruption, questionable labor practices and human rights violations.
		BLE5.c.9.m: Explain how culture affects ethical decisions.	**BLE5.c.14.h:** Analyze global organizations that promote and guide ethical behavior.
			BLE5.c.15.h: Illustrate strategies that international businesses can use to encourage ethical behavior.
BLE5.d: Predict environmental factors that may encourage unethical behavior.	**BLE5.d.1.e:** Define profit.	**BLE5.d.4.m:** Describe how the drive to make a profit may influence unethical behavior.	**BLE5.d.8.h:** Outline the degree of influence media has on ethical behavior.
	BLE5.d.2.e: Define competition.	**BLE5.d.5.m:** Explain competition and its importance to business.	**BLE5.d.9.h:** Evaluate ethical problems that could result from business technologies.
	BLE5.d.3.e: Explain how a business uses the media (i.e., radio, television, digital communications, print).	**BLE5.d.6.m:** Discuss the importance of making a profit.	**BLE5.d.10.h:** Analyze training opportunities that a business could implement to promote ethical behavior among its employees.
		BLE5.d.7.m: Examine how businesses use social media and other emerging technologies.	**BLE5.d.11.h:** Examine how a competitive business environment may promote unethical behavior.

	Performance Indicators (By Grade Band)		
Learning Priority	**PK-5**	**6-8**	**9-12**
BLE5.e: Analyze the ethical and legal relationship between fair business practices and intellectual property.	**BLE5.e.1.e:** Explain the consequences when someone uses an idea that is not their own.	**BLE5.e.5.m:** Discuss different types of intellectual property in a business environment.	**BLE5.e.9.h:** Outline the consequences of patent, trademark and copyright infringement.
	BLE5.e.2.e: Define trademark and give examples of logos or trademarks.	**BLE5.e.6.m:** Explain why intellectual property is valuable and protected.	**BLE5.e.10.h:** Analyze the ethical impacts of employee raiding and non-compete clauses in business.
	BLE5.e.3.e: Define confidentiality.	**BLE5.e.7.m:** Distinguish between real property and intellectual property.	**BLE5.e.11.h:** Explain digital rights management and its importance to technological businesses.
	BLE5.e.4.e: Summarize the difference between cheating and stealing.	**BLE5.e.8.m:** List the differences between patents, trademarks and copyright.	**BLE5.e.12.h:** Assess intellectual property ethical case studies.
Standard: BIT.BLE6: Students will analyze the role of personal integrity and ethical behavior in the workplace.			
BLE6.a: Differentiate between ethical and legal issues in business relationships.	**BLE6.a.1.e:** Define ethics.	**BLE6.a.4.m:** Distinguish between and relate the consequences of illegal actions and unethical behavior.	**BLE6.a.7.h:** Compare and contrast ethical theories.
	BLE6.a.2.e: Identify ethical character traits (i.e., honesty, integrity and fairness).	**BLE6.a.5.m:** Explain how a person's values relate to ethical behavior.	**BLE6.a.8.h:** Analyze ethical dilemmas.
	BLE6.a.3.e: Communicate how to respect the privacy of others.	**BLE6.a.6.m:** Describe how ethics and law are related.	**BLE6.a.9.h:** Compare and contrast the consequences of unethical behavior with illegal behavior.
			BLE6.a.10.h: Analyze the role of values in constructing an ethical code that relates to the legal system.
			BLE6.a.11.h: Describe the Sarbanes-Oxley Act and other related legislation and their impact on ethical business transactions.

	Performance Indicators (By Grade Band)		
Learning Priority	**PK-5**	**6-8**	**9-12**
BLE6.b: Explain the impact of unethical behavior in business transactions.	**BLE6.b.1.e:** Predict examples of honest and dishonest workplace behavior.	**BLE6.b.3.m:** Evaluate the consequences of unethical behavior that occur in the workplace.	**BLE6.b.7.h:** Examine ethical issues involving employer/employee relationships.
	BLE6.b.2.e: Define a business client.	**BLE6.b.4.m:** Identify the responsibilities a business has to its employees.	**BLE6.b.8.h:** Compare strategies that encourage ethical behavior in business transactions.
		BLE6.b.5.m: Identify the responsibilities a business has to its clients.	**BLE6.b.9.h:** Investigate the origin of the study of business ethics and its implications on business transactions.
		BLE6.b.6.m: Identify the responsibilities a business has to its shareholders.	**BLE6.b.10.h:** Compare and contrast the relationship between a business' fiduciary responsibilities and its responsibilities to its employees and clients.
			BLE6.b.11.h: Analyze the difference between ethical behavior based on legal responsibilities and ethical behavior based on moral responsibilities.
BLE6.c: Demonstrate ethical work habits.	**BLE6.c.1.e:** Demonstrate positive work habits.	**BLE6.c.4.m:** Describe how to act with integrity.	**BLE6.c.7.h:** Assess problem-solving techniques that are ethically acceptable.
	BLE6.c.2.e: Explain honesty and respect.	**BLE6.c.5.m:** Demonstrate ethical behavior when working as a team.	**BLE6.c.8.h:** Analyze the importance of respecting individual differences and treating people with fairness.
	BLE6.c.3.e: Discuss how honesty and respect affect relationships with others.	**BLE6.c.6.m:** Identify the cost to a business when employees use business resources for personal reasons.	**BLE6.c.9.h:** Assess methods that can be used to encourage ethical work habits such as integrity, punctuality and respect.
			BLE6.c.10.h: Compare and contrast both the financial and non-financial costs of unethical work habits to a company.

Standard: BIT.BLE7: Students will evaluate ways in which ethical concerns affect emerging technologies and their impact on society.			
	Performance Indicators (By Grade Band)		
Learning Priority	**PK-5**	**6-8**	**9-12**
BLE7.a: Determine ethical issues related to information systems, such as access, accuracy and privacy.	**BLE7.a.1.e:** Establish reasons why electronically generated information does not guarantee privacy.	**BLE7.a.6.m:** List ways an employee could misuse company email.	**BLE7.a.13.h:** Analyze ethical issues related to emerging business technologies.
	BLE7.a.2.e: List acceptable behaviors when sharing electronically generated information.	**BLE7.a.7.m:** Discuss emerging technologies that a company or its employees use to conduct business.	**BLE7.a.14.h:** Compare corporate policies that prohibit unethical use of electronically generated information.
	BLE7.a.3.e: Explain plagiarism.	**BLE7.a.8.m:** Exhibit appropriate ethical behavior when using information technology.	**BLE7.a.15.h:** Outline the differences of license agreements (i.e., open source, site licenses, single-user license).
	BLE7.a.4.e: Define copyright.	**BLE7.a.9.m:** List possible consequences of unethical use of information technology.	**BLE7.a.16.h:** Analyze the impact of ethical and legal issues in an electronic environment.
	BLE7.a.5.e: Explain specific personal information that should not be available online.	**BLE7.a.10.m:** Review the rights and responsibilities of sharing electronically generated information.	**BLE7.a.17.h:** Develop an organizational policy dealing with the ethical and legal use of information.
		BLE7.a.11.m: Explain netiquette and its place in using information systems in the workplace.	**BLE7.a.18.h:** Compare various codes of ethics for specific language dealing with emerging technologies.
		BLE7.a.12.m: Explain the purpose of an Acceptable Use Policy.	**BLE7.a.19.h:** Compare and contrast Acceptable Use Policies among various business structures.
BLE7.b: Analyze ethical responsibilities and privacy issues when using technology in a business environment.	**BLE7.b.1.e:** Discuss reasons people use digital applications.	**BLE7.b.4.m:** Explain how social networking applications are used in personal and professional environments.	**BLE7.b.7.h:** Review the professional consequences of inappropriate use of social networking in business environments.
	BLE7.b.2.e: Discuss information that is shared through digital sources.	**BLE7.b.5.m:** Explain how the behavior and actions of an employee is a potential reflection on their employer.	**BLE7.b.8.h:** Summarize positive methods in which social networking applications are used as an effective business tool.

Learning Priority	Performance Indicators (By Grade Band)		
	PK-5	**6-8**	**9-12**
	BLE7.b.3.e: Identify information that should not be shared through a digital source.	**BLE7.b.6.m:** Recognize ways that corporations are impacted by social networking.	**BLE7.b.9.h:** Outline expectations and consequences that could be included in a corporate social networking policy.
			BLE7.b.10.h: Analyze how the effective use of social networking in the business environment supports collaboration and communication.

When developing course content related to Business Law and Ethics refer to additional standards, learning priorities and performance indicators associated with Accounting and Finance, Business Communication, Economics and IT Foundations.

Wisconsin Standards for Business and Information Technology (B&IT)

Business / Content Area: EC/Economics

Standard: BIT.EC1: Students will evaluate how resources are allocated in society.

Learning Priority	Performance Indicators (By Grade Band)		
	PK-5	**6-8**	**9-12**
EC1.a: Describe how productive resources are limited and people must make choices in how they are used.	**EC1.a.1.e:** List economic wants.	**EC1.a.4.m:** Demonstrate economic decision making.	**EC1.a.7.h:** Evaluate an economic growth strategy that stimulates a sluggish economy.
	EC1.a.2.e: Identify economic choices students make.	**EC1.a.5.m:** Analyze economic choices that have both present and future consequences.	
	EC1.a.3.e: Identify the opportunity costs involved in making personal decisions.	**EC1.a.6.m:** Develop a solution to a problem and identify the opportunity cost.	
EC1.b: Use effective decision making processes to compare the costs and benefits of alternatives.	**EC1.b.1.e:** Describe the choices that people make that require them to give up something in order to receive something else.	**EC1.b.3.m:** Examine how a cost is something people give up when they receive something in exchange.	**EC1.b.5.h:** Measure the opportunity costs for solving various societal problems while still achieving economic goals.
	EC1.b.2.e: Identify the benefits that satisfy peoples' wants.	**EC1.b.4.m:** Determine the best consumption level of a particular product.	**EC1.b.6.h:** Assess how marginal utility affects both consumers and producers.
EC1.c: Differentiate between the methods that are used to allocate resources.	**EC1.c.1.e:** Explain why no individual method of distributing goods and services can satisfy all wants and needs.	**EC1.c.4.m:** Differentiate between how resources are allocated in traditional, command, market and mixed economies.	**EC1.c.7.h:** Evaluate the effectiveness in allocating resources in different economic systems (i.e. traditional, command, market and mixed economies).
	EC1.c.2.e: Recognize that goods and services are distributed using various methods.	**EC1.c.5.m:** Analyze how scarcity requires the use of a distribution method.	**EC1.c.8.h:** Compare the costs and benefits of different allocation methods.
	EC1.c.3.e: Discuss how people must either work individually or collectively to determine how resources are allocated.	**EC1.c.6.m:** Examine the following economic questions that all economies must address: what goods and services will be produced; how will they be produced; and who will consume them?	

Standard: BIT.EC2: Students will analyze how an economy functions.			
	Performance Indicators (By Grade Band)		
Learning Priority	**PK-5**	**6-8**	**9-12**
EC2.a: Analyze the various macroeconomic measures of economic activity.	**EC2.a.1.e:** Describe inflation and deflation.	**EC2.a.3.m:** Evaluate how inflation and deflation affect purchasing power.	**EC2.a.6.h:** Evaluate the advantages and disadvantages of inflation and deflation.
	EC2.a.2.e: Illustrate how inflation reduces the value of money.	**EC2.a.4.m:** Analyze the relationship between purchasing power and inflation.	**EC2.a.7.h:** Measure how the Consumer Price Index (CPI) affects purchasing power.
		EC2.a.5.m: Analyze how changes in disposable income can affect an economy.	**EC2.a.8.h:** Evaluate the various stages of the business cycle, such as recovery, expansion, trough and peak.
			EC2.a.9.h: Calculate the real interest rate.
EC2.b: Describe how the economy can fluctuate based on spending and production decisions at the microeconomic and macroeconomic levels.	**EC2.b.1.e:** Define standard of living.	**EC2.b.4.m:** Analyze the effects of GDP.	**EC2.e.7.h:** Examine the distribution of public goods and services to the related funding sources.
	EC2.b.2.e: Identify the relationship of production levels (goods and services) to the standard of living.	**EC2.b.5.m:** Calculate the per capita GDP of a given country.	**EC2.b.8.h:** Compare and contrast potential GDP to real GDP.
	EC2.b.3.e: List productive resources.	**EC2.b.6.m:** Examine roles and resources available of households, businesses and the government.	**EC2.b.9.h:** Compare the GDPs of various nations to their standards of living.
			EC2.b.10.h: Assess the interrelated roles of households, businesses and the government in an economy.
EC2.c: Examine how unemployment imposes costs on individuals and the overall economy.	**EC2.c.1.e:** Compare and contrast employment vs. unemployment.	**EC2.c.4.m:** Evaluate the effects of unemployment on an economy.	**EC2.c.7.h:** Compare and contrast the various types of unemployment, such as frictional, structural, cyclical and seasonal.
	EC2.c.2.e: List reasons why a person may not be currently employed.	**EC2.c.5.m:** Analyze the demographics of a labor force.	**EC2.c.8.h:** Compare unemployment rates based on age, gender, race and education levels.

	Performance Indicators (By Grade Band)		
Learning Priority	**PK-5**	**6-8**	**9-12**
	EC2.c.3.e: Explain the purpose of unemployment.	**EC2.c.6.m:** Describe how unemployment affects our purchasing power.	**EC2.c.9.h:** Explain why the national unemployment rate differs from other estimates of actual unemployment.
EC2.d: Analyze the factors that stimulate economic growth and adjust the standard of living.	**EC2.d.1.e:** Discuss how physical capital, such as tools and machinery, can help workers improve their productivity.	**EC2.d.2.m:** Measure productivity in terms of input and output.	**EC2.d.4.h:** Appraise economic growth and identify the factors that cause it.
		EC2.d.3.m: Evaluate how technological change leads to new and improved goods and services.	**EC2.d.5.h:** Summarize how economic growth impacts poverty and the standard of living.
			EC2.d.6.h: Measure the opportunity costs and economic risks involved in investing in new physical and/or human capital.
EC2.e: Analyze the role of government, especially the U.S., in economic systems.	**EC2.e.1.e:** Describe how governments provide various kinds of public goods and services in a market economy.	**EC2.e.2.m:** Explain how individuals pay for public goods and services through taxes and fees.	**EC2.e.7.h:** Compare the benefit distribution of public goods and services to the funding sources.
		EC2.e.3.m: Inventory the various payments that constitute the majority of federal, state and local governmental spending.	**EC2.e.8.h:** Assess the impact of government expenditures to society.
		EC2.e.4.m: Compare local, state and federal tax receipts and expenditures.	**EC2.e.9.h:** Evaluate progressive, regressive and proportional taxes and list their effect on specific income groups.
		EC2.e.5.m: Distinguish how local, state and federal government regulations impact business, society and individuals in a society.	**EC2.e.10.h:** Interpret the various fiscal policies that the federal government uses to regulate the economy.

	Performance Indicators (By Grade Band)		
Learning Priority	**PK-5**	**6-8**	**9-12**
		EC2.e.6.m: Define federal budget deficit and budget surplus.	**EC2.e.11.h:** Summarize how stabilizers, such as unemployment compensation, welfare benefits, Social Security subsidies and tax rates, affect economies in transition.
			EC2.e.12.h: Evaluate how the national debt affects the economy and the effects of short- and long-term spending.
EC2.f: Measure the cost of government policies.			**EC2.f.1.h:** Contrast the benefits and costs of political decisions.
			EC2.f.2.h: Assess government decisions based on long-term and short-term decisions.
			EC2.f.3.h: Evaluate why price controls are sometimes advocated by special interest groups.
EC2.g: Evaluate how the federal government budgetary policy and the Federal Reserve System's monetary policy influence the employment, output and price levels in our economy.	**EC2.g.1.e:** Identify that the Federal Reserve is the central banking system of the United States.	**EC2.g.2.m:** Examine the history of banking in the United States and explain how monetary and fiscal policies evolved.	**EC2.g.5.h:** Assess how the Federal Reserve System uses monetary policies to regulate the economy.
		EC2.g.3.m: Analyze the actions of the federal government when it runs a budget deficit and surplus.	**EC2.g.6.h**: Measure the effects of increasing/decreasing federal spending and reducing/increasing taxes.
		EC2.g.4.m: Identify when the federal government's annual budget is balanced.	**EC2.g.7.h:** Compare and give examples of various monetary policies.
			EC2.g.8.h: Evaluate how society allocates resources through laws, public policy and taxation.

Standard: BIT.EC3: Students will assess the role that money plays in our society.			
	Performance Indicators (By Grade Band)		
Learning Priority	**PK-5**	**6-8**	**9-12**
EC3.a: Analyze the role of economic institutions and how they help individuals and groups accomplish their goals.	**EC3.a.1.e:** Identify how people contribute to the productive resources of land, labor, capital and entrepreneurship.	**EC3.a.4.m:** Compare the various types of economic institutions that exist in a market economy.	**EC3.a.7.h:** Assess and analyze the historic events that influenced the creation of our current banking system.
	EC3.a.2.e: Differentiate how saving and spending affect the economy differently.	**EC3.a.5.m:** Examine the role of profit and how it is related to risk and uncertainty.	**EC3.a.8.h:** Assess the advantages and disadvantages that result when an organization incorporates and issues stocks.
	EC3.a.3.e: Explain the role of banks in a market economy.	**EC3.a.6.m:** Analyze how labor unions represent workers.	**EC3.a.9.h:** Distinguish between the various types of non-profit organizations.
EC3.b: Evaluate how money influences our economy and economic decision making.	**EC3.b.1.e:** Discuss how people use money.	**EC3.b.4.m:** Evaluate the basic money supply in our economy.	**EC3.b.7.h:** Assess how the money supply in an economy is influenced when banks make loans and when the loans are paid off.
	EC3.b.2.e: Explain the historical progression of the current currency system.	**EC3.b.5.m:** Analyze how money is used as a "store of value."	**EC3.b.8.h:** Evaluate borrowing behaviors in relation to changes in interest rates.
	EC3.b.3.e: Evaluate how resources are used to make goods and services.	**EC3.b.6.m:** Describe the role of interest rates.	**EC3.b.9.h:** Interpret how interest rates are affected by the forces of supply and demand.
EC3.c: Analyze an individual's earning power.	**EC3.c.1.e:** State how human labor is a resource that is used to produce goods and services.	**EC3.c.3.m:** Identify the value of productive workers to employers and the benefits generated by being a productive employee.	**EC3.c.6.h:** Analyze how supply and demand for workers impacts salary.
	EC3.c.2.e: Describe how people earn income by exchanging their productive resources for either wages or salaries.	**EC3.c.4.m:** Define the price of labor and measure how a wage or salary is the price of labor.	**EC3.c.7.h:** Examine how worker's income is impacted by the demand for goods and services.
		EC3.c.5.m: Support the rationale for employers paying hourly wages or salaries to workers.	**EC3.c.8.h:** Assess how the economy, the GDP, technology, governmental policies and discrimination can affect personal income.

Standard: BIT.EC4: Students will analyze how market structures and prices affect the economy.			
	Performance Indicators (By Grade Band)		
Learning Priority	**PK-5**	**6-8**	**9-12**
EC4.a: Differentiate between buyers and sellers.	**EC4.a.1.e:** Discuss how each country has its own currency.	**EC4.a.7.m:** Illustrate how market prices are set.	**EC4.a.12.h:** Analyze market effects on supply and demand and how it reacts to government intervention.
	EC4.a.2.e: Define a market.	**EC4.a.8.m:** Demonstrate the process in which the equilibrium price of a good or service equals demand.	**EC4.a.13.h:** Interpret how the changes in supply or demand often cause buyers and sellers to adjust their purchase and sales decisions based on relative price.
	EC4.a.3.e: Explain how prices are used to allocate resources.	**EC4.a.9.m:** Examine how markets are interrelated and changes in the price of one good or service can lead to changes in the price of other goods and services.	**EC4.a.14.h:** Discuss factors contributing to the demand for a product.
	EC4.a.4.e: Define the price of a good or service.	**EC4.a.10.m:** Demonstrate how an increase or a decrease in the price of a good or service affects the quantity that producers are willing to make.	**EC4.a.15.h:** Illustrate shortages and surpluses and discuss the effects of each.
	EC4.a.5.e: Illustrate the law of demand (i.e. When prices are high, people buy less of a product.)	**EC4.a.11.m:** Discuss when consumers look for substitutes.	**EC4.a.16.h**: Interpret supply and demand curves.
	EC4.a.6.e: Identify substitutes for commonly-used products.		
EC4.b: Evaluate how competition between buyers and sellers influences both the quantity produced and the price of a good or service.	**EC4.b.1.e:** Define competition in a market economy.	**EC4.b.2.m:** Differentiate how competition is influenced.	**EC4.b.5.h:** Evaluate how competition levels are determined.
		EC4.b.3.m: Examine how competition for similar products impacts buyers and sellers.	**EC4.b.6.h:** Explain why collusion impacts the market's equilibrium and influences the level of competition.
		EC4.b.4.m: Discuss the effect of competition on products and prices.	**EC4.b.7.h:** Assess the effect of the introduction of new products and production methods on competition.

	Performance Indicators (By Grade Band)		
Learning Priority	**PK-5**	**6-8**	**9-12**
EC4.c: Interpret how specialization allows goods and services to be produced, which impacts both production and consumption.	**EC4.c.1.e:** Identify how economic specialization occurs when people concentrate their productive efforts on fewer goods and services than they actually use.	**EC4.c.3.m:** Describe how the specialization of labor influences the interdependence between producers and consumers.	**EC4.c.6.h:** Compare factors that prompt international trade such as the availability of productive resources and differences in relative prices.
	EC4.c.2.e: Recognize when people specialize and divide labor tasks, how this impacts productivity, costs and money.	**EC4.c.4.m:** Measure labor productivity as output per worker.	**EC4.c.7.h:** Assess how specialization facilitates international trade and interdependence between nations.
		EC4.c.5.m: Evaluate how economic conditions and policies in one country can affect another country because of international economic interdependence.	**EC4.c.8.h:** Measure the effect that transaction costs have on international trade.

When developing course content related to Economics refer to additional standards, learning priorities and performance indicators associated with Accounting and Finance, Business Calculations, Business Law and Ethics, Personal Finance and IT Foundations.

Wisconsin Standards for Business and Information Technology (B&IT)
Business / Content Area: EN/Entrepreneurship

Standard: BIT.EN1: Students will recognize that entrepreneurs possess unique characteristics and evaluate the degree to which one possesses those characteristics.

	Performance Indicators (By Grade Band)		
Learning Priority	**PK-5**	**6-8**	**9-12**
EN1.a: Explore the characteristics of an entrepreneur.	**EN1.a.1.e:** Identify the characteristics of a successful entrepreneur.	**EN1.a.2.m:** Identify one's own personal traits that are typical characteristics of an entrepreneur.	**EN1.a.4.h:** Analyze the degree to which one possesses the characteristics of an entrepreneur.
		EN1.a.3.m: Compare the costs and benefits of choosing to become an entrepreneur.	**EN1.a.5.h:** Analyze the personal advantages and risks of owning a business.
			EN1.a.6.h: Describe the paths to becoming an entrepreneur.
			EN1.a.7.h: Discuss entrepreneurship as a choice for non-traditional groups.
EN1.b: Analyze the role of the entrepreneur in America's businesses today.	**EN1.b.1.e:** Explain how a manager contributes to the operation of a business.	**EN1.b.5.m:** Identify the roles of a manager and those of an entrepreneur.	**EN1.b.8.h:** Analyze the similarities and differences between the roles of a manager and an entrepreneur.
	EN1.b.2.e: Define entrepreneurship, employer and employee.	**EN1.b.6.m:** Describe the entrepreneurial advantages and disadvantages associated with hiring employees.	**EN1.b.9.h:** Explain the importance of entrepreneurship as a choice in a market economy.
	EN1.b.3.e: Identify entrepreneurs in history.	**EN1.b.7.m:** Identify entrepreneurs and their contributions to the local economy.	**EN1.b.10.h:** Identify and appraise the unique contributions of entrepreneurs to the economy of a country.
	EN1.b.4.e: Describe the differences between being an employer or an employee.		

Standard: BIT.EN2: Students will analyze the concepts and processes associated with successful entrepreneurial performance.			
	Performance Indicators (By Grade Band)		
Learning Priority	**PK-5**	**6-8**	**9-12**
EN2.a: Evaluate the entrepreneurial discovery process.	**EN2.a.1.e:** Identify for-profit and non-profit businesses.	**EN2.a.5.m:** Determine issues and trends in businesses locally.	**EN2.a.9.h:** Generate and determine feasibility of venture ideas.
	EN2.a.2.e: Identify current/future needs and wants as related to an entrepreneurial venture.	**EN2.a.6.m:** Assess global trends and opportunities in the area of entrepreneurship.	**EN2.a.10.h:** Evaluate market viability of a local community for a new venture business (i.e., population demographics, levels of employment, saturation of market, etc.).
	EN2.a.3.e: Describe business activities (i.e., merchandising, service, non-profit).	**EN2.a.7.m:** Identify and assess opportunities for venture creation.	**EN2.a.11.h:** Analyze employer expectations in the business environment.
	EN2.a.4.e: Identify problems facing consumers and businesses.	**EN2.a.8.m:** Identify and describe tools used by entrepreneurs for venture planning.	**EN2.a.12.h:** Evaluate how ethics, government and different forms of business ownership affect an entrepreneurial venture.
EN2.b: Formulate a plan to in delve into an entrepreneurial venture now or in the future.	**EN2.b.1.e:** Identify opportunities resulting from others' wants and perceived needs.	**EN2.b.4.m:** Describe opportunities/problems that led to the development of successful entrepreneurial endeavors.	**EN2.b.9.h:** Use digital opportunities (i.e., virtual entrepreneurs) to identify and solve various business problems, opportunities and challenges.
	EN2.b.2.e: Generate alternative solutions to a given problem.	**EN2.b.5.m:** Use the problem-solving process to resolve a problem facing consumers of businesses.	**EN2.b.10.h:** Describe an entrepreneurial opportunity and formulate the steps in establishing a business oriented toward that opportunity.
	EN2.b.3.e: Discuss how planning can help to achieve an entrepreneur's goals.	**EN2.b.6.m:** Recognize the need to obtain professional assistance for solving specific business problems.	**EN2.b.11.h:** Explain the feasibility of starting a home-based or web-based business.
		EN2.b.7.m: Identify businesses that could be operated from an individual's home or digitally.	**EN2.b.12.h:** Compare and contrast the advantages and risks of buying an existing business, starting an entirely new business or purchasing a franchise.
		EN2.b.8.m: Compose and reflect on a plan to achieve an entrepreneur's goal.	**EN2.b.13.h:** Develop a business plan for a prospective entrepreneurial venture.

Learning Priority	Performance Indicators (By Grade Band)		
	PK-5	6-8	9-12
			EN2.b.14.h: Explain the need for continuation planning for an entrepreneurial venture.
			EN2.b.15.h: Develop exit strategies for a failing business.
EN2.c: Integrate the management of the many facets of business into an entrepreneurial venture (i.e., finance, human resources, operations, marketing, etc.).		**EN2.c.1.m:** Explain methods and/or processes for organizing work flow.	**EN2.c.3.h:** Distinguish between debt and equity financing for venture creation.
		EN2.c.2.m: Develop a product and/or service.	**EN2.c.4.h:** Describe processes used to acquire adequate financial resources for venture creation and startup.
			EN2.c.5.h: Explain factors to consider in determining a venture's human resources needs.
			EN2.c.6.h: Use external resources to supplement an entrepreneur's expertise.

When developing course content related to Entrepreneurship refer to additional standards, learning priorities and performance indicators associated with Accounting and Finance, Business Calculations, Business Communications, Business Law and Ethics, Economics, Global Business, Management, Marketing and IT Foundations.

Wisconsin Standards for Business and Information Technology (B&IT)

Business / Content Area: GB/Global Business

Standard: BIT.GB1: Students will analyze the impact of the global business environment on business, consumers and economies.

Learning Priority	Performance Indicators (By Grade Band)		
	PK-5	**6-8**	**9-12**
GB1.a: Analyze the role of international business and trade.	**GB1.a.1.e:** Identify international goods and services.	**GB1.a.4.m:** Identify goods and services imported to and exported from a state, region, country.	**GB1.a.8.h:** Describe the product development process used to create goods and services in different countries.
	GB1.a.2.e: Define domestic business and global business.	**GB1.a.5.m:** Examine the difference between domestic and global business.	**GB1.a.9.h:** Evaluate the economic impact of global businesses on domestic businesses.
	GB1.a.3.e: List examples of international trade in the community and state.	**GB1.a.6.m:** Explain the historical origins of global business.	**GB1.a.10.h:** Describe the major factors that influence global trade.
		GB1.a.7.m: Describe settings in which global business affects people.	**GB1.a.11.h:** Examine international trade partnerships and describe the trading patterns regionally, statewide and between countries.
GB1.b: Determine how geography and historical trends play a role in globalization.	**GB1.b.1.e:** Identify major geographical features of various countries.	**GB1.b.3.m:** Identify and locate major trade regions of the world.	**GB1.b.7.h:** Describe the impact of geography on international business, including factors such as climate, time zones, distance, resources, technology, etc.
	GB1.b.2.e: Differentiate between various time zones worldwide.	**GB1.b.4.m:** Explain how time zones around the world influence global business.	**GB1.b.8.h:** Explain the roles that less developed countries play in global business.
		GB1.b.5.m: Discuss the role the United States, Wisconsin and regional community have played in global business.	**GB1.b.9.h:** Examine how absolute and comparative advantage help countries trade.
		GB1.b.6.m: Discuss the global standards of living and their impact on a country.	**GB1.b.10.h:** Identify which countries are currently recognized as global leaders and those which are predicted to increase their global presence.

Learning Priority	Performance Indicators (By Grade Band)		
	PK-5	6-8	9-12
GB1.c: Explain the impact of political and legal organizations on international trade.		**GB1.c.1.m:** Explain the different types of governments in the world.	**GB1.c.4.h:** Analyze the political environments that impact global business.
		GB1.c.2.m: Analyze different legal systems in various countries.	**GB1.c.5.h:** Devise a plan to deal with legal implications when conducting business across national boundaries.
		GB1.c.3.m: Discuss the ways in which governments influence global trade.	**GB1.c.6.h:** Formulate a plan to settle differences in global trade relations.
GB1.d: Assess the process of importing, exporting and how trade barriers and agreements work.	**GB1.d.1.e:** Define import, export and trade.	**GB1.d.2.m:** Identify reasons why countries trade with each other.	**GB1.d.7.h:** Explain the documents used in the importing and exporting process.
		GB1.d.3.m: Examine the steps of the process of importing and exporting.	**GB1.d.8.h:** Develop a plan to minimize risks and increase security needed to move products and services to global markets.
		GB1.d.4.m: Identify why companies and countries trade.	**GB1.d.9.h:** Evaluate the impact of current and emerging trade issues (direct and indirect) on global trade.
		GB1.d.5.m: Analyze the importance of having a balance of trade for countries.	**GB1.d.10.h:** Predict possible solutions to negative balance of trade.
		GB1.d.6.m: Explain why governments impose trade barriers.	**GB1.d.11.h:** Describe the regulations that influence the importing and exporting of goods and services.
			GB1.d.12.h: Describe the role and impact of international trade agreements and organizations.

	Performance Indicators (By Grade Band)		
Learning Priority	**PK-5**	**6-8**	**9-12**
GB1.e: Examine the process of global currency, exchange for closing business transactions with financial institutions.	**GB1.e.1.e:** Identify currencies of various countries.	**GB1.e.2.m:** Explain the use of currency and bartering in the global marketplace.	**GB1.e.5.h:** Evaluate the International Monetary system.
		GB1.e.3.m: Describe methods that nations use to control currency exchange issues.	**GB1.e.6.h:** Analyze how changing currency rates and interest rates affect international trade.
		GB1.e.4.m: Identify challenges associated with dealing in foreign currencies.	**GB1.e.7.h:** Assess how multinational banks impact global business.
GB1.f: Evaluate risk management in a global business environment.		**GB1.f.1.m:** Analyze risk versus return in global transactions.	**GB1.f.3.h:** Construct a plan to minimize risk in international finance transactions.
		GB1.f.2.m: Examine the types of commercial risk in international trade.	**GB1.f.4.h:** Develop insurance options that will protect international transactions.
			GB1.f.5.h: Assess banking regulations involving theft of currency transactions.
Standard: BIT.GB2: Students will analyze the management strategies in a global business environment.			
GB2.a: Analyze challenges in operating and management strategies used in international businesses.		**GB2.a.1.m:** Discuss the pros and cons of using a global workforce.	**GB2.a.3.h:** Design organizational strategies for multinational businesses.
		GB2.a.2.m: Illustrate the structure of a global business in an organizational chart.	**GB2.a.4.h:** Construct a system to evaluate customer satisfaction and product quality.
			GB2.a.5.h: Evaluate how control procedures benefit global businesses.
GB2.b: Examine how cultural differences affect human resource management in global business.		**GB2.b.1.m:** Describe the different living and working conditions from around the world.	**GB2.b.3.h:** Evaluate social and cultural factors that influence human resource activities.
		GB2.b.2.m: Analyze the elements of culture and subcultures.	**GB2.b.4.h:** Design a system to evaluate employee satisfaction and training in global businesses.

Learning Priority	Performance Indicators (By Grade Band)		
	PK-5	6-8	9-12
			GB2.b.5.h: Compare the different employee compensation packages in different cultures.
			GB2.b.6.h: Assess the occupational hazards that differ between countries.
			GB2.b.7.h: Create a plan to use social institutions to help workers adapt to new cultures.

When developing course content related to Global Business refer to additional standards, learning priorities and performance indicators associated with Accounting and Finance, Business Calculations, Business Communications, Business Law and Ethics, Economics, Entrepreneurship, Global Business, Management, Marketing and IT Foundations.

Wisconsin Standards for Business and Information Technology (B&IT)

Business / Content Area: MG/Management

Standard: BIT.MG1: Students will describe business management functions and examine their implementation in business.

Learning Priority	Performance Indicators (By Grade Band)		
	PK-5	**6-8**	**9-12**
MG1.a: Evaluate the development of management's role of leadership and organization in a business.	**MG1.a.1.e:** Discuss the different roles that an institution/ organization have.	**MG1.a.5.m:** Identify levels of command within an organization.	**MG1.a.10.h:** Evaluate the roles and levels of authority and their relationships within an institution or organization.
	MG1.a.2.e: Identify characteristics of great leaders.	**MG1.a.6.m:** Identify different management styles of leaders.	**MG1.a.11.h:** Explain several traits of effective leadership and the skills required.
	MG1.a.3.e: List the roles and responsibilities of people you come in contact with.	**MG1.a.7.m:** Identify various management theories and discuss how they impact motivation in business.	**MG1.a.12.h:** Compare and contrast various management theories.
	MG1.a.4.e: Outline different ways to organize a group.	**MG1.a.8.m:** Describe management roles and functions.	**MG1.a.13.h:** Describe the relationship between the management functions of planning, organizing, leading/directing and evaluating/controlling.
		MG1.a.9.m: Illustrate how a business organization might change in structure.	**MG1.a.14.h:** Summarize the evolution of organizational structures as a reflection of changes due to external and internal forces.
MG1.b: Examine the importance of management's function of evaluating and controlling in order to achieve a desired outcome.	**MG1.b.1.e:** List different ways to feel successful.	**MG1.b.5.m:** Explain different methods of measuring success.	**MG1.b.9.h:** Describe the importance of evaluating success in business.
	MG1.b.2.e: Express methods for measuring achievement of goals.	**MG1.b.6.m:** Apply a method of measuring if a goal has been achieved.	**MG1.b.10.h:** Construct and defend a method of evaluating the attainment of a goal.
	MG1.b.3.e: Rank businesses based on a performance measure.	**MG1.b.7.m:** Calculate a performance measure for a business and compare it to industry/business sector benchmarks.	**MG1.b.11.h:** Experiment with different measures of a business's performance compared to industry/business sector benchmarks.

	Performance Indicators (By Grade Band)		
Learning Priority	**PK-5**	**6-8**	**9-12**
	MG1.b.4.e: Distinguish between opportunities for revising/re-attempting the achievement of goals versus one-time opportunities.	**MG1.b.8.m:** Describe action that can be taken when a goal is not achieved.	**MG1.b.12.h:** Summarize the importance of taking action when performance results are not acceptable.
			MG1.b.13.h: Identify and discuss management theories (i.e., Taylor, Weber, Follett, McGregor).
			MG1.b.14.h: Identify motivational theories that impact management (i.e., Maslow, Herzberg, McClelland).
MG1.c: Relate planning to the success of management's goals.	**MG1.c.1.e:** Describe what a plan is.	**MG1.c.6.m:** Illustrate the benefits of creating a plan to accomplish a goal.	**MG1.c.11.h:** Discuss planning tools and summarize the importance of organizing activities to accomplish desired goals.
	MG1.c.2.e: Produce a plan to accomplish a goal.	**MG1.c.7.m:** Produce a multi-step plan for accomplishing a goal and appraise it from other points of view.	**MG1.c.12.h:** Examine the importance of setting a vision, mission, goals, values and objectives within an organization.
	MG1.c.3.e: Identify the consequences of not planning.	**MG1.c.8.m:** Model the use of a plan toward the achievement of a project.	**MG1.c.13.h:** Analyze various business plans to determine whether plans are aligned with the business vision, mission and goals.
	MG1.c.4.e: Describe decisions that you have control over.	**MG1.c.9.m:** Outline the process used to make a decision.	**MG1.c.14.h:** Outline decision making and problem solving steps, including analyzing outcomes that are a result of those decisions.
	MG1.c.5.e: List different measures of success and discuss how they might apply to different situations.	**MG1.c.10.m:** Defend a decision using data.	**MG1.c.15.h:** Describe methods of evaluating an organization's performance and controlling the organization in various situations.

Standard: BIT.MG2: Students will examine organizational structures for businesses and use operations and production principles for effective operation of the business.			
	Performance Indicators (By Grade Band)		
Learning Priority	**PK-5**	**6-8**	**9-12**
MG2.a: Compare and contrast organizational structures within businesses.	**MG2.a.1.e:** Describe the different roles that individuals can play to create an effective team.	**MG2.a.4.m:** Design a team to achieve a goal that includes various roles/functions.	**MG2.a.7.h:** Identify different levels of management; explain the purpose of organizational charts and the interrelationship of the various levels.
	MG2.a.2.e: Categorize businesses by the different products, services and types of customers.	**MG2.a.5.m:** Identify businesses in each of the areas of: commercial, industrial and service.	**MG2.a.8.h:** Distinguish between commercial, industrial and service businesses.
	MG2.a.3.e: Label the different departments within an organization and discuss their importance to the organization as a whole.	**MG2.a.6.m:** Predict the relationships among people in a large organization (either at school or in the community).	**MG2.a.9.h:** Describe/diagram the interrelationships within an organization's departments.
MG2.b: Analyze the processes and systems that operations managers implement to monitor, plan and control business activities required for continued business functioning.	**MG2.b.1.e:** Discuss how products are designed to meet the customer's desires.	**MG2.b.6.m:** Create a simple design for a product and list the required tools and materials.	**MG2.b.12.h:** Examine various methods of designing and redesigning products, including the steps of the process and the tools needed.
	MG2.b.2.e: Distinguish among various suppliers that provide businesses with needed supplies or services.	**MG2.b.7.m:** Illustrate the steps needed to efficiently and effectively make a product.	**MG2.b.13.h:** Examine aspects of scheduling, including the efficiency and effectiveness of a production schedule.
	MG2.b.3.e: List items that a business might buy and estimate the quantity of each item they should have.	**MG2.b.8.m:** Analyze supplier choices and select the best fitting supplier.	**MG2.b.14.h:** Describe the role that suppliers play in providing materials to a business and what factors are used in selecting a supplier (i.e., price, quality, availability, reliability).
	MG2.b.4.e: Indicate different quality levels of products that consumers can choose.	**MG2.b.9.m:** Contrast the cost versus benefit of buying supply quantities.	**MG2.b.15.h:** Value the purpose of inventory control and list different methods of inventory control.
	MG2.b.5.e: Discuss how a business produces a product.	**MG2.b.10.m:** Discriminate between different quality levels of a given product.	**MG2.b.16.h:** Examine the idea of quality management and relate it to how businesses compete.

Learning Priority	Performance Indicators (By Grade Band)		
	PK-5	6-8	9-12
		MG2.b.11.m: Summarize a business's factors of production (design, scheduling, materials procurement, inventory management and quality control measures).	**MG2.b.17.h:** Explain the interrelationship between factors of production (Design, scheduling, purchasing, inventory management and quality control measures).
Standard: BIT.MG3: Students will examine the role of the human resource department and its function as means to achieving management's goals.			
MG3.a: Appraise the importance of the human resources department in the planning, recruitment, selection and orientation of employees.		**MG3.a.1.m:** Explain how human resource staff can help a business develop its workforce.	**MG3.a.5.h:** Identify legislation affecting the recruitment and selection process (i.e., affirmative action, right to privacy and Americans with Disabilities Act).
		MG3.a.2.m: Prepare a tool to guide in the selection of an employee for a specific job (i.e., a rubric for selecting a candidate for a job such as nurse, banker, etc.).	**MG3.a.6.h:** Examine recruitment and employee selection tools and explain how each can apply to the recruitment and hiring process.
		MG3.a.3.m: Discuss employment contracts.	**MG3.a.7.h:** Describe the common traits of an employment contract.
		MG3.a.4.m: Identify the benefits of orientation.	**MG3.a.8.h:** Defend the resources used to orient a new employee.
MG3.b: Assess methods for evaluating employees' performance and determining compensation, benefits, incentives and promotion.	**MG3.b.1.e:** Order several stages of developing responsibility.	**MG3.b.3.m:** Give examples of the benefits of professional development.	**MG3.b.8.h:** Analyze the benefits to the employer and the employee of professional development.
	MG3.b.2.e: Discuss different methods of motivating people to perform.	**MG3.b.4.m:** Illustrate several stages for an individual to gradually develop, maintain and improve particular skills.	**MG3.b.9.h:** Outline several stages of employee development within an organization (i.e., professional development, cross training, evaluation and goal setting).
		MG3.b.5.m: Relate performance to compensation received and how providing incentives affects performance.	**MG3.b.10.h:** Explain why and how employees' performance is evaluated for compensation and benefits and how it relates to goal-setting.

Learning Priority	Performance Indicators (By Grade Band)		
	PK-5	6-8	9-12
		MG3.b.6.m: Identify jobs that use varying types of performance measures to compensate the employees.	**MG3.b.11.h:** Review employee compensation plans, including benefit packages, incentive programs and performance measures that may be used to calculate compensation.
		MG3.b.7.m: Generalize the difference between promoting an employee from within a business versus hiring from outside.	**MG3.b.12.h:** Compare and contrast promoting an employee from within a business versus hiring from outside.
MG3.c: Recognize human resource department's activities relating to employee safety and equal treatment among employees, as required by laws and regulations.		**MG3.c.1.m:** Explain the human resources departments' role in advocating for the employees.	**MG3.c.4.h:** Summarize the value of the human resource department's advocacy for employees.
		MG3.c.2.m: Examine concerns for others' safety and health.	**MG3.c.5.h:** Evaluate health and safety issues related to workplace safety.
		MG3.c.3.m: Infer the impact of a legal issue on the classroom environment and a business environment.	**MG3.c.6.h:** Review legal issues (i.e., harassment, employee rights, privacy, drug testing, labor disputes, child labor, discrimination and substance abuse) and the potential impact to the business.
MG3.d: Describe human resources' involvement in the termination and transition of employees.		**MG3.d.1.m:** Discuss reasons why businesses reduce their workforce.	**MG3.d.2.h:** Examine internal and external reasons for termination of employees.
			MG3.d.3.h: Explain the obligations that a business has for displaced or transitioning employees.

When developing course content related to Management refer to additional standards, learning priorities and performance indicators associated with Accounting and Finance, Business Calculations, Business Communications, Business Law and Ethics, Economics, Entrepreneurship, Global Business, Management, Marketing and IT Foundations.

Wisconsin Standards for Business and Information Technology (B&IT)

Business / Content Area: MK/Marketing

Standard: BIT.MK1: Students will analyze the elements of the marketing mix, the interrelationships and how they affect sales and business processes.

Learning Priority	Performance Indicators (By Grade Band)		
	PK-5	**6-8**	**9-12**
MK1.a: Analyze the process used to obtain, develop, maintain and/or improve a product or service in response to market wants and needs.	**MK1.a.1.e:** Identify new products desired by consumers.	**MK1.a.4.m:** Identify ways to improve existing products and services.	**MK1.a.9.h:** Classify products in consumer categories (i.e., convenience, shopping or specialty) or industrial categories (i.e., raw materials, component parts and installations).
	MK1.a.2.e: Identify brand names.	**MK1.a.5.m:** Describe the process for new product or service development (i.e., conception, development and test marketing).	**MK1.a.10.h:** Identify methods/techniques to generate product or service ideas.
	MK1.a.3.e: Identify a global product and/or service.	**MK1.a.6.m:** Recognize the purpose of brands.	**MK1.a.11.h:** Identify the impact of the product life cycle on marketing decisions.
		MK1.a.7.m: Identify qualities of an effective brand.	**MK1.a.12.h:** Explain and apply the concept of the product mix.
		MK1.a.8.m: Discuss methods of developing new products that will succeed across national boundaries.	**MK1.a.13.h:** Describe factors used by business to position products/services.
			MK1.a.14.h: Explain the nature of product/service branding and bundling.
			MK1.a.15.h: Examine reasons for consumers to have brand loyalty.
			MK1.a.16.h: Identify examples of product/service extensions (i.e., product warranty, technical support).
			MK1.a.17.h: Predict how products/services may need to be modified to meet the needs of international customers.

Learning Priority	Performance Indicators (By Grade Band)		
	PK-5	**6-8**	**9-12**
MK1.b: Apply strategies used to determine and adjust product/service prices to maximize return and meet value perceptions.	**MK1.b.1.e:** Explain how price determines what consumers purchase.	**MK1.b.2.m:** Identify the factors that influence a product's price.	**MK1.b.6.h:** Identify pricing strategies (i.e., line, loss leader, psychological, penetration and skimming) and situations in which each is applicable.
		MK1.b.3.m: Explain the relationship between price and perceived quality.	**MK1.b.7.h:** Calculate a product's price using different pricing methods including the break-even point.
		MK1.b.4.m: Explain how consumer practices (i.e., shoplifting, improper returns) affect prices.	**MK1.b.8.h:** Explain the impact of government regulations and laws affecting pricing practices.
		MK1.b.5.m: Predict pricing based on demand, cost, etc. in both domestic and international/global competition.	**MK1.b.9.h:** Explain the impact of evolving technologies on the changing roles of buyers and sellers in determining price.
			MK1.b.10.h: Design a pricing strategy for a product that would be sold in a global market.
MK1.c: Identify, select, monitor and evaluate sales channels and distribution methods.	**MK1.c.1.e:** Identify where different products can be purchased.	**MK1.c.3.m:** Explain the difference between a buyer and a supplier/vendor.	**MK1.c.6.h:** Examine direct and indirect channels of distribution (i.e., wholesaler, agent and broker) and when each is most appropriate to use.
	MK1.c.2.e: Describe how products and/or services get to the customer.	**MK1.c.4.m:** Explain the role of the different levels of channel distribution (i.e., manufacturer, distributor, retailer).	**MK1.c.7.h:** Describe evolving technologies (i.e., the Internet) as a channel of distribution.
		MK1.c.5.m: Identify distribution options for international/global distribution.	**MK1.c.8.h:** Develop a distribution plan that would benefit a business internationally.
MK1.d: Implement appropriate strategies to communicate information about products and services to achieve a desired outcome.	**MK1.d.1.e:** Explain the role of advertising.	**MK1.d.4.m:** Explain types of promotion.	**MK1.d.8.h:** Evaluate factors used to determine media selection.
	MK1.d.2.e: Explain how advertising affects consumer purchases.	**MK1.d.5.m:** Identify the various media available for advertising.	**MK1.d.9.h:** Identify methods for evaluating the effectiveness of various forms of advertising.

	Performance Indicators (By Grade Band)		
Learning Priority	PK-5	6-8	9-12
	MK1.d.3.e: Give examples of personal selling.	**MK1.d.6.m:** Identify various forms of sales promotions (i.e., sweepstakes, coupons, etc.).	**MK1.d.10.h:** Evaluate media pricing in relations to reach and frequency.
		MK1.d.7.m: Examine the role of personal selling in the promotion mix.	**MK1.d.11.h:** Identify types of public relations activities.
			MK1.d.12.h: Develop a promotional plan for a product/service.
			MK1.d.13.h: Describe the purposes of various types of sales promotions (i.e., encouraging repeat purchases).
			MK1.d.14.h: Demonstrate the steps involved in the personal selling process.
MK1.e: Analyze the characteristics, motivations and behaviors of consumers.	**MK1.e.1.e:** Identify customer needs and reasons they buy goods and services.	**MK1.e.3.m:** Describe consumer differences.	**MK1.e.7.h:** Identify ways business can positive customer relationships.
	MK1.e.2.e: Identify customers and why they return to the same business.	**MK1.e.4.m:** Assess the factors that influence customer-business relationships.	**MK1.e.8.h:** Describe the impact of consumer differences (i.e., life stages and socioeconomic factors) on buying decisions.
		MK1.e.5.m: Explain ways companies show concern for customers.	**MK1.e.9.h:** Differentiate between ultimate consumers and other types of consumers (i.e., governments, business, nonprofit).
		MK1.e.6.m: Illustrate how social, cultural, technological, geographic and political factors influence customer buying behavior in different countries.	**MK1.e.10.h:** Differentiate between rational and emotional buying motives.
			MK1.e.11.h: Define market segmentation and describe how it is used.

	Performance Indicators (By Grade Band)		
Learning Priority	**PK-5**	**6-8**	**9-12**
			MK1.e.12.h: Identify tools of market segmentation and ways they can be used to identify target markets.
			MK1.e.13.h: Describe how consumer behavior and foreign markets can affect the elements of the marketing mix.
MK1.f: Perform marketing research and develop a marketing plan that meets to needs of a diverse stakeholder group.		**MK1.f.1.m:** Use marketing research techniques to identify domestic and global needs and wants.	**MK1.f.2.h:** Identify the reasons for conducting marketing research.
			MK1.f.3.h Identify and collect primary and secondary data for a new product/service proposal.
			MK1.f.4.h: Estimate the product life cycle of a product/service in an international market.
			MK1.f.5.h: Develop a comprehensive marketing plan for either a domestic or international product/service.

When developing course content related to Marketing refer to additional standards, learning priorities and performance indicators associated with Accounting and Finance, Business Communications, Business Law and Ethics, Economics, Entrepreneurship, Global Business, Management, Marketing, IT Foundations and Digital Communications.

Wisconsin Standards for Business and Information Technology (B&IT)

Business / Content Area: PF/Personal Finance

Standard: BIT.PF1: Students will apply reliable information and systematic decision-making when buying goods and services.

Learning Priority	Performance Indicators (By Grade Band)		
	PK-5	**6-8**	**9-12**
PF1.a: Apply proper decision-making practices for wise shopping.	**PF1.a.1.e:** Define store brand products/services.	**PF1.a.3.m:** Compare the quality and prices for store and name brand products/services.	**PF1.a.5.h:** Evaluate and apply personal purchasing habits.
	PF1.a.2.e: Define name-brand products/services.	**PF1.a.4.m:** Examine if choices are wants or needs.	**PF1.a.6.h:** Explain the importance of comparison shopping.
PF1.b: Summarize major consumer protection laws.	**PF1.b.1.e:** Compare product return policies at local retail stores.	**PF1.b.2.m:** Identify deceptive business practices that consumer protection laws forbid.	**PF1.b.4.h:** Assess steps in resolving a consumer complaint.
		PF1.b.3.m: Identify consumer protection agencies.	**PF1.b.5.h:** Research online and printed sources of up-to-date information about consumer rights.

Standard: BIT.PF2: Students will manage money effectively by developing financial goals and budgets.

Learning Priority	PK-5	6-8	9-12
PF2.a: Evaluate financial institutions in order to meet individual needs.	**PF2.a.1.e:** Define financial institutions.	**PF2.a.3.m:** Explain how financial institutions operate and how they benefit consumers.	**PF2.a.5.h:** Compare and contrast the services offered by financial institutions.
	PF2.a.2.e: Identify types of accounts.	**PF2.a.4.m:** Research and define financial institution terminology.	**PF2.a.6.h:** Explain the roles of FDIC (Federal Deposit Insurance Corp.) and NCUA (National Credit Union Association).
			PF2.a.7.h: Explain the purpose and examine the role of the Federal Reserve System.
PF2.b: Describe methods to transfer ownership of money.	**PF2.b.1.e:** Identify different ways that money is exchanged.	**PF2.b.2.m:** Define electronic banking.	**PF2.b.5.h:** Compare advantages and disadvantages of electronic banking for individuals and business.
		PF2.b.3.m: Describe the procedures of using various payment methods.	**PF2.b.6.h:** Analyze and choose appropriate payment options for business and personal transactions.
		PF2.b.4.m: Recognize the safety precautions for electronic banking.	**PF2.b.7.h:** Compare and contrast personal financial precaution plans.

	Performance Indicators (By Grade Band)		
Learning Priority	**PK-5**	**6-8**	**9-12**
PF2.c: Create a plan for spending and saving to meet individual goals.	**PF2.c.1.e:** Give examples of household expense categories and sources of income.	**PF2.c.3.m:** Explain how to use a budget to manage spending and achieve financial goals.	**PF2.c.5.h:** Identify and prioritize financial goals.
	PF2.c.2.e: Describe how to allocate a weekly allowance among the financial goals of spending, saving and sharing.	**PF2.c.4.m:** Identify the components of a personal budget.	**PF2.c.6.h:** Discuss the components of a personal budget, including income, planned saving, taxes and fixed/variable expenses.
PF2.d: Develop a system for keeping and using financial records.	**PF2.d.1.e:** Identify personal assets and estimate their values.	**PF2.d.2.m:** Discuss the use of a file system for personal financial documents.	**PF2.d.3.h:** Develop, monitor and modify a personal financial plan.
PF2.e: Describe the role of taxes.	**PF2.e.1.e:** Explain the meaning and purpose of taxes.	**PF2.e.3.m:** Discuss the ethics of paying taxes.	**PF2.e.5.h:** Analyze the different types of taxes.
	PF2.e.2.e: Cite examples of how the government uses tax revenue.	**PF2.e.4.m:** Identify sources of tax revenue.	**PF2.e.6.h:** Evaluate how taxes can affect personal/business financial planning.
PF2.f: Correctly report income and taxes.		**PF2.f.1.m:** Identify taxable income and employee benefits.	**PF2.f.4.h:** Evaluate how income and employee benefits affect taxes.
		PF2.f.2.m: Define and explain the purpose of a Form W-2.	**PF2.f.5.h:** Explain the purpose and the effect of take-home pay of changing the allowances claimed on employment tax forms.
		PF2.f.3.m: Define and explain the purpose of Form 1099-INT.	**PF2.f.6.h:** Prepare and evaluate personal tax forms and accompanying schedules at the Federal and State levels.
Standard: BIT.PF3: Students will evaluate savings and investment options and implement a diversified investing strategy that is compatible with personal goals.			
PF3.a: Apply strategies and evaluate financial information when creating wealth/building assets.	**PF3.a.1.e:** Explain the principle of savings.	**PF3.a.6.m:** Explain the concept of "time value" of money.	**PF3.a.12.h:** Compare and contrast the effect "compounding interest" versus "simple interest."
	PF3.a.2.e: Define opportunity cost.	**PF3.a.7.m:** Apply the principle of "pay yourself first."	**PF3.a.13.h:** Identify and assess various means of building wealth.

	Performance Indicators (By Grade Band)		
Learning Priority	**PK-5**	**6-8**	**9-12**
	PF3.a.3.e: Describe ways that people can cut expenses to save more of their incomes.	PF3.a.8.m: Define the difference between income and wealth.	PF3.a.14.h: Assess factors that influence financial planning.
	PF3.a.4.e: List examples of financial decisions and their possible consequences.	PF3.a.9.m: Cite examples of how saving money can improve financial well-being.	PF3.a.15.h: Compare and contrast a plan which demonstrates responsibility for financial well-being over a lifetime.
	PF3.a.5.e: Identify ways to be a financially responsible youth.	PF3.a.10.m: Identify ways to be a financially responsible young adult.	PF3.a.16.h: Evaluate ethical considerations of various personal financial decisions.
		PF3.a.11.m: Identify sources of financial information.	PF3.a.17.h: Project and substantiate the role of philanthropy, volunteer service and charities in the community development and quality of life.
PF3.b: Describe the relationship between saving and investing.	PF3.b.1.e: Define investing.	PF3.b.4.m: Differentiate between income and investment growth.	PF3.b.7.h: Explain the role of revenue-generating assets in building wealth.
	PF3.b.2.e: Differentiate between saving and investing.	PF3.b.5.m: Describe reasons for saving and investing.	PF3.b.8.h: Explain how government agencies regulate financial markets.
	PF3.b.3.e: Identify various methods of savings.	PF3.b.6.m: Differentiate between various savings/investing options.	PF3.b.9.h: Compare and contrast the risk, return and liquidity of various savings and investment alternatives.
PF3.c: Demonstrate ability to use decision-making processes in making financial decisions related to planning, saving and investing.	PF3.c.1.e: Describe reasons to save.	PF3.c.2.m: Breakdown budgeted financial costs to actual costs.	PF3.c.4.h: Develop and justify the best investment and/or savings options to achieve particular goals.
		PF3.c.3.m: Determine the average, medium or estimated costs of major life events.	PF3.c.5.h: Identify the purpose of retirement planning through various retirement options.
			PF3.c.6.h: Assess the advantages of employer-sponsored and other retirement savings plans.

Standard: BIT.PF4: Students will examine factors that affect incurring debt, cost of credit and legal aspects of credit in order to remain both creditworthy and financially secure.			
	Performance Indicators (By Grade Band)		
Learning Priority	**PK-5**	**6-8**	**9-12**
PF4.a: Identify the costs and benefits of various types of credit.	**PF4.a.1.e:** Explain the difference between buying with cash and buying with credit.	**PF4.a.2.m:** Compare and contrast the total cost of repaying a loan.	**PF4.a.4.h:** Identify and evaluate credit products and services.
		PF4.a.3.m: Describe the advantages and disadvantages of using credit.	**PF4.a.5.h:** Explain all credit card disclosure terms.
			PF4.a.6.h: Compare and contrast the cost of various types of credit.
			PF4.a.7.h: Analyze sources of consumer credit.
			PF4.a.8.h: Evaluate the difference between positive debt and negative debt.
PF4.b: Explain the purpose of a credit record and identify borrowers' credit report rights.	**PF4.b.1.e:** Describe the qualities that would be desirable in a person who borrows a favorite personal possession.	**PF4.b.3.m:** Explain why it is important to establish positive credit history.	**PF4.b.6.h:** Identify the 5 elements of credit worthiness.
	PF4.b.2.e: Give examples of reasonable conditions to set for the use of borrowed personal property.	**PF4.b.4.m:** Identify credit report organizations and explain the value of credit reports to borrowers and to lenders.	**PF4.b.7.h:** Explain how a credit score and credit reports affect creditworthiness and the cost of credit.
		PF4.b.5.m: Identify appropriate uses of a credit report.	**PF4.b.8.h:** Examine the factors that improve a credit score.
			PF4.b.9.h: Analyze the information contained in a credit report, indicate the time that certain negative data can be retained and describe how to dispute inaccurate entries.
PF4.c: Describe ways to avoid or correct credit problems.	**PF4.c.1.e:** List ways to avoid credit problems.	**PF4.c.2.m:** Identify possible indicators of excessive debt.	**PF4.c.3.h:** Construct actions that a consumer could take to reduce or better manage excessive debt.
			PF4.c.4.h: Describe major causes of bankruptcy.

Learning Priority	Performance Indicators (By Grade Band)		
	PK-5	6-8	9-12
PF4.d: Summarize major consumer credit laws and methods of fraud protection.		**PF4.d.1.m:** Identify protection examples derived from consumer credit laws.	**PF4.d.2.h:** Interpret consumer credit laws and the protections that they provide.
			PF4.d.3.h: Construct ways consumers can take to reduce risks to identity theft.
Standard: BIT.PF5: Students will explain the features and roles of insurance when making choices available to consumers for protection against risk and financial loss.			
PF5.a: Identify common types of risks and basic risk management.	**PF5.a.1.e:** Identify examples of risks that individuals and households face.	**PF5.a.3.m:** Discuss the relationship between risk and insurance.	**PF5.a.5.h:** Describe methods people use to manage risk.
	PF5.a.2.e: Recognize the importance of protection against financial loss.	**PF5.a.4.m:** Explain how to reduce financial risk to self, family and community.	**PF5.a.6.h:** Evaluate insurance needs based on the types of risks.
PF5.b: Integrate and apply concepts related to personal financial risk, protection from loss and financial planning.	**PF5.b.1.e:** List valuable items that households commonly own.	**PF5.b.4.m:** Describe the need for and value of different types of insurance.	**PF5.b.6.h:** Investigate and apply different types of insurance coverage to selected situations.
	PF5.b.2.e: Describe how valuable items might be damaged or lost; identify ways to protect them.	**PF5.b.5.m:** Define basic insurance terminology.	**PF5.b.7.h:** Compare insurance rates, premiums and deductibles.
	PF5.b.3.e: Define insurance and explain the basic premise behind insurance.		

When developing course content related to Personal Finance refer to additional standards, learning priorities and performance indicators associated with Accounting and Finance, Business Calculations, Business Communications, Business Law and Ethics, Economics, Entrepreneurship, Global Business, Marketing and IT Foundations.

Wisconsin Standards for Business and Information Technology (B&IT)

Information Technology / Content Area: DGC/Digital and Graphic Communication

Standard: BIT.DGC1: Students will create print-quality publications for intended audiences or purposes through the use of advanced layout, design and graphics production software and hardware.

Learning Priority	Performance Indicators (By Grade Band)		
	PK-5	**6-8**	**9-12**
DGC1.a: Use desktop publishing software to produce a variety of publications (i.e., flyers, newsletters, brochures, instructional manuals).	**DGC1.a.1.e:** Create a document or publication with text, page border and clipart.	**DGC1.a.3.m:** Create a document or publication incorporating text, columns, graphics, borders and shading.	**DGC1.a.5.h:** Design and create complex publications.
	DGC1.a.2.e: Insert clipart and other graphics to enhance documents or publications.	**DGC1.a.4.m:** Create publications using templates.	**DGC1.a.6.h:** Use technical skills (i.e., pagination, printing, folding, cutting, binding) to produce publishable materials.
			DGC1.a.7.h: Import and export text, data and graphics between software programs.
DGC1.b: Apply elements of design (contrast, repetition, alignment, proximity) when creating publications.	**DGC1.b.1.e:** Enhance documents or publications with fonts, font effects and font color.	**DGC1.b.3.m:** Enhance documents using paragraph and page alignment.	**DGC1.b.5.h:** Use styles to apply layout and design concepts to create publications that communicate effectively to readers.
	DGC1.b.2.e: Select borders and shading to enhance documents.	**DGC1.b.4.m:** Apply typography concepts using a variety of fonts appropriately to differentiate text.	**DG1.b.6.h:** Differentiate typography for publications in a digital and print format.

Standard: BIT.DGC2: Students will design and publish effective web pages and websites.

Learning Priority	PK-5	6-8	9-12
DGC2.a: Design and create dynamic websites.	**DGC2.a.1.e:** Access, navigate and use online resources.	**DGC2.a.4.m:** Identify and explain various types of online resources.	**DGC2.a.8.h:** Compare and contrast various Internet protocols.
	DGC2.a.2.e: Identify the components of a web page.	**DGC2.a.5.m:** Design and create web pages incorporating various types of media (text, images, video and audio).	**DGC2.a.9.h:** Identify needs of client and target audience.
	DGC2.a.3.e: Design a website using a template.	**DGC2.a.6.m:** Design and create websites incorporating navigation and linking.	**DGC2.a.10.h:** Apply appropriate web design elements.
		DGC2.a.7.m: Publish web pages and websites on local and remote systems.	**DGC2.a.11.h:** Design and create websites for multiple platforms.

Learning Priority	PK-5	6-8	9-12
			DGC2.a.12.h: Create readable, searchable, accessible and sticky content.
			DGC2.a.13.h: Research and apply accessibility guidelines and laws that affect website design.
			DGC2.a.14.h: Research and analyze hosting and domain name solutions.
			DGC2.a.15.h: Compare and contrast the features of web development software.
			DGC2.a.16.h: Use websites to generate revenue.
			DGC2.a.17.h: Design, develop and deliver advanced web content and applications using authoring tools.
			DGC2.a.18.h: Analyze web server solutions and platforms.
			DGC2.a.19.h: Build dynamic web elements utilizing scripting, coding and database integration.
Standard: BIT.DGC3: Students will produce media-rich presentations to meet need of audience.			
DGC3.a: Capture an audio sequence on a digital device.	**DGC3.a.1.e:** Demonstrate audio recording and editing abilities.	**DGC3.a.2.m:** Enhance audio recordings with audio editing software.	**DGC3.a.3.h:** Transfer edited audio to a portable device.
DGC3.b: Apply various techniques in a video editing sequence on a digital device.	**DGC3.b.1.e:** Record movies with a digital device.	**DGC3.b.2.m:** Transfer digital video recordings to another digital device.	**DGC3.b.4.h:** Transfer edited video to portable media and storage devices.
		DGC3.b.3.m: Create an edited video sequence from captured video files.	**DGC3.b.5.h:** Capture digital video using various techniques (i.e. lighting, angles, etc.).
DGC3.c: Design and produce media-rich presentations.	**DGC3.c.1.e**: Create an edited video sequence from captured digital image files.	**DGC3.c.2.m:** Import digital images, audio and video files.	**DGC3.c.3.h:** Create media-rich presentations for a target audience incorporating digital images, audio and video files.
			DGC3.c.4.h: Convert data between media and file formats.

	Performance Indicators (By Grade Band)		
Learning Priority	**PK-5**	**6-8**	**9-12**
			DGC3.c.5.h: Analyze the purpose of the media to determine the appropriate file format and level of compression.
Standard: BIT.DGC4: Students will create digital images for use in publications, websites, digital slide shows and videos.			
DGC4.a: Prepare images for use in a variety of media.	**DGC4.a.1.e:** Resize and crop images.	**DGC4.a.5.m:** Identify image file formats.	**DGC4.a.9.h:** Convert digital image file format to meet software requirements.
	DGC4.a.2.e: Identify landscape and portrait images.	**DGC4.a.6.m:** Modify brightness, contrast, color, resolution and transparency of digital images.	**DGC4.a.10.h:** Explain the purpose for multiple image formats.
	DGC4.a.3.e: Identify close-up and distant images.	**DGC4.a.7.m:** Use image editing software to correct and enhance images	**DGC4.a.11.h:** Prepare images for professional reproduction and distribution.
	DGC4.a.4.e: Create graphic images in a drawing program.	**DGC4.a.8.m:** Create graphic images using image editing software.	**DGC4.a.12.h:** Compare and contrast capabilities of photo editing software.
DGC4.b: Capture images using a digital device.	**DGC4.b.1.e:** Demonstrate the safe and proper care of digital cameras and devices.	**DGC4.b.6.m:** Rename digital images.	**DGC4.b.11.h:** Explain the function of camera modes.
	DGC4.b.2.e: Demonstrate proper camera handling techniques.	**DGC4.b.7.m:** Transfer captured digital images to another digital device.	**DGC4.b.12.h:** Adjust camera settings based on lighting, action, distance to subject, portrait or landscape.
	DGC4.b.3.e: Capture digital images using point and shoot.	**DGC4.b.8.m:** Insert captured digital images in print or media projects.	**DGC4.b.13.h:** Compose digital images using various techniques (i.e., framing, angles, balance and lines).
	DGC4.b.4.e: Place digital images in a designated folder.	**DGC4.b.9.m:** Organize digital images in subfolders.	**DGC4.b.14.h:** Use compression tools to package folders containing image files.
	DGC4.b.5.e: Scan an image.	**DGC4.b.10.m:** Modify scanner settings when scanning images.	**DGC4.b.15.h:** Compare and contrast features of scanning devices.

Wisconsin Standards for Business and Information Technology (B&IT)

Information Technology / Content Area: IT/IT Foundations

Standard: BIT.IT1: Students will use an appropriate digital tool to meet personal and business needs.

	Performance Indicators (By Grade Band)		
Learning Priority	**PK-5**	**6-8**	**9-12**
IT1.a: Develop and refine proper use of input technologies.	**IT1.a.1.e:** Demonstrate the correct finger placement and reaches. (Recommended minimum: 5 wpm x grade level).	**IT1.a.4.m:** Demonstrate the touch method of keyboarding on an alphanumeric keyboard at acceptable speed and accuracy levels. (Recommended minimum: 5 wpm x grade level).	**IT1.a.7.h:** Demonstrate the touch method of keyboarding on an alphanumeric keyboard at acceptable speed and accuracy levels. (Recommended minimum: 5 wpm x grade level).
	IT1.a.2.e: Identify and apply the components of correct keyboarding technique.	**IT1.a.5.m:** Demonstrate the touch method of keyboarding on a numeric keypad.	**IT1.a.8.h:** Demonstrate the touch method of keyboarding on a numeric keypad (suggested range 195-220 kspm).
	IT1.a.3.e: Input data into various digital devices (i.e., tablets, hand-held devices).	**IT1.a.6.m:** Demonstrate various methods of inputting non-text data, such as pictures, videos and music.	**IT1.a.9.h:** Use multiple input technologies (i.e., voice recognition, scribe tablets, scanners) to input data.
IT1.b: Select and use appropriate features of a word processor to organize and effectively communicate information.	**IT1.b.1.e:** Apply reviewing features of a word processor such as spell check, grammar check and thesaurus.	**IT1.b.4.m:** Identify the various proofreader marks and define their meaning.	**IT1.b.9.h:** Automate tasks using mail merge and macro options.
	IT1.b.2.e: Prepare documents in a timely fashion without errors.	**IT1.b.5.m:** Produce functional letters, memos and reports.	**IT1.b.10.h:** Enhance usability of documents using advanced tools such as bookmarks, section breaks, headers and footers.
	IT1.b.3.e: Use existing graphics to enhance the appearance of documents.	**IT1.b.6.m:** Organize information using the automatic table features of a word processor.	**IT1.b.11.h:** Develop and apply templates to expedite document creation.
		IT1.b.7.m: Customize documents using formatting such as alignment, spacing, themes, borders and ordered and unordered lists.	**IT1.b.12.h:** Create forms and protected documents for multiple-user situations.

	Performance Indicators (By Grade Band)		
Learning Priority	**PK-5**	**6-8**	**9-12**
		IT1.b. 8.m: Create and manipulate graphics to enhance the appearance of documents.	**IT1.b.13.h:** Collaborate on documents using multi-user features such as tracking changes, merging documents and online collaboration.
IT1.c: Select and use appropriate features of a spreadsheet program to organize and effectively communicate information.	**IT1.c.1.e:** Input data into a spreadsheet.	**IT1.c.3.m:** Enhance a spreadsheet visually using fonts, colors and graphics.	**IT1.c.6.h:** Generate advanced formulas and functions to perform calculations.
	IT1.c.2.e: Illustrate data through graphs and charts.	**IT1.c.4.m:** Generate formulas to perform calculations.	**IT1.c.7.h:** Create and analyze pivot-table charts to help solve business problems.
		IT1.c.5.m: Analyze numerical and graphic data in a spreadsheet.	**IT1.c.8.h:** Analyze data using various scenarios and goal-seeking to make business decisions.
			IT1.c.9.h: Enhance user-friendliness of spreadsheets using conditional formatting, data validation and comments.
			IT1.c.10.h: Analyze data relevant to a specific business problem by utilizing sorts and filters.
IT1.d: Select and use appropriate features of presentation tools to communicate effectively.	**IT1.d.1.e:** Create a digital presentation.	**IT1.d.2.m:** Enhance a presentation visually using graphics, sounds, diagrams, animation and transitions.	**IT1.d.5.h:** Synthesize information by embedding spreadsheets and charts in a presentation.
		IT1.d.3.m: Create linear and non-linear presentations using hyperlinks.	**IT1.d.6.h:** Automate presentation tasks using macros, timings and narration.
		IT1.d.4.m: Customize a presentation for a given situation by modifying design templates with color schemes and custom backgrounds.	**IT1.d.7.h:** Enhance usability of a presentation by using notes pages, comments, action buttons and custom shows.
			IT1.d.8.h: Integrate various types of media to effectively communicate in a business situation.

Learning Priority	Performance Indicators (By Grade Band)		
	PK-5	**6-8**	**9-12**
IT1.e: Discuss and demonstrate use of emerging technologies as appropriate to a given task.	**IT1.e.1.e:** Explore emerging technology of various types.	**IT1.e.3.m:** Compare and contrast acceptable and unacceptable uses of emerging technology.	**IT1.e.5.h:** Analyze a business task and apply the most appropriate emerging tool for the situation.
	IT1.e.2.e: Demonstrate the use of emerging technology for an academic setting.	**IT1.e.4.m:** Apply an emerging technology tool appropriately to a given situation.	**IT1.e.6.h:** Demonstrate proficiency in the use of a variety of emerging technologies.
			IT1.e.7.h: Analyze the impact of technological advances on society and individual users.
IT1.f: Select and use the most appropriate tool to solve digital problems.	**IT1.f.1.e:** Identify software and/or tools appropriate for a specific task.	**IT1.f.3.m:** Use help features and reference materials to learn software and tools to solve problems.	**IT1.f.7.h:** Compare and contrast software and tool features from multiple vendors/providers in solving a problem.
	IT1.f.2.e: Prepare projects that include a variety of media.	**IT1.f.4.m:** Create projects collaboratively.	**IT1.f.8.h:** Research advanced software/tool functions using knowledge-based options (i.e., user communities, RSS feeds, tech support, etc.).
		IT1.f.5.m: Identify personal technology needs and budget.	**IT1.f.9.h:** Identify and analyze user needs within an organization and propose digital solutions.
		IT1.f.6.m: Identify and research sources of information about hardware, software and other tools.	

Standard: BIT.IT2: Students will evaluate and maintain current and emerging hardware as it relates to configuring, installing, upgrading, diagnosing and repairing.

Learning Priority	PK-5	6-8	9-12
IT2.a: Identify hardware components inside and outside of a digital device and distinguish which hardware devices would benefit certain tasks.	**IT2.a.1.e:** Identify commonly used peripheral devices, such as monitor, keyboard, mouse, mobile devices, scanners and cameras.	**IT2a.4.m:** Demonstrate the use of a variety of printer functions.	**IT2a.7.h:** Analyze the life cycle of hardware with consideration of cost.
	IT2.a.2.e: Identify commonly used output devices, such as speakers, printer and projector.	**IT2a.5.m:** Compare and contrast types of storage devices.	**IT2a.8.h:** Identify the best storage option for a given task.
	IT2.a.3.e: List and define hardware components.	**IT2a.6.m:** Identify internal components of an electronic device.	**IT2a.9.h:** Evaluate various types of hardware and recommend the proper usage for a given task.

	Performance Indicators (By Grade Band)		
Learning Priority	**PK-5**	**6-8**	**9-12**
IT2.b: Perform basic troubleshooting and maintenance for various hardware components as needed.	**IT2.b.1.e:** Recognize a basic hardware problem such as computer freeze, inability to print, mouse not functional, etc.	**IT2.b.3.m:** Determine which peripheral device is causing a problem and take steps to correct it.	**IT2.b.5.h:** Diagnose problems with hardware and peripheral devices and recommend or provide a solution.
	IT2.b.2.e: Demonstrate proper maintenance of computers and peripheral devices.	**IT2.b.4.m:** Customize hardware and software to optimize efficiency.	**IT2.b.6.h:** Analyze problems with internal hardware and perform repairs as necessary.
Standard: BIT.IT3: Students will describe, organize, create and maintain a database management system.			
IT3.a: Organize information using a database management system.	**IT3.a.1.e:** Define terminology related to databases, such as data, sort and query.	**IT3.a.3.m:** Create and edit fields and records within a database.	**IT3.a.5.h:** Plan the structure of and create a database using original information.
	IT3.a.2.e: Collect data suitable for a database and recognize how information is sorted.	**IT3.a.4.m:** Create tables in a database to organize information.	**IT3.a.6.h:** Create forms to enable other database users to enter information.
			IT3.a.7.h: Modify the record structure as necessary to fit an appropriate situation.
IT3.b: Solve personal and business problems using advanced database features.	**IT3.b.1.e:** Use a digital database to find information.	**IT3.b.2.m:** Perform queries to summarize information from a database.	**IT3.b.5.h:** Construct advanced reports and queries to summarize important information from a database.
		IT3.b.3.m: Perform sorts to organize information from a database.	**IT3.b.6.h:** Analyze information retrieved from a database to make a recommendation for a business situation.
		IT3.b.4.m: Differentiate among various types of information that may be stored in a database.	**IT3.b.7.h:** Analyze components of a database to create relationships among them.
			IT3.b.8.h: Compare and contrast the use of a database management system with other methods of organizing information.

Wisconsin Standards for Business and Information Technology (B&IT)

Information Technology / Content Area: NT/Networking

Standard: BIT.NT1: Students will analyze network system needs and requirements.

Learning Priority	Performance Indicators (By Grade Band)		
	PK-5	**6-8**	**9-12**
NT1.a: Apply networking terminology to a networking environment.	**NT1.a.1.e:** Recognize how to log in to a network.	**NT1.a.6.m:** Identify the purposes of a network operating system.	**NT1.a.11.h:** Analyze how the components of a network operating system support network operations.
	NT1.a.2.e: Demonstrate the proper use of devices connected to a network.	**NT1.a.7.m:** Recognize storage benefits of WAN, LAN and other device dependent locations.	**NT1.a.12.h:** Identify licensing requirements.
	NT1.a.3.e: Repeat the process of saving using a WAN, LAN and a device dependent storage location.	**NT1.a.8.m:** Identify what it means to log in to a network and server.	**NT1.a.13.h:** Differentiate between local area networks (LAN) and wide area networks (WAN).
	NT1.a.4.e: Recognize the correct network printer.	**NT1.a.9.m:** Install and configure a wireless printer.	
	NT1.a.5.e: Recognize a wireless network and be able to connect.	**NT1.a.10.m:** Add a network device and other computer peripherals.	
NT1.b: Evaluate network devices, including network connectivity hardware and describe their functions.	**NT1.b.1.e:** Recognize an Internet connection.	**NT1.b.2.m:** Sketch a diagram of a digital device connected to a network.	**NT1.b.5.h:** Describe hardware components for a network.
		NT1.b.3.m: Distinguish among network environments.	**NT1.b.6.h:** Assess software requirements for a network.
		NT1.b.4.m: Identify hardware components of a network.	**NT1.b.7.h:** Develop the system requirements for a network.
			NT1.b.8.h: Assess security requirements and defend the need for data protection.
			NT1.b.9.h: Construct a network diagram to be deployed in a specified environment.
			NT1.b.10.h: Compare and contrast various network operating systems.
			NT1.b.11.h: Implement server virtualization.

When developing course content related to Networking refer to additional standards, learning priorities and performance indicators associated with Business Communications, Business Law and Ethics, IT Foundations, Digital Graphics and Communications and Programming/Applications Development.

Wisconsin Standards for Business and Information Technology (B&IT)

Information Technology / Content Area: PR/Programming and Applications Development

Standard: BIT.PR1: Students will assess customer needs and develop an appropriate software or application solution.

Learning Priority	Performance Indicators (By Grade Band)		
	PK-5	**6-8**	**9-12**
PR1.a: Demonstrate knowledge of the programming or application development process.	**PR1.a.1.e:** Define basic programming vocabulary.	**PR1.a.6.m:** Identify the development or problem- solving process.	**PR1.a.8.h:** Produce IT-based strategies and project plan to solve a specific problem.
	PR1.a.2.e: Describe how a program or application controls a device.	**PR1.a.7.m:** Compare and contrast multiple languages and their development.	**PR1.a.9.h:** Identify and explain the steps in the systems development life cycle.
	PR1.a.3.e: Identify that a program or application controls a device and its generated output.		**PR1.a.10.h:** Identify and analyze customer software needs and requirements.
	PR1.a.4.e: Identify typical programs that are used to control a digital device.		**PR1.a.11.h:** Identify and describe various structured analysis and design tools.
	PR1.a.5.e: State the purpose of programming languages.		**PR1.a.12.h:** Develop a testing and conversion plan.
			PR1.a.13.h: Develop a training plan and perform training.
			PR1.a.14.h: Describe the impact of operating systems on the development process.
PR1.b: Analyze and design information systems and/or games using appropriate development tools.		**PR1.b.1.m:** Convert a word problem into code using top-down design.	**PR1.b.5.h:** Use appropriate code to produce a computer application.
		PR1.b.2.m: Select appropriate data types.	**PR1.b.6.h:** Incorporate appropriate human interface design principles.
		PR1.b.3.m: Write structured program code.	**PR1.b.7.h:** Create a flow chart that details a process (flow of data through processing systems, operations and sequence).
		PR1.b.4.m: Diagram the scope and values of variables during execution of a simple program.	**PR1.b.8.h:** Apply design principles to programming tasks.
			PR1.b.9.h: Select and use an appropriate compiler.

	Performance Indicators (By Grade Band)		
Learning Priority	**PK-5**	**6-8**	**9-12**
			PR1.b.10.h: Develop and select appropriate algorithms and data structures to solve problems.
			PR1.b.11.h: Develop design specifications for record types, output and data stores.
PR1.c: Perform quality assurance tasks to produce a quality product.		**PR1.c.1.m:** Analyze the strengths and weaknesses of a current product.	**PR1.c.3.h:** Test, debug and document an application.
		PR1.c.2.m: Test and analyze ready-made applications and programs.	**PR1.c.4.h:** Perform maintenance and customer support functions.
			PR1.c.5.h: Generate a program that can be run through either an executable file or web-based application.

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Section V

Connecting Career and Technical Education to the Common Core State Standards

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Connecting Career and Technical Education to the Common Core State Standards

Introduction

In Wisconsin, the education vision is for every child to graduate ready for postsecondary education and the workforce—to be college and career ready. To achieve this vision, students must develop the skills to think, read, communicate and perform in many academic contexts. Since students must develop these specific skills, every educator must consider how students learn in their discipline.

In 2010, State Superintendent Tony Evers officially adopted the Common Core State Standards (CCSS) in English Language Arts, Mathematics and Literacy in All Subjects Areas.   The CCSS in Mathematics and English Language Arts are designed to be focused and coherent. Each is anchored in college and career readiness; as well as evidence and research-based. The CCSS signify the need to change practice in at least three areas: content, instruction and assessments. Building on the strength of the Common Core State Standards and the **Wisconsin Standards for Career and Technical Education**, educators in CTE must be knowledgeable in how both CTE and CCSS standards are addressed in their classrooms. Connections between the CCSS and CTE come in two forms.

Making the Connection: CCSS and CTE Content

1. **Integration with Disciplinary Literacy (Literacy in All Subjects) and Standards for Mathematical Practice**

   - **Standards and Instruction**- The knowledge and skills students learn in conjunction with content standards to assist students in reading, writing, speaking, listening and computing while using the specific knowledge and skills of the content area.
   - **Assessment** - Standards should be measured through multiple assessments including performance-based assessments, like those used in CTE to measure technical skill attainment.

2. **Direct "return on investment" within course content where standards from other content areas are embedded:**

   - **Standards and Instruction** -- The use of multiple sets of standards to create relevance of content for students; both CTE **AND** content/standards from other subjects.
   - **Assessment** -- Standards should be measured through multiple assessments including performance-based assessments, like those used in CTE to measure technical skill attainment.
   - **Equivalency –** Equivalency *shows a one-to-one correlation between CCSS or other content areas such as science and social studies **and** CTE standards t*hrough a state approved equivalency process in conformity with the Wisconsin State Statute for equivalency credit (§ 118.33, Wis. Stats.). This is an option for CTE courses that prove to have sufficient academic content and are taught in a technical and applied setting.

When district administrators and teachers alike ask for "an alignment of CTE to the CCSS" there is uncertainty about what that means or looks like. It will take time for CTE and core teachers to review their standards before beginning to work collaboratively to see connections between sets of standards. The reality is that there is no easy "one-to-one" match between CTE and CCSS and other content standards—it is about changing the role of the teacher to not only be experts in their content area, but to engage in deep conversations with colleagues across all content areas to make strong connections for students.

The Connection

This visual shows the relationship of the CCSS and CTE Content that, when combined together and adding the standards from other content areas, ensures that students are college and career ready for further education in their chosen pathway.

CTE + Other Content Standards **+** Literacy in All Subjects Standards **+** Standards for Mathematical Practice **=** College and Career Ready Students
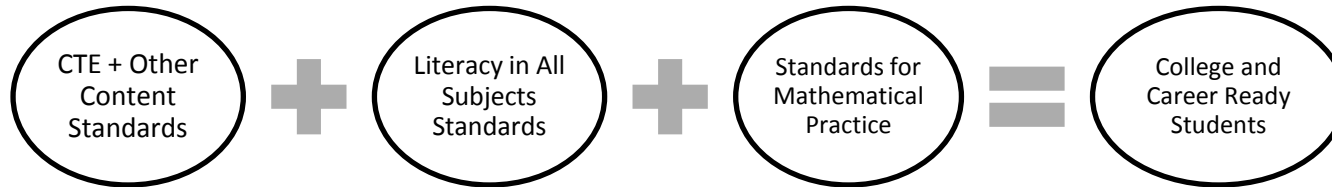
Literacy in All Subjects: The Shift

The shift in English language arts means a shared responsibility across all grade levels for all students. Extensive research establishes the need for college and career ready students to be proficient in reading both complex literary text and informational texts independently across a variety of content areas. Literacy, the ability to read, write, listen, speak, think critically and perform in different ways and for different purposes, begins to develop early and becomes increasingly important as students pursue specialized fields of study in high school and beyond. The Common Core State Standards (CCSS) for Literacy in All Subjects[†] are connected to college and career readiness standards that guide educators as they strive to help students meet the literacy challenges within each particular field of study. This national effort is referred to as "disciplinary literacy" that prepares students for college and career readiness.

In Wisconsin, disciplinary literacy is defined as the confluence of content knowledge, experiences and skills merged with the ability to read, write, listen, speak, think critically and perform in a way that is meaningful within the context of a given field.
~ Taken from "Literacy in All Subjects."

Disciplinary Literacy will look different in every classroom based upon the nature of the academic standards addressed within the course and the types of reading and writing required to convey knowledge. Students are reading texts to gain knowledge about the discipline; teachers are engaging students with questions and performance tasks; students are writing/composing/creating.
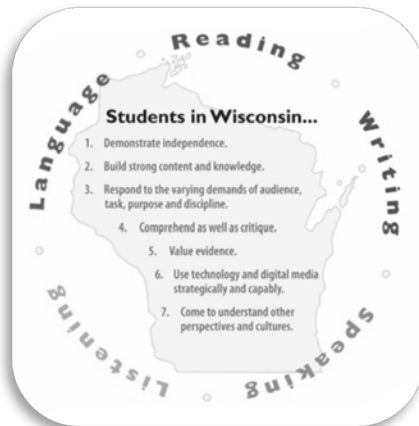
For the first time ever, the Common Core State Standards identify the specific literacy skills that should be a part of the Career and Technical Education (CTE) and other disciplines. The task, as experts, is to expose students to the authentic literacy activities of the discipline and teach students how to interact with content effectively. It is often taken for granted that by high school, students should be able to read what is given to them, but research now shows otherwise. The standards make it clear: Literacy must be taught—not assigned—within every classroom, every day.

"Literacy is a prerequisite to learning in all other subjects, especially as students are exposed to increasingly diverse and intricate texts from which they need to glean knowledge. Unfortunately, too many adolescents lack the literacy skills necessary to navigate the reading and writing requirements of high school and the future world in which they will work and live…While educators around the country are

seeking ways to address this [literacy] challenge, career and technical education (CTE) programs are stepping up to offer students a rigorous and relevant education rich in literacy content and strategies. CTE courses, often overlooked in academic discussions, can have a tremendous impact on students' literacy engagement and achievement and must be considered as part of the adolescent literacy solution."
~CTE's Role in Adolescent Literacy. Issue Brief, November 2009, Association for Career and Technical Education

Mathematical Practices: The Shift

"When today's students become adults, they will face new demands for mathematical proficiency that school mathematics should attempt to anticipate. Moreover, mathematics is a realm no longer restricted to a select few. All young Americans must learn to think mathematically and they must think mathematically to learn."

~Adding It Up, National Research Council, 2001

The shift in mathematics processes means students are able to transfer math skills and understanding across concepts and grades. Focus allows each student to think, practice and integrate new ideas into a growing knowledge structure. Mathematical proficiency is necessary for every student. Therefore, understanding concepts and being fluent are both important.

This means teaching more than *"how to get the answer"* and instead *support students' ability to access concepts* from a number of perspectives while demonstrating conceptual understanding of core math concepts by applying them to new situations. Teachers in content areas outside of math, particularly science and CTE, ensure students are using math at all grade levels to make meaning of and access content. Educators must intentionally engage students at all levels, so they are readily able to apply mathematics in their ever-changing world.

By combining the mathematical practices and CTE standards, it allows the teacher to build on students' prior learning from multiple content areas. Students are able to see the relevance of their learning in their chosen career pathway and deepen their learning by transferring skills and concepts.

Connecting to Other Content Area Standards
Career and Technical Education courses and programs are the quintessential convergence of standards from numerous content areas. Not only do students learn the knowledge and skills necessary for successful transition to college and careers, they also practice and apply their learning in real-life instructional situations that prepare them for specific entry-level careers and postsecondary studies. Along with CTE specific standards, students are also applying and reinforcing the standards learned in many other areas of study; such as, science, arts and creativity, social studies and mathematics. Educators should be considering how standards from other content areas are incorporated into instruction and assessments within CTE courses and units.
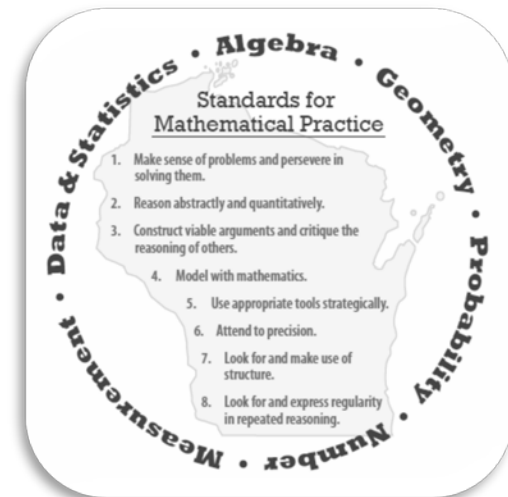
The Next Generation Science Standards (released in 2013) outline a set of "Scientific and Engineering Practices," as shown here, that all students should practice throughout their educational careers. These practices stress the importance of developing students' knowledge of how science and engineering achieve their ends while also strengthening their competency with related practices. Curriculum in CTE reinforces many of these practices and should also be considered in the development of activities and assessments.

Other standards, such as the Wisconsin Model Academic Standards for Personal Financial Literacy, National Content Standards for Entrepreneurship and the Career Cluster's Green/Sustainability Standards, can easily be embedded into CTE coursework curriculum and activities to reinforce the knowledge and skills that are important for every future employee and citizen.

Showcasing the connections made through CTE courses and programs serves to illustrate student mastery of all of these areas that make them truly ready for the next stage of their lives.

Performance Tasks
Wisconsin is a Smarter Balanced Assessment Consortium (SBAC) state, so the Theory of Action outlined by SBAC for creating performance tasks have been adapted for Wisconsin's classrooms. Performance tasks challenge students to apply their knowledge and skills to respond to real-world problems. They can best be described as collections of questions and activities that are coherently connected to a single theme or scenario. These activities are meant to measure capacities such as depth of understanding, research skills and complex analysis, which cannot be adequately assessed with selected- or constructed-response items.

When determining performance tasks, teachers need to determine *the purpose* of the performance task: Is the performance task going to plan, support, monitor or verify learning? Teachers need to determine *the type* of assessment the performance task is going to be: Is the performance task going to be a formative, benchmark or summative assessment?

Once that is decided, then teachers can design the performance task. A performance task presents students with a complex, real-world challenge in which the scenario, role, process and product are authentic; students must then demonstrate that they have the skills and knowledge to complete the task.

Elements of a performance task:
- Integrate knowledge and skills across multiple content standards or strands within a content area.
- Measure capacities such as depth of understanding, research skills, complex analysis and identification/providing of relevant evidence.
- Require student-initiated planning, management of information and ideas, interaction with other materials.
- Require production of extended responses, such as oral presentations, exhibitions and other scorable products, including more extended written responses, which might be revised and edited.
- Reflect a real-world task and/or scenario-based problem.
- Allow for multiple approaches.
- Represent content that is relevant and meaningful to students.

- Allow for demonstration of important knowledge and skills, including those that address 21st-century skills such as critically analyzing and synthesizing information presented in a variety of formats, media, etc.
- Require scoring that focuses on the essence of the task.
- Be feasible for the school/classroom environment.

In the next section there are examples of implementing CCSS into specific content areas through the use of performance tasks using sentence frames like the one shown below.

After reading/listening/viewing/researching _____ (texts), write/create/present _____ (product) for _____ (audience) that provides an/a explanation/argument/narrative _____ (content) so that _____ (purpose/so what).

† Transformed in Wisconsin from the Common Core State Standards for Literacy in Science, Social Studies, History and Technical Subjects.

Connecting Business and Information Technology to the Common Core State Standards

Connecting To Academic Standards through Performance Tasks
Once the purpose and type of performance task is decided, teachers can then design the performance task. A performance task presents students with a complex, real-world challenge in which the scenario, role, process and product are authentic; students must then demonstrate that they have the skills and knowledge to complete the task.

Displayed below is an example of a tool known as a sentence frame that may be used to develop a performance task in a Business and Information Technology (B&IT) course. Implementing CCSS may look different for every teacher, every program, every course and potentially every unit.   Once a performance task has been identified, then an instructor may connect the task to academic standards associated with the respective content area within Business and Information Technology, as well as within other academic areas.

(Example 1: grade 9-10 performance task in a financial course)

After reading/researching/listening/viewing multiple credit card offers online (texts), write/create/present a list of options that may fit students' individual needs (product) for the high school student who will pursue financial independence (audience) that provides a/an explanation/argument/narrative of benefits, interest rates and fees (content) so that informed decisions may be made using their line of credit (purpose/so what).

The following academic standard(s) are addressed through the performance task displayed above:

Business and Information Technology

> **PF4.a.4.h:** Identify and evaluate credit products and services.
> **PF4.a.6.h:** Compare and contrast the cost of various types of credit.
> **PF4.a.7.h:** Analyze sources of consumer credit.

Literacy Standards

> **Anchor Standard for Reading 1:** Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.
> **Anchor Standard for Reading 2:** Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon or concept; provide an accurate summary of the text.
> **Anchor Standard for Reading 4:** Determine the meaning of symbols, key terms and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9–10 texts and topics.
> **Anchor Standard for Writing 4:** Produce clear and coherent writing in which the development, organization and style are appropriate to task, purpose and audience.
> **Anchor Standard for Writing 7:** Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.

Mathematical Practices

> Make sense of problems and persevere in solving them.
> Reason abstractly and quantitatively.
> Construct viable arguments and critique the reasoning of others.

Other Content Standards Alignment
    Social Studies/Economics
    Mathematics
    Personal Financial Literacy

(Example 2: grade 11-12 performance task in a communications course)

After reading/researching/listening/viewing your school and/or district policy on fundraising (texts), write/create/present a business letter addressed to your chapter president that identifies at least three fundraising options (product) for your next membership meeting of Future Business Leaders of America-FBLA (audience) that provides a/an explanation/argument/narrative of each fundraising option and includes a forecast of estimated revenues and expenses (content) so that your members may debate options and make an official request seeking approval for at least one option to the school/district administration. (purpose/so what).

The following academic standard(s) are addressed through the performance task displayed above:
Business and Information Technology
    BC5.b.18.h: Develop direct, indirect and persuasive messages for appropriate situations.
    BC5.b.23.h: Compose a business letter.
    AF2.b.9.h: Forecast revenue and costs.
Literacy Standards
    Anchor Standard for Reading 2: Determine the central ideas or conclusions of a text; summarize complex concepts, processes or information presented in a text by paraphrasing them in simpler but still accurate terms.
    Anchor Standard for Writing 2: Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments or technical processes.
    Anchor Standard for Writing 4: Produce clear and coherent writing in which the development, organization and style are appropriate to task, purpose and audience.
Mathematical Practices
    Reason abstractly and quantitatively.
    Construct viable arguments and critique the reasoning of others.
    Use appropriate tools strategically.
    Attend to precision.
Other Content Standards Alignment
    Mathematics
    English language arts

The Value of Business and Information Technology
Through an example performance task, the documentation above identifies that the connection to academic standards extends far beyond the Business and Information Technology classroom. Critical knowledge and skills are developed through performance tasks which challenge a student to apply prior knowledge emphasized in other academic areas to discipline-specific content in Business or Information Technology. Additionally, the discipline-specific performance task can play a critical role in providing an opportunity for student growth in other core academic areas when this connection to an elective program of study is clearly made through classroom instruction. This reflective practice of combining Business and Information Technology Content Standards plus Literacy in All Subject Standards and Standards for Mathematical Practices plus standards for other content areas equals a greater assurance that students are college and career ready.

Reaching Every Student; Reaching Every Discipline

Reaching Every Student
The CCSS set high, clear and consistent expectations for all students. In order to ensure that all students can meet and exceed those expectations, Wisconsin educators provide flexible and fluid support based on student need. Each student brings a complex system of strengths and experiences to learning. One student may have gifts and talents in mathematics and need additional support to reach grade-level standards in reading. A student may be learning English as a second language while remaining identified for gifted services in science. The following statements provide guidance for how to ensure that the CCSS provide the foundation for learning for every student in Wisconsin, regardless of their unique learning needs.

Application of Common Core State Standards for English Language Learners
The National Governors Association Center for Best Practices and the Council of Chief State School Officers strongly believe that all students should be held to the same high expectations outlined in the Common Core State Standards. This includes students who are English language learners (ELLs). However, these students may require additional time, appropriate instructional support and aligned assessments as they acquire both English language proficiency and content area knowledge.

ELLs are a heterogeneous group with differences in ethnic background, first language, socioeconomic status, quality of prior schooling and levels of English language proficiency. Effectively educating these students requires pre-assessing each student instructionally, adjusting instruction accordingly and closely monitoring student progress. For example, ELLs who are literate in a first language that shares cognates with English can apply first-language vocabulary knowledge when reading in English; likewise ELLs with high levels of schooling can often bring to bear conceptual knowledge developed in their first language when reading in English. However, ELLs with limited or interrupted schooling will need to acquire background knowledge prerequisite to educational tasks at hand. Additionally, the development of native-like proficiency in English takes many years and may not be achieved by all ELLs especially if they start schooling in the US in the later grades. Teachers should recognize that it is possible to achieve the standards for reading and literature, writing and

research, language development and speaking and listening without manifesting native-like control of conventions and vocabulary.

English Language Arts
The Common Core State Standards for English Language Arts (ELA) articulate rigorous grade-level expectations in the areas of reading, writing, speaking, listening to prepare all students to be college and career ready, including English language learners. Second-language learners also will benefit from instruction about how to negotiate situations outside of those settings so they are able to participate on equal footing with native speakers in all aspects of social, economic and civic endeavors.

ELLs bring with them many resources that enhance their education and can serve as resources for schools and society. Many ELLs have first language and literacy knowledge and skills that boost their acquisition of language and literacy in a second language; additionally, they bring an array of talents and cultural practices and perspectives that enrich our schools and society. Teachers must build on this enormous reservoir of talent and provide those students who need it with additional time and appropriate instructional support. This includes language proficiency standards that teachers can use in conjunction with the ELA standards to assist ELLs in becoming proficient and literate in English. To help ELLs meet high academic standards in language arts it is essential that they have access to:

- Teachers and personnel at the school and district levels who are well prepared and qualified to support ELLs while taking advantage of the many strengths and skills they bring to the classroom;
- Literacy-rich school environments where students are immersed in a variety of language experiences;
- Instruction that develops foundational skills in English and enables ELLs to participate fully in grade-level coursework;
- Coursework that prepares ELLs for postsecondary education or the workplace, yet is made comprehensible for students learning content in a second language (through specific pedagogical techniques and additional resources);

- Opportunities for classroom discourse and interaction that are well-designed to enable ELLs to develop communicative strengths in language arts;
- Ongoing assessment and feedback to guide learning; and
- Speakers of English who know the language well enough to provide ELLs with models and support.

Application to Students with Disabilities
The Common Core State Standards articulate rigorous grade-level expectations in the areas of mathematics and English language arts. These standards identify the knowledge and skills students need in order to be successful in college and careers.

Students with disabilities, students eligible under the Individuals with Disabilities Education Act (IDEA), must be challenged to excel within the general curriculum and be prepared for success in their post-school lives, including college and/or careers. These common standards provide an historic opportunity to improve access to rigorous academic content standards for students with disabilities. The continued development of understanding about research-based instructional practices and a focus on their effective implementation will help improve access to mathematics and English language arts (ELA) standards for all students, including those with disabilities. Students with disabilities are a heterogeneous group with one common characteristic: the presence of disabling conditions that significantly hinder their abilities to benefit from general education (IDEA 34 CFR §300.39, 2004).Therefore, how these high standards are taught and assessed is of the utmost importance in reaching this diverse group of students.

In order for students with disabilities to meet high academic standards and to fully demonstrate their conceptual and procedural knowledge and skills in mathematics, reading, writing, speaking and listening (English language arts), their instruction must incorporate supports and accommodations, including:

- Supports and related services designed to meet the unique needs of these students and to enable their access to the general education curriculum (IDEA 34 CFR §300.34, 2004).
- An Individualized Education Program (IEP)[1] which includes annual goals aligned with and chosen to facilitate their attainment of grade-level academic standards.

- Teachers and specialized instructional support personnel who are prepared and qualified to deliver high-quality, evidence-based, individualized instruction and support services.

Promoting a culture of high expectations for all students is a fundamental goal of the Common Core State Standards. In order to participate with success in the general curriculum, students with disabilities, as appropriate, may be provided additional supports and services, such as:
- Instructional supports for learning, based on the principles of Universal Design for Learning (UDL),[2] which foster student engagement by presenting information in multiple ways and allowing for diverse avenues of action and expression.
- Instructional accommodations (Thompson, Morse, Sharpe & Hall, 2005), changes in materials or procedures, which do not change the standards but allow students to learn within the framework of the Common Core.
- Assistive technology devices and services to ensure access to the general education curriculum and the Common Core State Standards.

Some students with the most significant cognitive disabilities will require substantial supports and accommodations to have meaningful access to certain standards in both instruction and assessment, based on their communication and academic needs. These supports and accommodations should ensure that students receive access to multiple means of learning and opportunities to demonstrate knowledge, but retain the rigor and high expectations of the Common Core State Standards.

Implications for the Common Core State Standards for Students with Gifts and Talents
The CCSS provide a roadmap for what students need to learn by benchmarking expectations across grade levels. They include rigorous content and application of knowledge through higher-order skills. As such, they can serve as a foundation for a robust core curriculum, however, students with gifts and talents may need additional challenges or curricular options. In order to recognize what adaptations need to be made or what interventions need to be employed, we must understand who these students are.

According to the National Association for Gifted Children (2011), "Giftedness, intelligence and talent are fluid concepts and may look different in different contexts and cultures" (para. 1). This means that there are students that demonstrate high performance or have the potential to do so in academics, creativity, leadership and/or the visual and performing arts. Despite this diversity there are common characteristics that are important to note.

Students with gifts and talents:
- Learn at a fast pace.
- Are stimulated by depth and complexity of content.
- Make connections.

These traits have implications for how the Common Core State Standards are used. They reveal that as curriculum is designed and instruction is planned there must be:

- Differentiation based on student readiness, interest and learning style:
    - Pre-assessing in order to know where a student stands in relation to the content that will be taught (readiness), then teach those standards that the student has not mastered and enrich, compact and/or accelerate when standards have been mastered. This might mean using standards that are beyond the grade level of the student.
    - Knowledge of our students so we are familiar with their strengths, background knowledge, experiences, interests and learning styles.
    - Flexible grouping to provide opportunities for students to interact with peers that have similar abilities, similar interests and similar learning styles (homogenous grouping), as well as different abilities, different interests and different learning styles (heterogeneous grouping).

- Differentiation of content, process and product.
    - Use of a variety of materials (differentiating content) to provide challenge. Students may be studying the same concept using different text and resources.
    - Variety of tasks (differentiating process). For example in a science lesson about the relationship between temperature and rate of melting, some students may use computer-enhanced thermometers to record and graph temperature so they can concentrate on detecting patterns while other students may graph temperature at one-minute intervals, then examine the graph for patterns.
    - Variety of ways to demonstrate their learning (differentiating product).These choices can provide opportunities for students with varying abilities, interests and learning styles to show what they have discovered.

- Adjustment to the level, depth and pace of curriculum.
    - Compact the curriculum to intensify the pace.
    - Vary questioning and use creative and critical thinking strategies to provide depth.
    - Use standards beyond the grade level of the students. Since the CCSS provide a PK-12 learning progression, this is easily done.
    - Accelerate subject areas or whole grades when appropriate.

- Match the intensity of the intervention with the student's needs. This means that we must be prepared to adapt the core curriculum and plan for a continuum of services to meet the needs of all students, including those with gifts and talents.

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What is Disciplinary Literacy?

Literacy, the ability to read, write, listen, speak, think critically and perform in different ways and for different purposes, begins to develop early and becomes increasingly important as students pursue specialized fields of study in high school and beyond. The Common Core State Standards (CCSS) for Literacy in Science, Social Studies, History and the Technical Subjects are connected to College and Career Readiness Standards that guide educators as they strive to help students meet the literacy challenges within each particular field of study. This national effort is referred to as disciplinary literacy.

In Wisconsin, disciplinary literacy is defined as the

confluence of content knowledge, experiences and skills

merged with the ability to read, write, listen, speak,

think critically and perform in a way that is meaningful

within the context of a given field.

These abilities are important in ALL courses and subjects. While the Common Core State Standards (CCSS) for Literacy in Science, Social Studies, History and the Technical Subjects provide standards for cross-discipline reading and writing in grades 6-12, Wisconsin recognizes the need to broaden this effort and include **all disciplines and every educator in every grade level K-12.** This literacy focus must begin as soon as children have access to formal education and continue intentionally as college and career readiness goals advance for all children in Wisconsin.

To address this expanded definition and approach to disciplinary literacy, excerpts from the K-5 Common Core State Standards for English Language Arts are included in this document. Elementary classroom teachers build the foundational literacy skills necessary for students to access all learning. Additionally, they develop content specific to deep literary study, oratory tradition and linguistic analysis; skills specific to English language arts. Literacy reaches beyond this knowledge in one content area to include reading, writing, listening, speaking and thinking critically in each discipline beginning at an early age. The applicable K-5 standards help educators in Wisconsin build a ladder of skills and dispositions that lead to accelerated achievement across disciplines and will be included in every content-specific standards document into the future.

Why is disciplinary literacy important?

The modern global society, of which our students are a part, requires postsecondary learning. An analysis of workforce trends by Georgetown University economist Anthony Carnevale and his colleagues found that nearly 60 percent of all job openings in 2007 required some postsecondary education; postsecondary success depends on students' ability to comprehend and produce the kinds of complex texts found in all disciplines. Therefore, the economic future of our state, as well as our students and their success as productive citizens and critical thinkers link to disciplinary literacy.

Textbooks, articles, manuals and historical primary source documents create specialized challenges for learners. These texts often include abstracts, figures, tables, diagrams and specialized vocabulary. The ideas are complex and build across a number of paragraphs requiring focus and strategic processing. To comprehend and produce this type of text, students must be immersed in the language and thinking processes of that discipline and they must be supported by an expert guide, their teacher (Carnegie Report, 2010).

A focus at the elementary level on foundational reading, when expanded to include engaging experiences connected to informational texts, vocabulary and writing for content-specific purposes builds background knowledge and skills in each discipline. This increases opportunities for success as students approach more rigorous content in those disciplines (Alliance for Excellent Education, 2011).

Reading, writing, speaking, listening and critical thinking must be integrated into each discipline across all grades so that all students gradually build knowledge and skills toward college and career readiness. Collaboration among institutes of higher education, CESA Statewide Network, districts, schools, teachers and family and community will guide the implementation of the Common Core State Standards in Wisconsin.
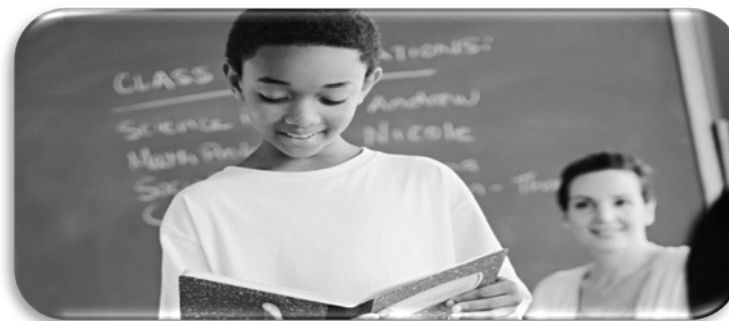
The message is that literacy is integral to attainment of content knowledge and content is essential background knowledge for literacy development. This interdependent relationship exists in all disciplines.

The Common Core State Standards require educators to support literacy in each classroom across the state. Since the impact of this effort is significant, it is essential that resources and supports be accessible to all educators. To build consistent understanding, DPI convened a statewide Disciplinary Literacy Leadership Team in 2011 comprised of educators from many content areas and educational backgrounds. This team was charged with examining the CCSS for Disciplinary Literacy, identifying the needs in the field for support and gathering materials and resources to address those needs.
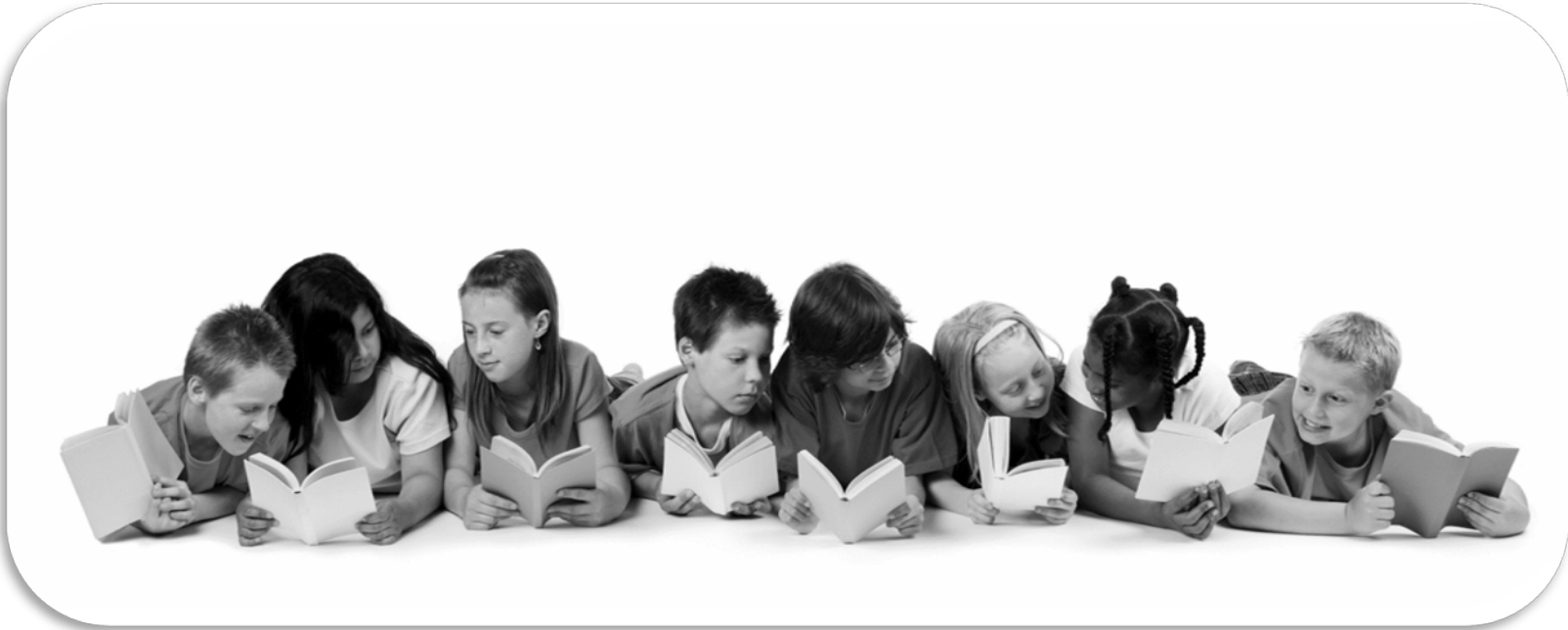
Wisconsin Foundations for Disciplinary Literacy

To guide understanding and professional learning, a set of foundations, developed in concert with Wisconsin's *Guiding Principles for Teaching and Learning,* directs Wisconsin's approach to disciplinary literacy.

Academic learning begins in early childhood and develops across all disciplines.

Each discipline has its own specific vocabulary, text types and ways of communicating. Children begin learning these context- and content-specific differences early in life and continue through high school and beyond. While gardening, small children observe and the form and function of a root, stem, leaf and soil; or measure, mix and blend while baking a cake. School offers all students opportunities to develop the ability to, for example, think like a scientist, write like a historian, critique like an artist, problem-solve like an auto mechanic or analyze technological advances like a health care technician. As literacy skills develop, educators gradually shift the responsibility for reading, writing, listening, speaking and critical thinking to students through guided supports in both individual and collaborative learning experiences.

Content knowledge is strengthened when educators integrate discipline-specific literacy into teaching and learning.

Educators help students recognize and understand the nuances of a discipline by using strategies that "make their thinking visible." They promote classroom reading, writing, listening, speaking and critical thinking using authentic materials that support the development of content-specific knowledge. They guide students through these complex texts by using strategies that develop conceptual understanding of language and set expectations for relevant application of skills. These literacy practices deepen students' content knowledge, strategies and skills so that their learning transfers to real world situations.

The literacy skills of reading, writing, listening, speaking and critical thinking improve when content-rich learning experiences motivate and engage students.

Educators who foster disciplinary literacy develop experiences that integrate rigorous content with relevant collaborative and creative literacy processes to motivate and engage students. Setting high expectations, they structure routines and supports that empower students to take charge of their own learning. When students work in teams to research science and mathematics concepts in the development of an invention or a graphic arts design; when they collaboratively build a blog that contains their recent marketing venture, they use specific literacy skills and strategies to solidify learning. Students need these opportunities over time to develop the precise and complex reading, writing, listening, speaking and critical thinking skills demanded in today's careers.

Students demonstrate their content knowledge through reading, writing, listening and speaking as part of a content-literate community.

Students who are literate in a particular discipline are able to successfully read, write and speak about that discipline and can listen to and think critically as others communicate in that community. Performance tasks that allow students to present the complexity of a content area in a way that is meaningful to the field become authentic approaches to assessing mastery within a discipline. Such tasks empower students to discover the real world connections across disciplines and to actively participate in communities of discipline-literate peers. As Wisconsin moves to the SMARTER Balanced Assessment System these performance tasks will be integral to assessment of student learning.

Students in Wisconsin...

Reading · Writing · Speaking · Listening · Language

1. Demonstrate independence.
2. Build strong content and knowledge.
3. Respond to the varying demands of audience, task, purpose and discipline.
4. Comprehend as well as critique.
5. Value evidence.
6. Use technology and digital media strategically and capably.
7. Come to understand other perspectives and cultures.

What research and resources are available to support educators' use of the Common Core State Standards for Literacy in All Subjects?

The Common Core State Standards for Literacy in All Subjects reflect the importance of literacy in both the oral and written language and in both productive (speaking and writing) and receptive (listening and reading) discourse. Clearly, critical and precise thinking are required to develop all of these specific strategies and skills. The standards also address the learning and functioning of language in a technological, media-driven world because the language that we use is selective depending upon the context of the conversation.

The following section will offer relevant research and resources to support professional learning in reading, writing, speaking, listening and language across disciplines. Collegial conversation and learning, both cross-discipline and within-discipline will help make the Common Core State Standards more applicable to schools and districts and will address the needs of unique programs within those contexts. A collection of online resources will continue to develop as support materials emerge.

Reading Connections
While early reading focuses on learning that letters make sounds and that words carry meaning, reading quickly develops to a point where the message taken from text depends on what the reader brings to it. The Carnegie Report, *Reading in the Disciplines* (2010) describes this phenomenon:

"The ability to comprehend written texts is not a static or fixed ability, but rather one that involves a dynamic relationship between the demands of texts and prior knowledge and goals of the reader."

Therefore, a musician reading a journal article that describes concepts in music theory will take more information away from the text than a music novice because of their knowledge and experience in music. As well, an individual who spends a significant amount of time reading automotive manuals will more easily navigate a cell phone manual because of familiarity with that type of text.

A chart excerpted from the Carnegie Report (2010) details a few of the generic and more discipline-specific strategies that support students as they attempt to comprehend complex text. While the generic strategies pertain across content areas, discipline-specific ones must be tailored to match the demands of the content area.

Both generic and discipline focused strategies and knowledge must be applied to the comprehension and evaluation of:
- Textbooks
- Journal and magazine articles
- Historically situated primary documents
- Full Length Books
- Newspaper Articles
- Book Chapters
- Multimedia and Digital Texts

Generic Reading Strategies	Discipline-Specific Reading Strategies
Monitor comprehension	Build prior knowledge
Pre-read	Build specialized vocabulary
Set goals	Learn to deconstruct complex sentences
Think about what one already knows	
Ask questions	Use knowledge of text structures and genres to predict main and subordinate ideas
Make predictions	
Test predictions against the text	Map graphic (and mathematical) representations against explanations in the text
Re-read	
Summarize	Pose discipline relevant questions
	Compare claims and propositions across texts
	Use norms for reasoning within the discipline (i.e. what counts as evidence) to evaluate claims

Source: Carnegie Report, (2010)

Additional resources that support reading in specific subjects include *Content Counts! Developing Disciplinary Literacy Skills, K–6* by Jennifer L. Altieri (2011).This guide for discipline-specific literacy at the elementary level offers strategies to balance the demands of literacy while continuing to make content count and help students meet the reading, writing, speaking and listening demands of the content areas as they advance in school.

A resource by Doug Buehl (2011) entitled *Developing Readers in the Academic Disciplines* describes what it means to read, write and think through a disciplinary lens in the adolescent years. This teacher-friendly guide helps connect literacy with disciplinary understandings to bridge academic knowledge gaps, frontload instruction and build critical thinking through questioning.

Note on range and content of student reading

To become college and career ready, students must grapple with works of exceptional craft and thought whose range extends across genres, cultures and centuries. Such works offer profound insights into the human condition and serve as models for students' own thinking and writing. Along with high-quality contemporary works, these texts should be chosen from seminal U.S. documents, the classics of American literature and the timeless dramas of Shakespeare. Through wide and deep reading of literature and literary nonfiction of steadily increasing sophistication, students gain a reservoir of literary and cultural knowledge, references and images; the ability to evaluate intricate arguments; and the capacity to surmount the challenges posed by complex texts. (*CCSS p. 35 http://www.corestandards.org/assets/CCSSI_ELA%20Standards.pdf*)

The Common Core State Standards require that all students "be able to comprehend texts of steadily increasing complexity as they progress through school" (Appendix A: Research Supporting Key Elements of the Standards, p. 2). More detailed definitions of complex text and examples of complex texts across disciplines are available in Appendix B of the English Language Arts CCSS.

Writing Connections

The Common Core State Standards call for emphasis on three types of writing: narrative, informational and logical argument. Writing that presents a logical argument is especially appropriate to discipline-specific work since credible evidence differs across content areas. The ability to consider multiple perspectives, assess the validity of claims and present a point of view is required in argumentative writing. These thinking and communication skills are "critical to college and career readiness".

A 2007 report entitled *Writing Next: Effective Strategies to Improve Writing of Adolescents in Middle and High Schools* detailed research on writing to learn, rather than only for assessment, as having a significant impact on content learning.

The study found writing to learn was equally effective for all content areas in the study (social studies, math and science) and at every grade (4-12).

Note on range and content of student writing

For students, writing is a key means of asserting and defending claims, showing what they know about a subject and conveying what they have experienced, imagined, thought and felt. To be college- and career-ready writers, students must take task, purpose and audience into careful consideration, choosing words, information, structures and formats deliberately. They need to know how to combine elements of different kinds of writing—for example, to use narrative strategies within an argument and explanation within narrative—to produce complex and nuanced writing. They need to be able to use technology strategically when creating, refining and collaborating on writing. They have to become adept at gathering information, evaluating sources and citing material accurately, reporting findings from their research and analysis of sources in a clear and cogent manner. They must have flexibility, concentration and fluency to produce high quality first draft text under a tight deadline as well as the capacity to revisit and make improvements to a piece of writing over multiple drafts when circumstances encourage or require it. *(CCSS p.41 http://www.corestandards.org/assets/CCSSI_ELA%20Standards.pdf)*

When a social studies teacher guides students in taking on the perspective of a person from a specific historical era, she might ask students to write a first person narrative from that perspective. Research into that era leads students to discover personal beliefs of that historical person. They may dig into the personal experiences, ideas and events involved in the era to visualize life in that period. They then develop a rich understanding of the era and embed language from that era into the texts that they create. (Samples of discipline-specific writing across grades and content areas are available in Appendix C of the English Language Arts CCSS.

Speaking, Listening and Language Connections

The ability to share ideas and orally communicate with credibility in a specific academic discourse empowers students and allows access to specialized groups. In *Situated Language and Learning: A Critique of Traditional Schooling*, James Paul Gee (2004) describes the need to prioritize these skills so that students are at ease as they enter situations connected to a specific content area and are more likely to continue their learning in that discipline.

As expertise develops, students feel more and more comfortable applying knowledge and skills while speaking and listening in a specific discipline.

- A media course may teach students appropriate expression, tone and rate of speech when addressing a large audience.

- Listening carefully to questions posed is a specialized skill that debate facilitators develop.

- Scientists learn to listen for bias in the perspectives presented by peers to determine the reliability of scientific outcomes.

- Artists have very specialized and specific ways of speaking about the many aspects of a piece.

A policy brief from the Alliance for Excellent Education called, *Engineering Solutions to the National Crisis in Literacy: How to Make Good on the Promise of the Common Core State Standards* describes "a staircase of literacy demands" and emphasizes the importance of a progressive development of language and literacy over time.

The conceptual understanding of "functions" in mathematics may begin to develop in elementary school in its simplest form. As the concept develops over the years, students will use the word "function" in a meaningful way when speaking and writing to describe the mathematical concept they apply. When educators explicitly connect a mathematical term to its application and repeatedly expose students to the concept connected to the term, a specialized language becomes second nature to the mathematics classroom.

Students must have extensive vocabularies, built through reading and explicit instruction embedded in the context of content learning. This enables them to comprehend complex texts, engage in purposeful writing and communicate effectively within a discipline.

Skills in determining or clarifying the meaning of words and phrases encountered, choosing flexibly from an array of strategies and seeing an individual word as part of a network of other words that, for example, have similar denotations but different connotations allow students to access information and support their own learning.

Literacy in Multiple Languages

Increasing economic, security, cross-cultural and global demands underscore the value of literacy in more than one language. Students who think, read, write and communicate in multiple languages are an asset to our own country and can more easily interact and compete in the world at large.

English language learners (ELL) in our classrooms face significant challenges as they add a new language and work to grasp content at the same rate as their English-speaking peers. In a report to the Carnegie Corporation entitled *Double the Work: Challenges and Solutions to Acquiring Academic Literacy for Adolescent English Language Learners (2007)* researchers found that a focus on academic literacy is crucial for ELL's success in school. In their description of academic literacy they include reading, writing and oral discourse that:

- Varies from subject to subject.

- Requires knowledge of multiple genres of text, purposes for text use and text media.

- Is influenced by students' literacies in context outside of school.

- Is influenced by students' personal, social and cultural experiences.

The needs of our English language learners are addressed when we embed disciplinary literacy strategies into our subject area teaching. These high impact strategies and skills allow English language learners and all students to more readily access content knowledge and connect it to the prior knowledge they bring to the classroom. When educators take the initiative to understand and embed these strategies and skills, they offer additional opportunities for success to all of our students.

Who Should Use the Common Core State Standards for Literacy in All Subjects?

The term "disciplinary literacy" may be new to many Wisconsin teachers. The Common Core State Standards for Literacy in All Subjects, as excerpted from the Common Core Standards for English Language Arts, are intended for all PK-12 educators. Each standard is written broadly in content-neutral language, breaking down the complex skills that comprise reading, writing, speaking, listening and language. These standards serve as a complement to the specific content-related standards of each individual discipline. Administrators and communities may also find the disciplinary literacy standards helpful in charting a clear and consistent school or district-wide approach to literacy that moves Wisconsin forward toward the goal of every student career and college ready.

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Writing Next: Effective Strategies to Improve Writing of Adolescents in Middle and High Schools (2007)

Standards for Mathematical Practice

Mathematical proficiency is necessary for every student; therefore, understanding concepts and being fluent with procedural skills are both important. This means that educators must intentionally engage students at all levels so they are readily able to understand important concepts, use skills effectively and apply mathematics to make sense of their changing world.

Adding it Up (National Research Council, 2001), a major research report that informed the development of the Common Core State Standards for Mathematics, emphasizes the five strands of mathematical proficiency: conceptual understanding, procedural fluency, adaptive reasoning, strategic competence and productive disposition. These strands are not sequential, but intertwined and form the basis for the *Standards for Mathematical Content* and the *Standards for Mathematical Practice*. Together, these two sets of mathematics standards define what students should understand and be able to do in their study of PK-12 mathematics.

Standards for Mathematical Practice	Characteristics of Mathematically Proficient Students
Make sense of problems and persevere in solving them.	**Mathematically proficient students can:** Explain the meaning of a problem and restate it in their words. Analyze given information to develop possible strategies for solving the problem. Identify and execute appropriate strategies to solve the problem. Evaluate progress toward the solution and make revisions if necessary. Explain the connections among various representations of a problem or concept. Check for accuracy and reasonableness of work, strategy and solution. Understand and connect strategies used by others to solve problems.
Reason abstractly and quantitatively.	**Mathematically proficient students can:** Translate given information to create a mathematical representation for a concept. Manipulate the mathematical representation by showing the process considering the meaning of the quantities involved. Recognize the relationships between numbers/quantities within the process to evaluate a problem. Review the process for reasonableness within the original context.
Construct viable arguments and critique the reasoning of others.	**Mathematically proficient students can:** Use observations and prior knowledge (stated assumptions, definitions and previous established results) to make conjectures and construct arguments. Compare and contrast logical arguments and identify which one makes the most sense. Justify (orally and in written form) the approach used, including how it fits in the context from which the data arose. Listen, understand, analyze and respond to the arguments of others. Identify and explain both correct and flawed logic. Recognize and use counterexamples to refine assumptions or definitions and dispute or disprove an argument.

Standards for Mathematical Practice	Characteristics of Mathematically Proficient Students
Model with mathematics.	**Mathematically proficient students can:** Use a variety of methods to model, represent and solve real-world problems. Simplify a complicated problem by making assumptions and approximations. Interpret results in the context of the problem and revise the model if necessary. Choose a model that is both appropriate and efficient to arrive at one or more desired solutions.
Use appropriate tools strategically.	**Mathematically proficient students can:** Identify mathematical tools and recognize their strengths and weaknesses. Select and use appropriate tools to best model/solve problems. Use estimation to predict reasonable solutions and/or detect errors. Identify and successfully use external mathematical resources to pose or solve problems. Use a variety of technologies, including digital content, to explore, confirm and deepen conceptual understanding.
Attend to precision.	**Mathematically proficient students can:** Understand symbols and use them consistently within the context of a problem. Calculate answers efficiently and accurately and label them appropriately. Formulate precise explanations (orally and in written form) using both mathematical representations and words. Communicate using clear mathematical definitions, vocabulary and symbols.
Look for and make use of structure.	**Mathematically proficient students can:** Look for, identify and accept patterns or structure within relationships. Use patterns or structure to make sense of mathematics and connect prior knowledge to similar situations and extend to novel situations. Analyze a complex problem by breaking it down into smaller parts. Reflect on the problem as a whole and shift perspective as needed.
Look for and express regularity in repeated reasoning.	**Mathematically proficient students can:** Recognize similarities and patterns in repeated trials with a process. Generalize the process to create a shortcut which may lead to developing rules or creating a formula. Evaluate the reasonableness of results throughout the mathematical process while attending to the details.

* Collaborative project with Cedarburg, Franklin, Fox Point-Bayside, Grafton, Greendale, Kettle Moraine, Menomonee Falls, Oconomowoc, Pewaukee, Waukesha and Whitefish Bay School Districts and CESA 1.

Section VI

Wisconsin's Guiding Principles for Teaching and Learning

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Guiding Principles for Teaching and Learning

These guiding principles are the underpinnings of effective teaching and learning for every Wisconsin teacher and every Wisconsin student. They are larger than any one initiative, process or set of standards. Rather, they are the lens we look through as we identify teaching and learning standards, design assessments and determine what good instruction looks like. These principles recognize that every student has the right to learn and are built upon three essential elements: high quality instruction, balanced assessment and collaboration. They are meant to align with academic excellence, rigorous instruction and college and career readiness for every Wisconsin student. For additional research, resources and probing questions to support professional learning on the six principles, please see the Wisconsin Research and Resources section of this document.

Every student has the right to learn.
It is our collective responsibility as an education community to make certain each child receives a high-quality, challenging education designed to maximize potential, an education that reflects and stretches his or her abilities and interests. This belief in the right of every child to learn forms the basis of equitable teaching and learning. The five principles that follow cannot exist without this commitment guiding our work.

Instruction must be rigorous and relevant.
To understand the world in which we live, there are certain things we all must learn. Each school subject is made up of a core of essential knowledge that is deep, rich and vital. Every student, regardless of age or ability, must be taught this essential knowledge. What students learn is fundamentally connected to how they learn and successful instruction blends the content of a discipline with processes of an engaging learning environment that changes to meet the dynamic needs of all students.

Purposeful assessment drives instruction and affects learning.
Assessment is an integral part of teaching and learning. Purposeful assessment practices help teachers and students understand where they have been, where they are and where they might go next. No one assessment can provide sufficient information to plan teaching and learning. Using different types of assessments as part of instruction results in useful information about student understanding and progress. Educators should use this information to guide their own practice and in partnership with students and their families to reflect on learning and set future goals.

Learning is a collaborative responsibility.
Teaching and learning are both collaborative processes. Collaboration benefits teaching and learning when it occurs on several levels: when students, teachers, family members and the community collectively prioritize education and engage in activities that support local schools, educators and students; when educators collaborate with their colleagues to support innovative classroom practices and set high expectations for themselves and their students; and when students are given opportunities to work together toward academic goals in ways that enhance learning.

Students bring strengths and experiences to learning.
Every student learns. Although no two students come to school with the same culture, learning strengths, background knowledge or experiences and no two students learn in exactly the same way, every student's unique personal history enriches classrooms, schools and the community. This diversity is our greatest education asset.

Responsive environments engage learners.
Meaningful learning happens in environments where creativity, awareness, inquiry and critical thinking are part of instruction. Responsive learning environments adapt to the individual needs of each student and encourage learning by promoting collaboration rather than isolation of learners. Learning environments, whether classrooms, schools or other systems, should be structured to promote engaged teaching and learning.

Guiding Principle 1:
Every student has the right to learn.

It is our collective responsibility as an education community to make certain each child receives a high-quality, challenging education designed to maximize potential, an education that reflects and stretches his or her abilities and interests. This belief in the right of every child to learn forms the basis of equitable teaching and learning. The five principles that follow cannot exist without this commitment guiding our work.

Every student's right to learn provides the overarching vision for Wisconsin's Guiding Principles for education. To be successful, education must be committed to serving the learning needs of students from various social, economic, cultural, linguistic and developmental backgrounds. For all students to have a guaranteed right to learn, schooling must be equitable.

Research Summary

Focusing on Equity
The belief that each student has the right to learn despite differences in educational needs and backgrounds has important implications for ensuring an equitable education for all students. In the education research literature, the term *educational equality* refers to the notion that all students should have access to an education of similar quality—the proxy for which is frequently educational *inputs* such as funding, facilities, resources and quality teaching and learning. In contrast, the term *educational equity* connotes the requirement that all students receive an education that allows them to achieve at a standard level or attain standard educational *outcomes* (Brighouse & Swift, 2008). Importantly, equality in terms of educational resources or inputs may not guarantee equity in educational outcomes because not all students reach the same level of achievement with the same access to resources (Brighouse & Swift, 2008).To serve students of varying economic, social, developmental or linguistic backgrounds, achieving equity in education may require more resources to meet the greater educational needs of certain students (Berne & Stiefel, 1994).

The research literature offers several components that provide a framework for understanding what an equitable education for all students looks like at the classroom level. These components include a call for all students to be provided with the following:

- Access to resources and facilities
- Instruction in all areas tailored to their needs
- Curriculum that is rigorous and relevant
- Educators who are culturally sensitive and respectful
- Interactions with staff and other students that are positive and encouraging in an atmosphere of learning
- Assessment that is varied to give each student the opportunity to demonstrate learning (Education Northwest, 2011)

Access
Access to resources and facilities largely refers to various legal mandates that all children have the right to attend school and participate in all school activities. Since the landmark ruling *Brown v. Board of Education of Topeka* (1954), court decisions and federal regulations have mandated equality of access to all educational opportunities for students regardless of race, ethnicity or gender (Civil Rights Act, 1964), disability (Education for All Handicapped Children Act, 1975) or language (*Lau v. Nichols, 1974*). Equity in the provision of educational resources and funding was improved with the passage of Title I of the Elementary and Secondary Education Act (ESEA; 1965), which provided additional resources for economically disadvantaged students to meet their learning needs. Since Title I, research on equity in education has grown and with the reauthorization of ESEA in the No Child Left Behind Act in 2001, equity in educational outcomes for all students was emphasized in the law. Access to an equitable education is a legal right for all children and the quality of that access in classroom instruction is a moral and ethical right.

Instruction
Instruction that is tailored to meet all students' needs goes beyond simply providing equal access to education. High-quality instruction has increasingly been defined in the literature as a key factor in student achievement. High-quality instruction includes differentiated instructional strategies, teaching to students' learning styles and provision of instructional support for students who are educationally, socially or linguistically challenged. Differentiated instruction involves utilizing unique instructional strategies for meeting individual student needs as well as modifying curriculum for both high- and low-performing students. Assessing and teaching to student learning styles is one form of differentiation. Research has shown the value of adapting instructional strategies to different student learning styles (Gardner, 1999)

and supports the practice of classroom differentiation (Mulroy & Eddinger, 2003; Tomlinson, 2005).

Curriculum
Designing curriculum that is rigorous and relevant provides an important foundation for a high-quality learning environment by helping make standards-based content accessible to all students. A relevant, rigorous curriculum has been found to be important for all students. Although advanced and rigorous curriculum is generally viewed to be an important factor of academic success for high-achieving students, research also indicates that using challenging, interesting and varied curriculum for students of all achievement levels improves student achievement (Daggett, 2005). Rigorous curriculum can be adapted for low-performing students in a way that challenges them and helps them meet learning standards. For example, the universal design for learning (UDL) offers strategies for making the general curriculum accessible to special education students (Rose, Hasselbring, Stahl, & Zabala, 2009). Similarly, research on lesson scaffolding emphasizes strategies for providing a rigorous content curriculum to student who are culturally or linguistically diverse or who need additional context to understand certain concepts (Gibbons, 2002).

Climate
Interactions with staff and students that are positive and focused on learning are part of an emotionally safe school climate, but the literature also supports the need for a climate of high academic expectations (Haycock, 2001). Schools with large numbers of high-poverty and racially diverse students have shown significant academic growth when teachers and staff members create an environment of high expectations for achievement (Reeves, 2010). In addition, research on school climate has asserted the need for students to feel emotionally safe and respected as well as physically safe in school (Gronna & Chin-Chance, 1999).

A positive, respectful learning environment with high expectations and curricular and instructional supports for all students offers an avenue to genuine educational equity.

Probing Questions

- What are some of the needs and challenges your school faces in moving toward a fully equitable education for all students?
- How could you provide leadership in your school to work to ensure an equitable education for all students?

Resources
A variety of resources are available for teachers and leaders on educational equity for all students. A few websites and links are highlighted below:

The School Improvement Center developed activities to help districts develop an equity framework. These resources can be found at Actualizing Equity: The Equity Framework: http://www.gapsc.com/EducatorPreparation/NoChildLeftBehind/Admin/Files/ conference_032010/Actualizing_Equity.pdf.

The Education Equality Project developed a website with useful resources for educators. It can be found at http://www.edequality.org.

The Equity Center has a website with a variety of resources. The resources can be found at http://educationnorthwest.org/project/ Equity%20Program/resource/.

The Midwest Equity Assistance Center has a website with many resources. It can be found at http://www.meac.org/Publications.html.

The Office for Civil Rights has a useful website for educators. It can be found at http://www2.ed.gov/about/offices/list/ocr/index.html.

Southern Poverty Law Center, Teaching Tolerance Program. Resources can be found at http://www.splcenter.org/what-we-do/teaching-tolerance.

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Guiding Principle 2:
Instruction must be rigorous and relevant.

To understand the world in which we live, there are certain things we all must learn. Each school subject is made up of a core of essential knowledge that is deep, rich and vital. Every student, regardless of age or ability, must be taught this essential knowledge. What students learn is fundamentally connected to how they learn and successful instruction blends the content of a discipline with processes of an engaging learning environment that changes to meet the dynamic needs of all students.

Research Summary

Instruction should connect directly to students' lives and must deeply engage them with the content in order for students to be better prepared for college and careers. To succeed in postsecondary education and in a 21st century economy, students must be afforded opportunities to practice higher-order thinking skills, such as how to analyze an argument, weigh evidence, recognize bias (their own and others' bias), distinguish fact from opinion, balance competing principles, work collaboratively with others and be able to communicate clearly what they understand (Wagner, 2006). In order to accomplish these goals, instruction must be rigorous and meaningful.

The definition of rigor varies greatly in both research and practice. Bower and Powers (2009) conducted a study to determine the essential components of rigor. They defined rigor through their research as "how the standard curriculum is delivered within the classroom to ensure students are not only successful on standardized assessments but also able to apply this knowledge to new situations both within the classroom and in the real world." They also identified higher-order thinking and real-world application as two critical aspects of rigor, suggesting that it is not enough for students to know how to memorize information and perform on multiple-choice and short-answer tests. Students must have deep and rich content knowledge, but rigor also includes the ability to apply that knowledge in authentic ways.

Teaching and learning approaches that involve students collaborating on projects that culminate with a product or presentation are a way to bring rigor into the classroom. Students can take on real problems, use what

they know and research to come up with real solutions to real problems. They must engage with their subject and with their peers.

In August 2010, the Institutes of Education Sciences reported the results of a randomized control trial showing that a problem-based curriculum boosted high school students' knowledge of economics. This research suggests that students using this learning system and its variants score similarly on standardized tests as students who follow more traditional classroom practices. The research also suggests that students learning through problem-solving and projects are more adept at applying what they know and are more deeply engaged.

The notion of a meaningful curriculum is not a new one. John Dewey (1990), writing in 1902, called for a curriculum that involves a critical but balanced understanding of the culture and the prior knowledge of each child in order to extend learning. According to Spillane (2000), presenting content in more authentic ways—disciplinary and other real-world contexts—has become a central theme of current reform movements. Schools should be places where "the work students are asked to do [is] work worth doing" (Darling-Hammond, 2006, p. 21). Research collected by the International Center for Leadership in Education shows that "students understand and retain knowledge best when they have applied it in a practical, relevant setting" (Daggett, 2005, p. 2).A skilled 21st century educator helps students master learning targets and standards using purposefully crafted lessons and teaches with appropriate instructional strategies incorporated. The students understand why they are learning particular skills and content and are engaged in learning opportunities that allow them to use their inquiry skills, creativity and critical thinking to solve problems.

According to Brown, Collins and Duguid (1989), instruction connected to individual contexts has been found to have a significant impact on learning. Research conducted by Sanbonmatsu, Shavitt and Sherman (1991) and Petty and Cacioppo (1984) also contends that student learning is directly influenced by how well it is connected to a context. Much of this research began with the analysis of how people learn when they find

the ideas significant to their own world. It begins to show the importance of connecting content and instruction to the world of the students. Weaver and Cottrell (1988) point out that how content is presented can affect how students retain it. They state instruction that connects the content to the students' lives and experiences helps students to internalize meaning. Sass (1989) and Keller (1987) suggest that if teachers can make the content familiar to the students and link it to what they are familiar with, students' learning will increase. Shulman and Luechauer (1993) contend that these connections must be done by engaging students with rigorous content in interactive learning environments.

Higher-Order Thinking
Higher-order thinking, according to Newmann (1990),"challenges the student to interpret, analyze or manipulate information" (p. 45).This definition suggests that instruction must be designed to engage students through multiple levels in order for them to gain a better understanding of the content. An analysis of the research by Lewis and Smith (1993) led to their definition of higher-order thinking: "when a person takes new information and information stored in memory and interrelates and/ or rearranges and extends this information to achieve a purpose or find possible answers in perplexing situations" (p. 44).This definition emphasizes the level of complexity necessary to help students reach a deeper and higher level of understanding of the content. Shulman (1987) points out teachers will need an in-depth knowledge of their content to be able to fit these types of strategies to their instruction.

Real-World Application
VanOers and Wardekker (1999) indicate that connecting instruction to real-world applications gives meaning to learning, makes it practical and can help to develop connections with the greater community. Incorporating real-world examples becomes more authentic to students because they will be able to connect the learning to the bigger picture rather than just the classroom. Newmann and Wehlage (1993) describe the three criteria developed by Archbald and Newmann (1988) for this type of authentic learning:"Students construct meaning and produce knowledge, students use disciplined inquiry to construct meaning and students aim their work toward production of discourse, products and performances that have value or meaning beyond success in school" (p. 8) These criteria, when reflected upon by teachers, can be a useful tool to ensure that instruction is authentic and engaging for all students.

Authentic Learning
Authentic learning builds on the concept of "learning by doing" to increase a student's engagement. To succeed, this method needs to have meaning or value to the student, embody in-depth learning in the subject and allow the student to use what he or she learned to produce something new and innovative (Lemke & Coughlin, 2009). For example, in project-based learning, students collaborate to create their own projects that demonstrate their knowledge (Bell, 2010). Students start by developing a question that will guide their work. The teacher acts as the supervisor. The goal is greater understanding of the topic, deeper learning, higher-level reading and increased motivation (Bell, 2010). Research has shown that students who engage in project-based learning outscore their traditionally educated peers in standardized testing (Bell, 2010).

Constructivist learning is also a way to bring authenticity to the classroom. Richard Mayer (2004) defines constructivist learning as an "active process in which learners are active sense makers who seek to build coherent and organized knowledge." Students co-construct their learning, with the teacher serving as a guide or facilitator (oftentimes using technology as a facilitating tool).The teacher doesn't function in a purely didactic manner. Neo and Neo (2009) state that constructivism helps students develop problem-solving skills, critical thinking and creative skills and apply them in meaningful ways. Inquiry-based instruction, a type of constructivist learning, has students identify real world problems and then pose and find answers to their own questions. A study by Minner, Levy and Century (2010) has shown this method can improve student performance. They found inquiry-based instruction has a larger impact (approximately 25-30% higher) on a student's initial understanding and retention of content than any other variable.

Another form of authentic learning involves video simulated learning or gaming. Research has shown that video games can provide a rich learning context by fostering creative thinking. The games can show players how to manage complex problems and how their decisions can affect the outcome (Sharritt, 2008). This form of learning also can engage students in collaboration and interaction with peers.

Multimodal Instruction
Multimodal teaching leverages various presentation formats—such as printed material, videos, PowerPoints and computers—to appeal to

different learning styles (Birch, 2009; Moreno & Mayer, 2007). It accommodates a more diverse curriculum and can provide a more engaging and interactive learning environment (Birch, 2009).According to research, an effective way of learning is by utilizing different modalities within the classroom, which can help students understand difficult concepts—therefore improving how they learn (Moreno & Mayer, 2007).

An example of multimodal learning that incorporates technology is digital storytelling. Digital storytelling is the practice of telling stories by using technology tools (e.g., digital cameras, authoring tools, computers) to create multimedia stories (Sadik, 2008). Researchers have found that using this form of learning facilitates student engagement, deep learning, project-based learning and effective integration of technology into instruction (Sadik, 2008).

Probing Questions
Research emphasizes the need for higher-order thinking embedded in instructional practice. How might you learn to incorporate higher-order thinking strategies into your practice?
The research also suggests the need to connect learning experiences to the real world of the students. How can you use real-world examples in your practice to better engage students in their learning?

Resources
The Rigor/Relevance Framework created by Daggett (2005) is a useful tool to create units, lessons and assessments that ask students to engage with content at a higher, deeper level. The model and examples are available on the following website: http://www.leadered.com/rrr.html.

Newmann's Authentic Intellectual Work Framework (Newmann, Secada & Wehlage, 1995) gives teachers the tools to analyze instructional practices and student work in regard to indicators of rigor. The research and tools are available at the Center for Authentic Intellectual Work website: http://centerforaiw.com/.

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Guiding Principle 3:
Purposeful assessment drives instruction and affects learning.

Assessment is an integral part of teaching and learning. Purposeful assessment practices help teachers and students understand where they have been, where they are and where they might go next. No one assessment can provide sufficient information to plan teaching and learning. Using different types of assessments as part of instruction results in useful information about student understanding and progress. Educators should use this information to guide their own practice and in partnership with students and their families to reflect on learning and set future goals.

Research Summary
Assessment informs teachers, administrators, parents and other stakeholders about student achievement. It provides valuable information for designing instruction; acts as an evaluation for students, classrooms and schools; and informs policy decisions. Instruments of assessment can provide formative or summative data and they can use traditional or authentic designs. Research on assessment emphasizes that the difference between formative and summative assessment has to do with how the data from the assessment is used.

Dunn and Mulvenon (2009) define summative assessment as assessment "data for the purposes of assessing academic progress at the end of a specified time period (i.e., a unit of material or an entire school year) and for the purposes of establishing a student's academic standing relative to some established criterion" (p. 3).

The Council of Chief State School Officers (CCSSO) (2008) define formative assessment as a process "used by teachers and students during instruction that provides feedback to adjust ongoing teaching and learning to improve students' achievement of intended instructional outcomes" (p. 3).

Wisconsin's approach to balanced assessment www.dpi.wi.gov/oea/ balanced emphasizes the importance of identifying the purposes for administering an assessment. Identifying the purpose or data needed establishes whether a particular assessment is being used formatively or summatively. There can be multiple purposes for giving a particular

assessment, but identifying how the data will be used helps to ensure that the assessment is collecting the data that is needed for educators, students and their families.

Assessments, whether formative or summative, can be designed as traditional or authentic tools. Traditional assessment uses tools such as paper and pencil tests, while authentic assessment focuses on evaluating student learning in a more "real life" situation. The bulk of the research on assessment design focuses on authentic assessment.

Formative Assessment
Using formative assessment as a regular part of instruction has been shown to improve student learning from early childhood to university education. It has been shown to increase learning for both low-performing and high-performing students. Black and Wiliam's (1998) seminal study found that the use of formative assessment produces significant learning gains for low-achieving students. Other researchers have shown similar results for students with special learning needs. (McCurdy & Shapiro, 1992; Fuchs & Fuchs, 1986). Research also supports the use of formative assessment in kindergarten classes (Bergan, Sladeczek, Schwarz, & Smith, 1991) and university students (Martinez & Martinez, 1992).

Formative assessment provides students with information on the gaps that exist between their current knowledge and the stated learning goals (Ramaprasad, 1983). By providing feedback on specific errors it helps students understand that their low performance can be improved and is not a result of lack of ability (Vispoel & Austin, 1995). Studies emphasize that formative assessment is most effective when teachers use it to provide specific and timely feedback on errors and suggestions for improvement (Wininger, 2005), when students understand the learning objectives and assessment criteria and when students have the opportunity to reflect on their work (Ross, 2006; Ruiz-Primo & Furtak, 2006). Recent research supports the use of web-based formative assessment for improving student achievement (Wang, 2007).
A number of studies emphasize the importance of teacher professional development on formative assessment in order to gain maximum student

achievement benefits (Atkins, Black & Coffey, 2001; Black & Wiliam, 1998).A 2009 article in *Educational Measurement* asserts that teachers are better at analyzing formative assessment data than at using it to design instruction. Research calls for more professional development on assessment for teachers (Heritage, Kim, Vendlinski, & Herman, 2009).

Authentic Assessment
Generating rich assessment data can be accomplished through the use of an authentic assessment design as well as through traditional tests. Authentic assessments require students to "use prior knowledge, recent learning and relevant skills to solve realistic, complex problems" (DiMartino & Castaneda, 2007, p. 39). Research on authentic assessment often explores one particular form, such as portfolios (Berryman & Russell, 2001; Tierney et al., 1998); however, several studies examined more than one form of authentic assessment: portfolios, project-based assessment, use of rubrics, teacher observation and student demonstration (Darling-Hammond, Rustique-Forrester, & Pecheone, 2005; Herman, 1997; Wiggins, 1990). Authentic assessment tools can be used to collect both formative and summative data. These data can provide a more complete picture of student learning.

Balanced Assessment
Wisconsin's Next Generation Assessment Task Force (2009) defines the purpose and characteristics of a balanced assessment system:
> Purpose: to provide students, educators, parents and the public with a range of information about academic achievement and to determine the best practices and policies that will result in improvements to student learning.
> Characteristics: includes a continuum of strategies and tools that are designed specifically to meet discrete needs–daily classroom instruction, periodic checkpoints during the year and annual snapshots of achievement. (p. 6)

A balanced assessment system is an important component of quality teaching and learning. Stiggins (2007) points out that a variety of quality assessments must be available to teachers in order to form a clearer picture of student achievement of the standards. Popham (2008) believes that when an assessment is of high quality, it can accurately detect changes in student achievement and can contribute to continuous improvement of the educational system.

Probing Questions
- How might you use questioning and discussion in your classroom in a way that gives you formative assessment information on all students?
- How can you use assignments and tests as effective formative assessment?
- How could you design and implement a balanced assessment system that includes pre- and post assessments for learning?

Resources
Rick Stiggins, founder and director of the Assessment Training Institute, provides resources on the practice of assessment at http://www.assessmentinst.com/author/rick-stiggins/.

Margaret Heritage's books Formative Assessment for Literacy and Academic Language (2008, coauthored with Alison Bailey) and Formative Assessment: Making It Happen in the Classroom (2010) provides resources and practices. These books are available through bookstores.

ASCD has publications on assessment at http://www.ascd.org/SearchResults.aspx?s=assessment&c=1&n=10&p=0.

The National Middle Schools Association provides assessment information through a search for "assessment" at http://www.nmsa.org/.
Boston (2002) recommends the following resources for assessment:

A Practical Guide to Alternative Assessment, by J. R. Herman, P. L. Aschbacher and L.Winters. Available at a variety of booksellers.

Improving Classroom Assessment: A Toolkit for Professional Developers
http://educationnorthwest.org/resource/700
Classroom Assessment and the National Science Education Standards
http:www.nap.edu/catalog/9847.html

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Guiding Principle 4:
Learning is a collaborative responsibility.

Teaching and learning are both collaborative processes. Collaboration benefits teaching and learning when it occurs on several levels: when students, teachers, family members and the community collectively prioritize education and engage in activities that support local schools, educators and students; when educators collaborate with their colleagues to support innovative classroom practices and set high expectations for themselves and their students; and when students are given opportunities to work together toward academic goals in ways that enhance learning.

Research Summary
Collaborative learning is an approach to teaching and learning that requires learners to work together to deliberate, discuss and create meaning. Smith and MacGregor (1992) define the term as follows:

> "Collaborative learning" is an umbrella term for a variety of educational approaches involving joint intellectual effort by students or students and teachers together. Usually, students are working in groups of two or more, mutually searching for understanding, solutions or meanings or creating a product. Collaborative learning activities vary widely, but most center on students' exploration or application of the course material, not simply the teacher's presentation or explication of it. (p. 1)

Collaborative learning has been practiced and studied since the early 1900s.The principles are based on the theories of John Dewey (2009), Lev Vygotsky (1980) and Benjamin Bloom (1956).Their collective work focusing on how students learn has led educators to develop more student-focused learning environments that put students at the center of instruction. Vygotsky specifically stated that learning is a social act and must not be done in isolation. This principle is the foundation of collaborative learning.

The research of Vygotsky (1980) and Jerome Bruner (1985) indicates that collaborative learning environments are one of the necessities for learning. Slavin's (1989) research also suggests that students and teachers learn more, are more engaged and feel like they get more out of their classes when working in a collaborative environment. Totten, Sills, Digby

and Russ (1991) found that those involved in collaborative learning understand content at deeper levels and have higher rates of achievement and retention than learners who work alone. They suggest that collaborative learning gives students opportunities to internalize their learning.

A meta-analysis from the Cooperative Learning Center at the University of Minnesota concluded that having students work collaboratively has significantly more impact on learning than having students work alone (Johnson, Maruyama, Johnson, Nelson, & Skon, 1981).An analysis of 122 studies on cooperative learning revealed:

- More students learn more material when they work together—talking through the material with each other and making sure that all group members understand—than when students compete with one another or work alone individualistically.
- More students are motivated to learn the material when they work together than when students compete or work alone individualistically (and the motivation tends to be more intrinsic).
- Students have more positive attitudes when they work together than when they compete or work alone individualistically.
- Students are more positive about the subject being studied, the teacher and themselves as learners in that class and are more accepting of each other (male or female, handicapped or not, bright or struggling or from different ethnic backgrounds) when they work together.

Collaboration can be between teachers, between students and between teacher and student.

Teacher-Teacher Collaboration
It is critical for teachers to have the time to collaborate. Professional learning communities, which provide teachers with established time to collaborate with other teachers, have become a more common practice in recent years. Louis and Kruse (1995) conducted a case study analysis that highlighted some of the positive outcomes associated with professional learning communities, including a reduction in teacher isolation, increases in teacher commitment and sense of shared responsibility and a better understanding of effective instructional practices. Professional learning

communities encourage collaborative problem solving and allow teachers to gain new strategies and skills to improve and energize their teaching and classrooms.

Another example of teacher-to-teacher collaboration is lesson study. This professional development process began in Japan. Lesson study is a collaborative approach to designing and studying classroom lessons and practice. The most critical components of lesson study are observation of the lesson, collection of data about teaching and learning and a collaborative analysis of the data to further impact instruction (Lewis, 2002; Lewis & Tsuchida, 1998; Wang-Iverson & Yoshida, 2005). Some of these characteristics are similar to other forms of professional development—analyzing student work, cognitive coaching and action research, to name a few—but the fact that it focuses on teachers observing a live lesson that was collaboratively developed is different than any other form of professional development. Lesson study is a way for teachers to work together, collect data and analyze data to reflect on teaching and learning (Lewis, 2002).

Student-Student Collaboration
Collaborative learning not only allows students to engage deeply with content but also helps students build the interpersonal skills needed to be successful in college and careers. Johnson, Johnson and Holubec (1993) state that collaborative learning provides students with the opportunity to develop social skills. They found that many of the outcomes expected as part of a collaborative learning activity corresponded with goals for student content understanding and skill attainment. The strategies associated with collaborative learning—such as role assignments, collaborative problem solving and task and group processing—all build the social skills that students need to be successful when working with others. Additionally, these skills are important in preparing students for the world of work, where collaborative writing and problem-solving are key elements of many careers.

There is a plethora of instructional and learning strategies that encourage student collaboration, including peer teaching, peer learning, reciprocal learning, team learning, study circles, study groups and work groups, to name just a few (Johnson & Johnson, 1986). Collaborative inquiry, which combines many of the elements of student collaboration just mentioned, is a research-based strategy in which learners work together through various phases "of planning, reflection and action as they explore an issue or question of importance to the group" (Goodnough, 2005 88). Collaborative inquiry brings together many perspectives to solve a problem, engaging students in relevant learning around an authentic question. It allows students to work together

toward a common purpose to explore, make meaning and understand the world around them (Lee & Smagorinsky, 2000).

Teacher-Student Collaboration
The purpose for collaboration in an educational setting is to learn and unpack content together to develop a shared understanding. Harding-Smith (1993) points out that collaborative learning approach is based on the idea that learning must be a social act. It is through interaction that learning occurs. Johnson and Johnson (1986) similarly emphasize that when students and teachers talk and listen to each other; they gain a deeper understanding of the content and can develop the skills necessary to negotiate meaning throughout their lives.

Collaboration requires a shift from teacher-led instruction to instruction and learning that is designed by both teachers and students. Collaboration between student and teacher plays a critical role in helping students reflect and engage in their own learning experiences. The constructivist learning movement is one current example of efforts to increase the amount of collaboration between student and teacher occurring in the classroom. Mayer (2004) defines constructivist learning as an "active process in which learners are active sense makers who seek to build coherent and organized knowledge" (p. 14). Students co-construct their learning, with the teacher serving as a guide or facilitator. The teacher does not function in a purely didactic (i.e., lecturing) role. Neo and Neo (2009) found that constructivism helps students develop problem-solving skills, critical thinking and creative skills and apply them in meaningful ways.

Probing Questions

- How can you use collaborative learning processes to engage students in their learning?
- How might you create space for teacher-teacher collaboration within your context?

Resources

All Things PLC website provides a number of resources on professional learning communities. Links to these resources can be found at http://www.allthingsplc.info/.

The Wisconsin Center for Education Research hosts a website with many resources for collaborative and small group learning. It can be found at http://www.wcer.wisc.edu/archive/cl1/cl/.

The Texas Collaborative for Teaching Excellence has created a professional development module about collaborative learning, which provides readings, research and resources. It can be found at http://www.texascollaborative.org/Collaborative_Learning_Module.htm.

A review of research on professional learning communities, presented at the National School Reform Faculty research forum in 2006, contains findings that outline what is known about professional learning communities and how they should be structured. This paper is available at http://www.nsrfharmony.org/research.vescio_ross_adams.pdf.

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Guiding Principle 5:
Students bring strengths and experiences to learning.

Every student learns. Although no two students come to school with the same culture, learning strengths, background knowledge or experiences and no two students learn in exactly the same way, every student's unique personal history enriches classrooms, schools and the community. This diversity is our greatest education asset.

Research Summary
The authors of the groundbreaking work How People Learn: Brain, Mind, Experience and School (Bransford, Brown, & Cocking, 2000) found that students' preconceptions may clash with new concepts and information they learn in school. If those preconceptions are not addressed, students may fail to grasp what is being taught or may learn only to pass a test. In other words, a student might enter kindergarten believing the world is flat because he or she has seen a flat map. Despite the presentation of geographic names and principles, the student still maintains the fundamental preconception about the shape of the world. Developing competence—or in this case, a knowledge of the shape of the world—requires that students have a deep foundation of factual knowledge, a context or conceptual framework to place it in and the opportunity to explore how it connects to the real world. Ultimately, a metacognitive approach—one that pushes students to think about their own thought processes—can help them take control of their own learning.

As educational research on how people learn advances, so does our approach to teaching and learning. Strategies to advance teaching and learning are constantly evolving into new and innovative ways to reach learners. When a teacher uses students' interests, curiosity and areas of confidence as starting points in planning instruction, learning is more productive. Teachers who are cognizant of these issues—and reflect on how to use them as strengths upon which they can build—ensure that all students have access to the content. Areas to consider are student strengths, gender, background knowledge and connections to the home environment.

Building on Student Strengths
Teaching to students' strengths can improve student engagement (Sternberg, 2000, Sternberg & Grigorenko, 2000). Many students have strengths that are unrecognized and neglected in traditional schooling. Students in underrepresented minority groups have culturally relevant knowledge that teachers can use to promote learning. Sternberg et al. (2000) found that conventional instruction in school systematically discriminates against students with creative and practical strengths and tends to favor students with strong memory and analytical abilities. This research, combined with Sternberg's earlier (1988) research showing that teaching for diverse styles of learning produces superior results, suggests that capitalizing on the various strengths that all students bring to the classroom can positively affect students' learning. When students are taught in a way that fits how they think, they do better in school (Sternberg, 2000; Sternberg & Grigorenko, 2000). Sternberg and O'Hara (2000) found that when students were taught in a way that incorporated analytical thinking, creative thinking (creating, imagining and inventing) and practical thinking (applying, implementing and putting into practice)—students achieved at higher levels than when taught using conventional instructional methods.

Gender Considerations
Changing instruction might help alleviate the gender gap in literacy achievement. Research conducted by Sax (2005) reveals that boys fall behind girls in reading and writing early on and never catch up. Sax (2007) found that this dynamic plays a role in higher high school dropout rates for males, particularly black males. The college graduation rate for females approaches twice that of males in Hispanic and black populations. Many classrooms are a better fit for the verbal-emotive, sit-still, take-notes, listen-carefully, multitasking girl (Sax, 2005).The characteristics that boys bring to learning—impulsivity, single-task focus, spatial-kinesthetic learning and physical aggression—often are viewed as problems.

Researchers such as Blum (1997) have identified more than 100 structural differences between the male and female brains. Altering strategies to accommodate more typically male assets—for example, the use of multimodal teaching (discussed on pages 10-11 of this report); the use of various display formats, such as printed material, videos, presentations and computers; and an interactive learning environment to appeal to different learning styles—can help bridge the gap between what students

are thinking and what they are able to put down on paper. Sadik's (2008) research suggests that using multimodal instructional strategies like digital storytelling—allowing students to incorporate digital cameras, creative and editing tools, computers and other technology to design multimedia presentations—deepens students' learning.

Background Knowledge Bransford et al. (2000) note in How People Learn, learning depends on how prior knowledge is incorporated into building new knowledge and thus teachers must take into account students' prior knowledge. Jensen's (2008) research on the brain and learning demonstrates that expertise cannot be developed merely through exposure to information. Students must connect the information to their prior knowledge to internalize and deepen their understanding. Teachers can connect academic learning with real-life experiences. Service learning, project-based learning, school-based enterprises and student leadership courses are some examples of how schools are trying to make the curriculum relevant. The key to making the curriculum relevant is asking the students to help connect the academics to their lives; this approach gets students actively engaged in their learning, which builds a stronger connection and commitment to school. Bell (2010) suggests that strategies such as project-based approaches to learning can help ensure that content and skills are taught together and connected to prior knowledge, which helps students understand how to develop and apply new skills in various contexts.

Connections to the Home Environment
Cochran-Smith (2004) emphasizes family histories, traditions and stories as an important part of education. Often, children enter school and find themselves in a place that does not recognize or value the knowledge or experience they bring from their homes or communities. This situation can create a feeling of disconnect for students—a dissonance obliging them to live in and navigate between two different worlds, each preventing them from full participation or success in the other. Districts and schools can alleviate this dissonance by valuing and taking advantage of the unique experiences that each student brings to the classroom. Emphasizing connections to parents and community, recognizing and utilizing student strengths and experiences and incorporating varied opportunities within the curriculum can help alleviate this dissonance.

Ferguson (2001) points out that it is particularly important to establish connections that not only bring the parents into the school environment but also encourage school understanding and participation within the community. Social distinctions often grow out of differences in attitudes, values, behaviors and family and community practices (Ferguson, 2001). Students need to feel their unique knowledge and experience is valued by the school and parents and community members need to feel they are respected and welcome within the school.

Although much attention has been paid to No Child Left Behind (NCLB) requirements for annual achievement tests and high-quality teachers, the law also includes important requirements for schools, districts and states to organize programs of parental involvement and to communicate with parents and the public about student achievement and the quality of schools. Epstein (2005) offers perspectives on the NCLB requirements for family involvement; provides a few examples from the field; suggests modifications that are needed in the law; and encourages sociologists of education to take new directions in research on school, family and community partnerships.

Probing Questions
- What are some ways that you currently use students' background knowledge to inform instruction?
- Does your experience teaching boys to read and write concur with the research? What ideas do you have to address the achievement gaps related to gender?
- What are ways you can uncover, acknowledge and use students' backgrounds and strengths to enhance learning?
- What are some strategies for valuing and taking advantage of the unique experiences that each student brings to the classroom?

Resources
A good resource still valid today is Making Assessment Work for Everyone: How to Build on Student Strengths. See the SEDL website to download this resource: http://www.sedl.org/pubs/tl05/.

A short, easy-to-digest article from Carnegie Mellon University is titled Theory and Research-Based Principles of Learning. The article and full bibliography are at http://www.cmu.edu/teaching/principles/learning.html.

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Guiding Principle 6:
Responsive environments engage learners.

Meaningful learning happens in environments where creativity, awareness, inquiry and critical thinking are part of instruction. Responsive learning environments adapt to the individual needs of each student and encourage learning by promoting collaboration rather than isolation of learners. Learning environments, whether classrooms, schools or other systems, should be structured to promote engaged teaching and learning.

Research Summary
To be effective for all students, classroom learning environments must be responsive to a broad range of needs among a diverse student population. These diverse needs include cultural and linguistic differences as well as developmental levels, academic readiness and learning styles. A responsive learning environment engages all students by providing a respectful climate where instruction and curriculum are designed to respond to the backgrounds and needs of every student.

Culturally Responsive Teaching
Research on culturally responsive teaching emphasizes the importance of teachers' understanding the cultural characteristics and contributions of various ethnic groups (Smith, 1998) and showing respect toward these students and their culture (Ladson-Billings, 1995; Pewewardy & Cahape, 2003). Culturally responsive teaching is defined by Gay (2002) as "using the cultural characteristics, experiences and perspectives of ethnically diverse students as conduits for teaching them more effectively" (p. 106).

Research on culturally responsive teaching has found that students both are more engaged in learning and learn more effectively when the knowledge and skills taught are presented within a context of their experience and cultural frames of references (Au & Kawakami, 1994; Gay, 2000; Ladson-Billings, 1995).Areas considered part of creating a culturally responsive learning environments are (1) understanding the cultural lifestyles of their students, such as which ethnic groups give priority to communal living and problem solving; (2) knowing differences in the modes of interaction between children and adults in different ethnic groups; and (3) becoming aware of cultural implications of gender role socialization among different groups (Banks & Banks, 2001).To provide a culturally responsive learning environment teachers need to:

- Communicate high expectations for all students (Gay, 2000; Hollins & Oliver, 1999; Ladson-Billings, 1994, Nieto, 1999).
- Use active teaching methods and act as learning facilitators (Banks & Banks, 2001; Gay, 2000).
- Maintain positive perspectives on families of diverse students (Delgado-Gaitin & Trueba, 1991).
- Gain knowledge of cultures of the students in their classrooms (Banks & Banks, 2001; Nieto, 1999).
- Reshape the curriculum to include culturally diverse topics (Banks & Banks, 2001; Gay, 2000; Hilliard, 1991).
- Use culturally sensitive instruction that includes student-controlled discussion and small-group work (Banks & Banks, 2001; Nieto, 1999).

Further research asserts that culturally responsive teachers help students understand that knowledge is not absolute and neutral but has moral and political elements. This knowledge can help students from diverse groups view learning as empowering (Ladson-Billings, 1995; Tharp & Gallimore, 1988).

Strategies for designing curriculum and instruction for culturally diverse students are similar to the strategies for differentiating curriculum and instruction. In fact, Mulroy and Eddinger (2003) point out that the research on differentiation emerged, in part, because of the demand on schools to serve an increasingly diverse student population. Heacox (2002) asserts that classrooms are diverse in cognitive abilities, learning styles, socioeconomic factors, readiness, learning pace and gender and cultural influences.

Differentiation
Research on differentiation includes meeting the learning needs of all students through modifying instruction and curriculum to consider developmental level, academic readiness and socioeconomic backgrounds, as well as cultural and linguistic differences. Tomlinson (2005) defines differentiated instruction as a philosophy of teaching based on the premise that students learn best when their teachers

accommodate the difference in their readiness levels, interests and learning profiles. In a differentiated learning environment, each student is valued for his or her unique strengths while being offered opportunities to learn and demonstrate learning through a variety of strategies (Mulroy & Eddinger, 2003). Hall (2002) states, "To differentiate instruction is to recognize students' varying backgrounds, readiness, language, learning preferences and interests and to react responsively" (p. 1).

According to Tomlinson (2005), who has written extensively on differentiation, three elements guide differentiated instruction: content, process and product. Content means that all students are given access to the same content but are allowed to master it in different ways. Process refers to the ways in which the content is taught. Product refers to how students demonstrate understanding. Corley (2005) provides three questions that drive differentiation: (1) What do you want the student to know? (2) How can each student best learn this? and (3) How can each student most effectively demonstrate learning? Maker (1986) offers a framework through which differentiation can occur in the classroom:

- Create an encouraging and engaging learning environment through student-centered activities, encouraging independent learning, accepting student contributions, using a rich variety of resources and providing mobility and flexibility in grouping.
- Modify the content according to abstractness and complexity. Provide a variety of content and particularly content focused on people.
- Modify the learning process through use of inquiry, higher-order thinking activities, group interactions, variable pacing, creativity and student risk-taking and freedom of choice in learning activities.
- Modify the product through facilitating different ways for students to demonstrate learning, such as the use of authentic assessments.

In addition, researchers have found that the use of flexible grouping and tiered instruction for differentiation increases student achievement (Corley, 2005; Tomlinson & Eidson, 2003). Heacox (2002) describes differentiation as follows:

> The focus is not on the adjustment of the students, but rather the adjustment of teaching and instructional strategies making it about learning, not teaching. The teacher is the facilitator who…puts students at the center of teaching and learning and

lets his or her students' learning needs direct instructional planning (p. 1).

Several studies conducted in elementary and middle school classroom have found that student achievement is increased in differentiated classrooms (Connor, Morrison, & Katch 2004; McAdamis, 2001). Tomlinson and Eidson (2003) emphasize the need to include the components of student readiness, student interest and student learning profile in differentiating instruction. Students' interests and learning profiles are often tied to their learning styles.

Learning Styles
The body of research on learning styles has coalesced around the work of Howard Gardner, who introduced the theory of multiple intelligences in 1983. Gardner's work suggests that the concept of a pure intelligence that can be measured by a single I.Q. score is flawed and he has identified nine intelligences that people possess to various degrees. His theory asserts that a person's type of intelligence determines how he or she learns best (Gardner, 1999).

Learning style refers to how a student learns and the concept takes into account cultural background and social and economic factors as well as multiple intelligences. Beishuizen and Stoutjesdjik (1999) define learning style as a consistent mode of acquiring knowledge through study or experience. Research has shown that the quality of learning at all levels of education (primary, secondary and higher education) is enhanced when instruction and curriculum take into account individual learning styles (Dunn, Griggs, Olsen, Beasley & Gorman, 1995).Another study found that student learning improved when the learning environment was modified to allow students to construct personally relevant knowledge and to engage in the materials at different levels and from different points of view (Dearing, 1997).

A responsive classroom environment considers the individual learning needs of all students. These learning needs include a variety of factors that influence how students learn: culture, language, developmental level, readiness, social and economic background and learning style.

Creativity

Creativity is an essential component for creating an engaging and accessible classroom environment. The Wisconsin Task Force on Arts and Creativity in Education (2009) defines creativity as a process that combines "imagination, creativity and innovation to produce something novel that has value" (p. 14). Sir Ken Robinson (2011) and Daniel Pink (2006) both support the need for schools to focus on creating classroom that foster this type of creativity in students. According to Robinson (2011), classrooms that foster creativity and allow students to question assumptions, look at content through various lenses and create new understandings can help students be more successful in postsecondary education and the workplace.

Probing Questions

- Describe two or three ways you might differentiate the instruction in your classroom. How might you share this with a new teacher?
- How might you implement a simple strategy for assessing your students' learning styles?

Resources

ASCD offers a number of resources on differentiated instruction, including work by Carol Ann Tomlinson, at http://www.ascd.org.
For resources on culturally responsive teaching, the Center for Culturally Responsive Teaching and Learning can be accessed at http://www.culturallyresponsive.org/.

The website of the National Center for Culturally Responsive Education Systems (NCCRESt) can be accessed at http://www.nccrest.org.
For learning styles and resources on multiple intelligences, Thomas Armstrong hosts a website with information on Gardner's Theory of Multiple Intelligences and related teaching resources at http://www.thomasarmstrong.com/multiple_intelligences.php.

Creativity: Its Place in Education is a report that offers suggestions for creative classrooms and teaching. This report can be found at http://www.jpb.com/creative/Creativity_in_Education.pdf.

The report of the Wisconsin Task Force on Arts and Creativity in Education offers recommendations for policy and practice. This report can be found at ftp://doaftp04.doa.state.wi.us/doadocs/taskforce_report_final2009pdf.

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