2014 WYOMING
CAREER & VOCATIONAL EDUCATION
CONTENT AND PERFORMANCE STANDARDS

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*to be fully implemented in districts by the beginning of school year 2017-18

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2014 WYOMING CAREER & VOCATIONAL EDUCATION CONTENT AND PERFORMANCE STANDARDS

RATIONALE

As part of the 21st century workforce, college and career ready students will need to be equipped with knowledge, skills, and characteristics that allow them to be productive, contributing members of an innovative, dynamic global society. Schools today must assist students in developing the necessary skills, intellectual abilities, and personal traits that help them to secure and maintain meaningful employment in the world of work. Nearly eight in ten future job openings in the next decade in the U.S. will require postsecondary education or training. Forty-five percent will be in "middle skill" occupations, which require at least some postsecondary education and training, while 33% will be in high skilled occupations for which a Bachelor's degree or more is required. By contrast, only 22% of future job openings will be "low skill" and accessible to those with a high school diploma or less. (The American Diploma Project)

The foundation for rewarding careers and productive employment is built through exploration and understanding of career choices. Today's employers seek creative, critical thinkers who are able to access and use information from a variety of sources to assist them in solving problems and making informed workplace decisions. In order to secure career advancements, an employee must demonstrate a willingness to learn on the job by embracing lifelong learning, and exhibit initiative, productivity, and responsibility. Additionally, an employee must advocate and continually demonstrate safe work practices.

Students must demonstrate the collaborative skills that play a major role in personal and career success. An individual should have the ability to participate as a member of a diverse team, teach others new skills, exercise leadership, compromise, and serve clients and customers. A student must be able to acquire, evaluate, interpret, organize and maintain data, and process and communicate information. In order to be a productive member of society, students must be able to manage personal and workplace resources including time, materials and finances. In addition, they must be flexible and adaptive with technology in a dynamic and ever-changing digital world.

ORGANIZATION OF STANDARDS

Standards specify the essential learning that students must master. They provide a K-12 framework to assist school districts, schools, and communities in developing and strengthening curriculum rather than prescribing courses, materials, or instructional methodology. Teachers ensure that students achieve standards by using a range of instructional strategies that they select based on their students' needs. Content and performance standards are identified for grade spans K-5, 6-8, 9-12 with benchmarks at grades five, eight, and eleven. The standards have not been assigned an order of importance. Terms used in this document are defined in the glossary.

Kindergarten through fifth grade students, parents, and teachers work toward the achievement of the fifth grade benchmarks. Sixth grade through eighth grade students, parents, and teachers work toward the achievement of the eighth grade benchmarks. Ninth grade through eleventh grade students, parents, and teachers work toward the achievement of the eleventh grade benchmarks. Success at each benchmark level requires the effort and commitment of all who prepare for that level. It also requires a commitment of support and cooperation between the three levels (elementary, middle and high school) and the district administration.

Content Standards: These statements define what students are expected to know and be able to do by the time they graduate. They do not dictate what methodology or instructional materials should be used, nor how the material is delivered.

Benchmarks: These statements specify what students are expected to know and be able to do at the end of each of the benchmark grade levels, in this document, grades 5, 8, and 11. These benchmarks specify the skills and content students must master along the way in order to demonstrate proficiency of the content standard by the time they graduate.

Performance Level Descriptors: These statements describe how well students must perform the benchmarks. The "proficient" level is required in order to demonstrate mastery of the standards. Descriptors help teachers assess where students are performing in relation to the benchmarks, and ultimately, the content standards.

THE PROCESS OF STANDARDS DEVELOPMENT

Consistent with its responsibility to evaluate and review the uniformity and quality of the standards at least every five years, the Wyoming State Board of Education directed the Wyoming Department of Education (WDE), working in consultation and coordination with local school districts, to formulate and implement a process to evaluate and review the uniformity and quality of the standards by December 2013.

The Wyoming Career/Vocational Education Content and Performance Standards represent a cooperative effort. The C/VE Committee was formed in May 2012 with representatives from school districts, community colleges, and businesses state-wide. This committee met for the first time in June 2012 to begin the revision process. Members began with a systematic evaluation of the uniformity and quality of the 2008 standards. The standards were reviewed for cognitive complexity, and it was decided to integrate a degree of national standards to establish the rigor of the Wyoming Career/Vocational Education Content and Performance Standards.

The Committee incorporated and adapted the Common Core State Standards (CCSS) for Literacy in Science and Technical subjects, and referenced the Common Career Technical Core (CCTC), 21st Century Skills, and International Society for Technology in Education (ISTE) in the Standards. The C/VE Committee chose not to adopt the CCTC Standards in order to develop a cohesive K-12 system. Alignment between national standards and the new C/VE Standards are drawn below:

ISTE Standard		C/VE Code
1	Creativity & Innovation	CV12.3.4
2	Communication & Collaboration	Standard 2
3	Research & Information Fluency	Standard 4
4	Critical Thinking, Problem Solving, and Decision Making	Standard 3
5	Digital Citizenship	Standard 5, Benchmark 3
6	Technology Operations and Concepts	Standard 5

CCTC Career Ready Practices		C/VE Code
1	Act as a responsible and contributing citizen and employee.	CV12.1.4
2	Apply appropriate academic and technical skills.	n/a
3	Attend to personal health and financial well-being.	n/a
4	Communicate clearly, effectively and with reason.	CV12.2.1
5	Consider the environmental, social and economic impacts of decisions.	CV12.3.4
6	Demonstrate creativity and innovation.	CV12.3.4
7	Employ valid and reliable research strategies.	CV12.3.3
8	Utilize critical thinking to make sense of problems and persevere in solving them.	Standard 3
9	Model integrity, ethical leadership and effective management.	CV12.2.2
10	Plan education and career path aligned to personal goals.	CV8.1.1 & 8.1.2
11	Use technology to enhance productivity.	Standard 5
12	Work productively in team while using cultural/global competence	CV12.2.3

All other documents reviewed by the Committee are referenced on page #23 of this document.

To completely revamp the standards to reflect greater rigor and closer alignment to national standards, grade-band groups of K-5, 6-8, 9-12 were formed to evaluate, update, and create standards, benchmarks, and performance level descriptors relevant to the skills needed by the 21st Century learner. Groups met via the Wyoming Education Network, on-line, as well as face-to-face to continue development and alignment. A public comment period via the Wyoming Department of Education website was allowed for one month before the team met again face-to-face to address potential edits and finalize the document. Throughout the drafting process, the C/VE Committee developed interdisciplinary, project-based standards which focus on high-level questioning, critical thinking, and problem solving across the grade spans. These standards will guide teachers toward effective instruction to aid in students' preparation for college and careers.

INTRODUCTION TO THE STANDARDS

CTE programs across the state of Wyoming are dynamic and diverse, encompassing the National 16 Career Clusters (http://www.careertech.org/) and their corresponding Career Pathways, linked below:

Agriculture, Food & Natural Resources	Education & Training
Architecture & Construction	Finance
Arts, A/V Technology & Communications	Government & Public Administration
Business, Management & Administration	Health Science
Hospitality & Tourism	Manufacturing
Human Services	Marketing
Information Technology	Science, Technology, Engineering & Mathematics
Law, Public Safety, Corrections & Security	Transportation, Distribution & Logistics

Wyoming CTE programs are further enhanced by professional organizations that provide annual professional development opportunities for CTE teachers: WVATA (Wyoming Vocational Agricultural Teachers Association); WBEA (Wyoming Business Education Association; WNRS (New and Related Services- guidance and career centers); WHSTE (Wyoming Health Services Teacher Education); WATFACS (Wyoming Association of Family and Consumer Sciences); WMEA (Wyoming Marketing Association); WTEA (Wyoming Technical Education Association.); and WACTE (Wyoming Association for Career and Technical Education).

Curricula need to stay current with rapid changes in the workplace and to recognize the differing sizes of programs within our state. For these reasons, the standards are written with broad scope and purpose. Intended also to promote college and career readiness, as defined by the American Diploma Project Network. "To be college- and career-ready, high school graduates must have studied a rigorous and broad curriculum, grounded in the core academic disciplines, but also consisting of other subjects that are part of a well-rounded education. Academic preparation alone is not enough to ensure postsecondary readiness but it is clear that it is an essential part of readiness for college, careers, and life in the 21st century." (http://www.achieve.org/college-and-career-readiness)

The standards have been organized into five major categories:

1. **Career Development and Readiness**
2. **Communication and Collaboration**
3. **Critical Thinking and Problem Solving**
4. **Technical Literacy**
5. **Technical Proficiency and Productivity**

The standards are not prioritized; rather, they are listed alphabetically. A brief description is provided for each of these standards on the following page.

Career Development and Readiness: Students demonstrate career planning and employability skills.

Communication and Collaboration: Students develop the skills necessary to effectively lead, collaborate, and communicate.

Critical Thinking and Problem Solving: Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate technology, tools, and resources.

Technical Literacy: Students effectively read, evaluate, write, and communicate technical information.

Technical Proficiency and Productivity: Students safely, ethically, and productively use existing and new technologies and systems.

Connections to the Common Core State Standards (CCSS) for Literacy in History, Science, and Technical Subjects: Standards Coding for English/Language Arts & Math

Content Standard	CCSS Coding	Stands for	Where You'll Find It
ELA	R.CCR.9 W.CCR.1	Reading / Writing College- and Career-Ready Anchor Standard **Example:** R.CCR.9 = Reading, Individual College and Career Readiness (CCR) Anchor Standard, Standard 9	Language Arts Standards - CCSS ELA pages, after the introduction (Reading - CCR, K-5 pg. 10; Gr. 6-12 pg. 35) (Writing - CCR, K-5 pg. 18; Gr. 6-12 pg. 41)
Reading	RL.3.2 RI.4.3	Reading of Literature, Gr. 3 Reading for Information, Gr. 4 **Example:** RI.4.3 = Reading, Informational Text, Grade 4, Standard 3	Language Arts Standards - CCSS ELA pages, after the introduction (K-5 pp. 11-12; Gr. 6-12 pp. 36-38) (K-5 pp.13-14; Gr. 6-12 pp. 39-40)
Writing	W.5.1a	Writing, Gr. 5 **Example:** W.5.1a Writing, Grade 5, Standard 1a	Language Arts Standards - CCSS ELA pages, after the introduction (K-5 pp. 19-21; Gr. 6-12 pp. 42-47)
Literacy Standards for History, Science, & Technical Subjects	RHST.CCR.2 RH.9-10.3 RST.11-12.3 WHST.CCR.2 WHST.9-10.3	Reading for History/S.S., Science, & Technical Subjects), CCR Anchor Standard #2 Reading Lit. in History, Gr. 9-10 Reading Lit. in Science & Technical Subjects, Gr. 11-12 **Example:** RST.6-8.3 = Reading, Science and Technical Text, Grade 6-8, Standard 3	Language Arts Standards - CCSS ELA pages, after the introduction (Gr. 6-12) (Reading - CCR pg. 60) (Reading - History pg. 61) (Reading - Science & Technical Subjects (RST) pg. 62) (Writing - CCR pg. 63) (Writing for Literacy in History, Science, & Technical Subjects (WHST) pp. 64-66)
Math	MP.2 7.G.A.2	Math Practice #2 7th Grade Geometry **Example:** 4.MD.A.2 = 4th Grade Math, Measurement & Data Domain, 1st Cluster Heading, Standard 2	Mathematics Standards – CCSS Math pages, after the introduction (K-12 pp. 10-83)

All Standards Documents can be found on the Wyoming Department of Education Standards Page at http://edu.wyoming.gov/educators/standards/.

2014 WYOMING CONTENT AND PERFORMANCE STANDARDS

CAREER & VOCATIONAL EDUCATION CONTENT STANDARD

1. Career Development and Readiness

Students demonstrate career planning and employability skills.

GRADE SPAN K-5		GRADE SPAN 6-8		GRADE SPAN 9-12	
CODE	GRADE 5 BENCHMARKS	CODE	GRADE 8 BENCHMARKS	CODE	GRADE 12 BENCHMARKS
CV5.1.1	Students identify and describe various occupations.	CV8.1.1	Career-aware students explore several career pathways including but not limited to outlook, salary, needed training, duties and lifestyle.	CV12.1.1	College and career-ready students evaluate current knowledge and interests in order to set career goals.
CV5.1.2	Students describe how work relates to meeting needs for goods, clothing, shelter, and other necessities for living.	CV8.1.2	Career-aware students conduct an inventory of personal skills, aptitude and interests and identify career pathways that align with their results.	CV12.1.2	College and career-ready students explore careers including outlook, salary, needed training, duties and lifestyle utilizing all available resources including mentors and industry experts.
CV5.1.3	Students identify and demonstrate behaviors contributing to the successful completion of workplace tasks.	CV8.1.3	Career-aware students prepare a self-improvement plan including secondary and postsecondary programs to gain desired knowledge and experience toward possible career opportunities.	CV12.1.3	College and career-ready students prepare an educational and career plan to enable them to gain desired knowledge and experience.
CV5.1.4	Students complete tasks within an allotted time by acquiring, storing, organizing, and using materials and space efficiently.	CV8.1.4	Career-aware students demonstrate an awareness of characteristics and skills necessary to enhance employability.	CV12.1.4	College and career-ready students demonstrate employability skills that enable them to be responsible and contributing citizens and employees.

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CAREER & VOCATIONAL EDUCATION CONTENT STANDARD

2. Communication and Collaboration

Students develop the skills necessary to effectively lead, collaborate, and communicate.

GRADE SPAN K-5		GRADE SPAN 6-8		GRADE SPAN 9-12	
CODE	GRADE 5 BENCHMARKS	CODE	GRADE 8 BENCHMARKS	CODE	GRADE 12 BENCHMARKS
CV5.2.1	Students identify and practice compromise and conflict resolution skills.	CV8.2.1	Career-aware students effectively communicate using a variety of appropriate methods.	CV12.2.1	College and career-ready students communicate clearly, effectively, and with reason.
CV5.2.2	Students share new concepts learned through peer teaching and presenting to a group.	CV8.2.2	Career-aware students successfully lead a group activity.	CV12.2.2	College and career-ready students identify and model integrity, ethical leadership and effective management skills.
CV5.2.3	Students identify and actively participate in group roles and responsibilities while demonstrating respect and awareness of diversity.	CV8.2.3	Career-aware students actively participate as a team member to accomplish group goals while effectively working with diverse individuals/groups.	CV12.2.3	College and career-ready students work productively in teams while using cultural global competence.
CV5.2.4	Students apply safe, legal, and responsible use of information and technology as appropriate to the task.	CV8.2.4	Career-aware students apply safe, legal, and responsible use of information and technology as appropriate to the task.	CV12.2.4	College and career-ready students apply safe, legal, and responsible use of information and technology as appropriate to the task.

2014 WYOMING CONTENT AND PERFORMANCE STANDARDS

CAREER & VOCATIONAL EDUCATION CONTENT STANDARD

3. Critical Thinking and Problem Solving

Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate technology, tools, and resources.

GRADE SPAN K-5		GRADE SPAN 6-8		GRADE SPAN 9-12	
CODE	GRADE 5 BENCHMARKS	CODE	GRADE 8 BENCHMARKS	CODE	GRADE 12 BENCHMARKS
CV5.3.1	Students identify and define real-world problems and meaningful questions for investigation.	CV8.3.1	Career-aware students identify real-world problems and efficiently locate & effectively use various sources of information for informed decision making.	CV12.3.1	College and career-ready students identify and define authentic problems and significant questions for investigation.
CV5.3.2	Students plan and manage activities to develop a solution or complete a project.	CV8.3.2	Career-aware students demonstrate an awareness of the working process of business and political systems and how they affect specific careers.	CV12.3.2	College and career-ready students identify trends, forecast possibilities, and explore complex systems and issues.
CV5.3.3	Students collect and analyze data to identify solutions and make informed decisions.	CV8.3.3	Career-aware students demonstrate an ability to explain and interpret solutions to problems using data and information compiled from a variety of reputable sources.	CV12.3.3	College and career-ready students employ valid and reliable research strategies and apply prior knowledge to solve a problem or complete a project.
CV5.3.4	Students seek help from appropriate people (staff, students, parents, etc.) and appropriate resources.	CV8.3.4	Career-aware students plan, manage and complete projects in a timely and effective manner.	CV12.3.4	College and career-ready students demonstrate creativity and innovation while considering the environmental, social, and economic impacts of decisions.

2014 WYOMING CONTENT AND PERFORMANCE STANDARDS

CAREER & VOCATIONAL EDUCATION CONTENT STANDARD

4. Technical Literacy

Students effectively read, evaluate, write, and communicate technical information.

GRADE SPAN K-5		GRADE SPAN 6-8		GRADE SPAN 9-12	
CODE	GRADE 5 BENCHMARKS	CODE	GRADE 8 BENCHMARKS	CODE	GRADE 12 BENCHMARKS
CV5.4.1	Students use a variety of methods including oral, written, graphic, pictorial, and/or multimedia in order to create and share a product.	CV8.4.1	Career-aware students produce clear and coherent writing in which the development, organization and style are appropriate to task, purpose and audience. (*CCSS W.9.4)	CV12.4.1	College and career-ready students produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (*CCSS W.11.4)
CV5.4.2	Students read and comprehend a variety of sources that provide workplace information, including functional texts.	CV8.4.2	Career-aware students demonstrate an ability to identify sources from which they locate, interpret, extract and summarize data in an ethical and appropriate manner.	CV12.4.2	College and career-ready students determine the meaning of symbols, key terms, and other content-specific words and phrases as they are used in technical context. (*Adapted from CCSS RL.9.11)
CV5.4.3	Students explain events, procedures, ideas, or concepts in technical texts, including what happened and why, based on specific information in the text. (*Adapted from CCSS RI.4.3)	CV8.4.3	Career-aware students demonstrate the ability to create compositions and presentations of technical data in both written and verbal formats.	CV12.4.3	College and career-ready students acquire, manipulate, analyze, diagnose, and/or report information, using the appropriate technology.
CV5.4.4	Students interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages) and explain how the information contributes to an understanding of the text in which it appears. (*Adapted from CCSS RI.4.7)	CV8.4.4	Career-aware students integrate and translate content presented in diverse formats and media, including visually and quantitatively, as well as in words. (*Adapted from CCSS R.CCR.7)	CV12.4.4	College and career-ready students precisely follow a complex multistep procedure when performing technical tasks. (*Adapted from CCSS RL.9.3) ***Coding can be found on page 8 of this document**

2014 WYOMING CONTENT AND PERFORMANCE STANDARDS

CAREER & VOCATIONAL EDUCATION CONTENT STANDARD

5. Technical Proficiency and Productivity

Students safely, ethically, and productively use existing and new technologies and systems.

GRADE SPAN K-5		GRADE SPAN 6-8		GRADE SPAN 9-12	
CODE	GRADE 5 BENCHMARKS	CODE	GRADE 8 BENCHMARKS	CODE	GRADE 12 BENCHMARKS
CV5.5.1	Students explain the need for rules within organizational systems.	CV8.5.1	Career-aware students identify technical and digital systems, how they are properly and ethically used and their relationship to other systems globally.	CV12.5.1	College and career-ready students manage resources to develop, analyze, and implement systems and applications.
CV5.5.2	Students examine family, community, monetary, and school systems.	CV8.5.2	Career-aware students plan tasks recognizing human resources, financial and timeline constraints that take into account priorities and goals.	CV12.5.2	College and career-ready students productively complete tasks taking constraints, priorities and resources into account.
CV5.5.3	Students understand and apply the responsibilities of digital citizenship.	CV8.5.3	Career-aware students demonstrate technical knowledge and skills by safely, ethically and appropriately acquiring, storing, organizing and using materials, tools, and workspace.	CV12.5.3	College and career-ready students safely and ethically use current industry-standard tools and emerging technologies.
CV5.5.4	Students understand and appropriately use available technology systems.	CV8.5.4	Career-aware students demonstrate proficiency in selecting and utilizing technologies in the completion of tasks and projects.	CV12.5.4	College and career-ready students utilize technology to develop innovative solutions or products.

Career & Vocational Education PLDs – Performance Level Descriptors

ELEMENTARY (K-5)	MIDDLE SCHOOL (6-8)	HIGH SCHOOL (9-12)
C/VE STANDARD 1 - Career Development and Readiness		
Students demonstrate career planning and employability skills.	Career-aware students demonstrate career planning and employability skills.	College and career-ready students demonstrate career planning and employability skills.
ADVANCED PERFORMANCE	**ADVANCED PERFORMANCE**	**ADVANCED PERFORMANCE**
Students complete tasks on time and manage materials and space. Students compare and contrast various occupations and can evaluate the importance of an occupation.	Students explore several career pathways. They identify career pathways and independently align strengths and interests. Students independently establish a self-improvement career plan that includes secondary and postsecondary program completion and related extracurricular (CTSO & community) involvement. Students describe, assess, improve, and demonstrate personal employability skills and characteristics.	Students understand and verbalize the career pathways model. They have worked with a career counselor to develop an inclusive Plan of Study that is aligned with their career interests and strengths. Students work independently with a career counselor to monitor and adjust their Plan of Study as their needs change. This includes secondary and postsecondary coursework opportunities as well as related CTSO & community service involvement. Students can accurately demonstrate personal employability skills and characteristics using both written and verbal communication methods.
PROFICIENT PERFORMANCE	**PROFICIENT PERFORMANCE**	**PROFICIENT PERFORMANCE**
Students regularly complete tasks on time and manage materials and space. Students compare various occupations and can explain the importance of an occupation.	Students explore and identify several career pathways that align with individual strengths and interests. Students have established a self-improvement career development plan that includes secondary & postsecondary program completion. Students can accurately identify employability skills and characteristics.	Students understand the career pathways model. They have worked with a career counselor to begin development of a Plan of Study that is aligned with their career interests and strengths. Students identify secondary and postsecondary coursework opportunities as well as related CTSO & community service involvement that may benefit them. They can identify and discuss valuable personal employability skills and characteristics.
BASIC PERFORMANCE	**BASIC PERFORMANCE**	**BASIC PERFORMANCE**
Students occasionally complete tasks on time and manage materials and space. Students compare two occupations and provide limited information on the importance of an occupation.	Students explore and identify, with assistance, a limited number of career pathways that align with individual strengths and interests. Students have established a partial self-improvement career development plan. With assistance, students can identify employability skills and characteristics.	Students have a limited understanding of the career pathways model. They have identified coursework around their career interests and strengths that would be used to develop a Plan of Study. Students have identified secondary and postsecondary coursework opportunities that are of interest to them. Students can discuss several personal employability skills and characteristics.
BELOW BASIC PERFORMANCE	**BELOW BASIC PERFORMANCE**	**BELOW BASIC PERFORMANCE**
Students require significant support to complete tasks on time and manage materials and space. Students can identify occupations.	Students require extensive support or provide little or no evidence in meeting the standard.	Students require extensive support or provide little or no evidence in meeting the standard.

Career & Vocational Education PLDs – Performance Level Descriptors

ELEMENTARY (K-5)	MIDDLE SCHOOL (6-8)	HIGH SCHOOL (9-12)
C/VE STANDARD 2 - Communication and Collaboration		
Students develop the skills necessary to effectively lead, collaborate, and communicate.	Career-aware students develop the skills necessary to effectively lead, collaborate, and communicate.	College and career-ready students develop the skills necessary to effectively lead, collaborate, and communicate.
ADVANCED PERFORMANCE	**ADVANCED PERFORMANCE**	**ADVANCED PERFORMANCE**
Students compromise and use conflict resolution skills independently. They share new concepts learned with others without prompting. Students are able to actively participate in group roles and responsibilities without teacher direction. When working with others, they demonstrate respect and incorporate diverse views, opinions, and thoughts. Students use information safely, ethically, and responsibly and are able to articulate the importance of doing so in and out of school.	Students positively recognize and utilize group diversity & productively interact with all team members to accomplish group goals. Students communicate effectively in all settings using a variety of methods. Students independently & successfully lead a group activity. They demonstrate global competencies, utilizing perspectives and strengths for the benefit of the team. Students consistently demonstrate safe, legal, and responsible use of information and technology as appropriate to the task.	Students are capable of fulfilling many roles on a team. They recognize that everyone brings different skills to a team and are able to effectively lead, collaborate, and communicate in order to successfully complete a project. They consistently share project progress and results. They demonstrate global competencies, utilizing perspectives and strengths for the benefit of the team.
PROFICIENT PERFORMANCE	**PROFICIENT PERFORMANCE**	**PROFICIENT PERFORMANCE**
Students are able to compromise and use conflict resolution skills with coaching. They share new concepts learned with others through an assigned task. Students are able to identify and participate in group roles and responsibilities. When working with others, they consistently demonstrate respect for diverse views, opinions, and thoughts. Students safely, responsibly, and ethically use information in a structured environment.	Students positively and productively interact with all team members to accomplish group goals. Students communicate effectively in most settings using a variety of methods. Students successfully lead a group activity with limited guidance. They demonstrate global competencies, learning from and working collaboratively with others. Students safely, legally, and responsibly use information and technology as appropriate to the task.	Students are active participants on a team. They communicate via standard methods with each other, and they utilize typical protocols to share project progress and results. They demonstrate global competencies, learning from and working collaboratively with others.
BASIC PERFORMANCE	**BASIC PERFORMANCE**	**BASIC PERFORMANCE**
Students are able to sometimes compromise and use conflict resolution skills during a structured setting with coaching and support. They occasionally share new concepts with others, and have difficulty participating and understanding some group roles and responsibilities. At times, students need support in showing respect for diverse views, opinions, and thoughts. Students need coaching to safely, responsibly, and ethically use information.	Students show little interest in group goals and seldom and/or inappropriately interact with team members. Students communicate effectively in some settings when given a specific method. Students lead a group activity with a lot of guidance. They have difficulty demonstrating global competencies, learning from and working collaboratively with others. With guidance students safely, legally, and responsibly use information and technology as appropriate to the task.	Students occasionally participate and communicate with other team members. They work toward project goals as individuals, rather than as a group. These students have a limited understanding that there are multiple means of communication and only utilize very basic methods to share project results. They have difficulty demonstrating global competencies, learning from and working collaboratively with others.

Career & Vocational Education PLDs – Performance Level Descriptors

ELEMENTARY (K-5)	MIDDLE SCHOOL (6-8)	HIGH SCHOOL (9-12)

C/VE STANDARD 2 - Communication and Collaboration   *Continued*

ELEMENTARY (K-5)	MIDDLE SCHOOL (6-8)	HIGH SCHOOL (9-12)
Students develop the skills necessary to effectively lead, collaborate, and communicate.	Career-aware students develop the skills necessary to effectively lead, collaborate, and communicate.	College and career-ready students develop the skills necessary to effectively lead, collaborate, and communicate.
BELOW BASIC PERFORMANCE	**BELOW BASIC PERFORMANCE**	**BELOW BASIC PERFORMANCE**
Students require significant support in making compromises or in using conflict resolution skills during a structured setting. With significant support, they are able to share concepts with others, or participate and understand group roles and responsibilities. Even with support, students struggle to show respect for diverse views, opinions, and thoughts. Students need significant support to safely, responsibly, and ethically use information.	Students require extensive support or provide little or no evidence in meeting the standard.	Students require extensive support or provide little or no evidence in meeting the standard

Career & Vocational Education PLDs – Performance Level Descriptors

ELEMENTARY (K-5)	MIDDLE SCHOOL (6-8)	HIGH SCHOOL (9-12)
C/VE STANDARD 3 - Critical Thinking and Problem Solving		
Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate technology, tools, and resources.	Career-aware students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate technology, tools, and resources.	College and career-ready students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate technology, tools, and resources.
ADVANCED PERFORMANCE	**ADVANCED PERFORMANCE**	**ADVANCED PERFORMANCE**
Students at the advanced level independently, consistently, and effectively problem solve by gathering data in order to make informed decisions. They evaluate information using appropriate technologies and/or resources to complete a task. Students seek or provide help independently.	Students independently and accurately locate, use, organize, analyze and communicate information in various formats. Students independently and accurately explain how systems operate and impact global society. Advanced students independently plan, manage, troubleshoot and complete projects in a timely manner.	Students independently and accurately locate, use, organize, analyze and communicate different types information through verbal and written means. Students use the appropriate technology, tools and resources to independently and accurately lead, research, manage and complete individual and group projects in a timely manner.
PROFICIENT PERFORMANCE	**PROFICIENT PERFORMANCE**	**PROFICIENT PERFORMANCE**
Students effectively problem solve by gathering data in order to make informed decisions. They organize information using appropriate technologies and/or resources to complete a task. Students seek or provide help with limited guidance.	Students accurately locate, use, organize, analyze and communicate, with minimal guidance, information in various formats. They accurately explain how systems operate and impact global society, with minimal guidance. Proficient students can plan, manage and complete projects in a timely manner.	Students accurately locate, use, organize and communicate information through verbal and written means. Students use technology, tools and resources to lead, research, manage and complete individual and group projects in a timely manner.
BASIC PERFORMANCE	**BASIC PERFORMANCE**	**BASIC PERFORMANCE**
Students demonstrate limited ability and require much assistance to problem solve and gather data in order to make informed decisions. They have limited abilities to organize information, occasionally using appropriate technologies and/or resources to complete a task. Students seek or provide help with a great amount of guidance.	Students locate, use, organize, analyze and communicate, with guidance, information in various formats. With guidance, basic students explain how systems operate. Basic students plan and complete projects with guidance.	Students locate, organize and communicate information with limited verbal and written means. Students can identify and/or use some technology, tools and resources to complete individual and group projects in a timely manner.
BELOW BASIC PERFORMANCE	**BELOW BASIC PERFORMANCE**	**BELOW BASIC PERFORMANCE**
Students require significant assistance to problem solve and gather data in order to make decisions. With significant support, they organize information, use technologies and/or resources to complete a task.	Students require extensive support or provide little or no evidence in meeting the standard.	Students require extensive support or provide little or no evidence in meeting the standard.

Career & Vocational Education PLDs – Performance Level Descriptors

ELEMENTARY (K-5)	MIDDLE SCHOOL (6-8)	HIGH SCHOOL (9-12)
C/VE STANDARD 4 - Technical Literary		
Students effectively read, evaluate, write, and communicate technical information.	Career-aware students effectively read, evaluate, write, and communicate technical information.	College and career-ready students effectively read, evaluate, write, and communicate technical information.
ADVANCED PERFORMANCE	**ADVANCED PERFORMANCE**	**ADVANCED PERFORMANCE**
Students read, comprehend, and evaluate a variety of functional texts. Students will create products that communicate information by evaluating and selecting the appropriate visual representations. Students will independently communicate understanding of visual representations through oral or written formats.	Students ethically select, interpret, integrate and analyze technical data and apply appropriate format(s) for composition and presentation of said technical data. Students successfully and independently integrate and convert quantitative or technical information into text and/or visual representations.	Students select, read, interpret, evaluate, analyze and communicate technical data in a variety of ways. Students can successfully and independently compose and present different types of technical data using a variety of visual technologies.
PROFICIENT PERFORMANCE	**PROFICIENT PERFORMANCE**	**PROFICIENT PERFORMANCE**
Students read and comprehend a variety of functional texts. Students will create products that communicate information using visual representations. Students will communicate understanding of visual representations through oral or written formats.	Students ethically select, interpret, and integrate technical data and apply appropriate format(s) for composition and presentation of said technical data. Students successfully integrate and convert quantitative or technical information into text and/or visual representations with minimal guidance.	Students effectively select, read, interpret, evaluate and communicate technical data in a variety of ways. Students can independently compose and present different types of technical data using current technologies.
BASIC PERFORMANCE	**BASIC PERFORMANCE**	**BASIC PERFORMANCE**
Students read and comprehend a variety of functional texts with guidance and support. Students demonstrate limited ability to create products that communicate information using visual representations. With prompting, students will communicate understanding of visual representations through oral or written formats.	Students ethically select, interpret and integrate technical data and apply appropriate format(s) for composition and presentation of said technical data with minimal guidance. Students integrate quantitative or technical information into text and/or visual representations with guidance.	With assistance, students read, evaluate, communicate and present different types of technical data using available technologies.
BELOW BASIC PERFORMANCE	**BELOW BASIC PERFORMANCE**	**BELOW BASIC PERFORMANCE**
Students require significant support to read and comprehend functional texts. Students have difficulty producing or communicating understanding of visual representations.	Students require extensive support or provide little or no evidence in meeting the standard.	Students require extensive support or provide little or no evidence in meeting the standard

Career & Vocational Education PLDs – Performance Level Descriptors

ELEMENTARY (K-5)	MIDDLE SCHOOL (6-8)	HIGH SCHOOL (9-12)
C/VE STANDARD 5 - Technical Proficiency and Productivity		
Students safely, ethically, and productively use existing and new technologies and systems.	Career-aware students safely, ethically, and productively use existing and new technologies and systems.	College and career-ready students safely, ethically, and productively use existing and new technologies and systems.
ADVANCED PERFORMANCE	**ADVANCED PERFORMANCE**	**ADVANCED PERFORMANCE**
Students analyze family, community, monetary, and school systems in everyday life. Students evaluate the need for rules within organizational systems and exercise them in daily life. Students explain and apply ethical responsibility for the proper use of technologies. Students are able to independently select appropriate technologies and effectively use the technology to accomplish a task.	Students consistently demonstrate technical knowledge and skills using appropriate tools and resources in a safe and ethical manner. They accurately categorize and analyze technical systems and how they impact other local and global systems.	Students consistently and safely use technology to complete tasks and projects that meet or exceed industry standards. They develop, evaluate and modify systems to most efficiently complete a task.
PROFICIENT PERFORMANCE	**PROFICIENT PERFORMANCE**	**PROFICIENT PERFORMANCE**
Students describe components of family, community, monetary, and school systems in everyday life. Students explain the need for rules within organizational systems and regularly exercise them in daily life. Students understand the ethical responsibility for the proper use of technologies. Students are able to select appropriate technologies and effectively use the technology to accomplish a task with limited guidance.	Students regularly demonstrate a basic level of technical knowledge and skills using appropriate tools and resources in a safe and ethical manner. They accurately identify and explain technical systems and how they impact other systems.	Students successfully and safely use technology to complete assigned tasks and projects without assistance. They evaluate the implications of the technology choices they make.
BASIC PERFORMANCE	**BASIC PERFORMANCE**	**BASIC PERFORMANCE**
Students identify components of family, community, monetary, and school systems in everyday life. Students understand the need for rules within organizational systems. Students have limited understanding of the ethical responsibility for the proper use of technologies. Students are able to select appropriate technologies to accomplish a task with guidance.	Students occasionally demonstrate a basic level of technical knowledge and skill using appropriate tools and resources in a safe manner. They identify and explain technical systems.	Students use technology to complete assigned tasks and projects with assistance. They must also be reminded to demonstrate the safe use of technology. They have a limited understanding of the importance of considering the ethical implications of the technology choices that they make.
BELOW BASIC PERFORMANCE	**BELOW BASIC PERFORMANCE**	**BELOW BASIC PERFORMANCE**
Students require extensive prompting to identify the components of family, community, monetary, and school systems in everyday life. Students recognize there are rules, but cannot explain the purpose of the rules. Students require significant support in ethically and appropriately using technology.	Students require extensive support or provide little or no evidence in meeting the standard	Students require extensive support or provide little or no evidence in meeting the standard

GLOSSARY

The glossary is intended to clarify selected terms and phrases used in the content, benchmark and performance standards which may not be familiar to all readers. Please consult appropriate reference materials for further clarification and definitions of other terms with which you are unfamiliar.

Career-aware students: Demonstrate a willingness to explore many career pathways. They examine potential careers including: prerequisites, salary, job requirements, and life-style demands. Throughout this learning process, students constantly revise and modify any false perceptions they may have about the workplace and professionalism. Career-aware students understand how their individual interests and talents may guide the selection of a career.

Career Pathways Model: A plan to help students determine what education and/or training is required to achieve a desired career.

Career plan: An educational planning document for student use that outlines a coherent sequence of secondary courses and experiences that will prepare a student for his/her post-secondary goals.

CTSO (Career & Technology Student Organizations): An organization that serves Career and Technical Education students in one or more of the 16 Career Clusters® identified in The National Career Clusters® Framework. CTSOs extend teaching and learning through innovative programs, business, and community partnerships and leadership experiences at the school, state, and national levels. More information can be found at www.ctsos.org. At the end of 2014, such organizations included the following:

- Business Professionals of America
- DECA
- FBLA-PBL
- FCCLA
- FFA
- Future Educators Association
- HOSA-Future Health Professionals
- SkillsUSA
- TSA

College and career ready: Students have developed a career plan that demonstrates an understanding of prerequisites and career requirements. They exhibit personal employability skills that enable them to be responsible and contributing citizens and employees.

Diversity: The multiple experiences brought forth by people from a variety of cultures, environments, abilities, and races.

Employability skills: Employers need responsible, reliable employees who can solve problems and exhibit the social skills and attitudes which enable them to effectively interact with other employees. These non-technical skills and knowledge, necessary for acceptance and effective participation in the workforce, include; honesty, integrity, adaptability, creativity, ethical behavior, appropriate personal appearance and grooming, punctuality, effective communications and problem solving abilities and accountability for personal actions. Employability skills are teachable skills.

Ethical: Conforming to an established set of principles or accepted professional and/or personal standards of conduct.

Financial literacy: The ability to use knowledge and skills to manage one's financial resources effectively for lifetime financial security.

Global competence: Learning from and working collaboratively with individuals representing diverse cultures, religions and lifestyles in a spirit of mutual respect and open dialogue in personal, work and community contexts.

Human Resources: Attributes that individuals bring that include knowledge, attitudes, and skills.

Innovation: Involves deliberate application of information, imagination, and initiative in deriving greater or different value from resources.

Industry Standard Tools: Commercial tools and equipment that industry uses on a regular basis to produce custom and/or mass produced products.

Integration: The process of bringing all parts together as a whole.

Interpersonal Skills: The skills and abilities necessary to work well with others.

Leadership: A process by which a person influences others to accomplish an objective and directs the organization/team in a way that makes it more cohesive and coherent.

Maintenance: The work needed to keep something in proper condition; upkeep.

Management: The act of controlling processes and ensuring that they operate efficiently and effectively; also used to direct the design, development, production, and marketing of a product or system.

Mentor: A wise and trusted supervisor, peer, or teacher.

Mentorship: The process of someone assisting another and guiding them in order to develop a thorough understanding.

Monetary Skills: Counting money, providing accurate change, and understanding the value of money and savings.

Personal finance: Describes the principles and methods that individuals use to acquire and manage income and assets.

Personal Financial Information: Any monetary information that shows relevance to personal or professional interests.

Productive: The ability to accomplish a given task as defined by a set of criteria.

Safety: Constantly aware of self and surroundings and making choices to eliminate harm, damage and/or loss.

Systems: An organized framework made up of interrelated components acting together as a whole, in which a change in one component may affect the operation of the whole. Examples: family, government, ecosystems, financial, computer, organizational, body, classroom, judicial, electrical, heating, automotive, or plumbing. Effective workers understand social, organizational and technological systems. They understand how parts of systems are connected; anticipate consequences, monitors and correct performance, and design.

Technology: Technology is the making, modification, usage, and knowledge of tools, machines, techniques, crafts, systems, methods of organization, in order to solve a problem, improve a preexisting solution to a problem, achieve a goal or perform a specific function. It can also refer to the collection of such tools, machinery, modifications, arrangements and procedures.

Troubleshoot: To locate and find the cause of problems.

Workplace: The attributes and skills necessary to enter paid or unpaid employment.

Workplace Resources: The management of devices, tools, and technology to accomplish the tasks needed in the classroom or workplace.

Workplace Readiness: The setting where productive activity takes place including school, community, home, and job.

Work Space: The space in which they are performing their work (i.e., school).

REFERENCES

National standards and several states' standards, along with other reference materials, were referenced to establish the rigor for the Wyoming Career & Vocational Education Content and Performance Standards. These documents are listed below.

- Achieve, Cross Disciplinary Proficiencies in the American Diploma Project Benchmarks. 2008. www.Achieve.org

- Achieve, What is College and Career Ready. 2009. www.Achieve.org

- California, Career Technical Education Model Curriculum Standards. 2005. www.cde.ca.gov/ci/ct/sf/documents/ctestandards.pdf

- The Council of Chief State School Officers (CCSSO) and the National Governors Association (NGA) Common Core State Standards for Literacy in History/Social Studies, Science, and Technical Subjects. 2010. http://www.corestandards.org/the-standards

- International Society for Technology in Education (ISTE), National Educational Technology Standards and Performance Indicators for Students. 2007. http://www.iste.org/standards/nets-for-students/nets-student-standards-2007

- Montana, Standards and Guidelines for Career and Vocational/Technical Education. 2002. www.opi.mt.gov/PDF/CTE/combinedguidelines.pdf

- The National Association of State Directors of Career Technical Education Consortium (NASDCTE), Common Career Technical Core. 2012. http://www.careertech.org/career-technical-education/cctc/

- Nebraska, Standards for Career Ready Practice Preparation for College & Career 2009. http://www.education.ne.gov/NCE/documents/NCECareerReadinessStandards.pdf

- Nevada, Career & Technical Education; Skills for Employment and Lifelong Learning. 2004. http://doe.nv.gov/CTE_Standards.htm

- North Dakota, Career and Technical Education Content Standards. 2006. http://www.nd.gov/cte/services/standards/

- Ohio, Career Field Technical Content Standards. 2008. http://education.ohio.gov/Topics/Academic-Content-Standards/Technology

- Partnership for 21st Century Skills, Framework for 21st Century Learning. 2000. http://www.p21.org/index.php?option=com_content&id=254&Itemid=120

- WestEd, Technical and Engineering Literacy Framework for the 2014 National Assessment of Educational Progress; Pre-Publication Edition. 2008. http://www.nagb.org/content/nagb/assets/documents/publications/frameworks/naep_tel_specs.pdf

- Wyoming, <u>Agriculture & Natural Resources Cluster and Pathway Competencies</u>. 2010.
  http://edu.wyoming.gov/sfdocs/publications/Perkins_Ag_Natural_Resource_Animal_Science_Competencies.pdf?sfvrsn=0

- Wyoming, <u>Architecture and Construction Cluster and Pathway Competencies.</u> 2010
  http://www.presassociates.com/documents/arch_and_construction-carpentry_competencies.pdf

- Wyoming, <u>Business Cluster & Pathway Competencies.</u>2010
  http://www.presassociates.com/documents/accounting_business_competencies.pdf

- Wyoming, <u>Manufacturing Cluster and Pathway Competencies.</u> 2010.
  http://edu.wyoming.gov/sf-docs/publications/Perkins_Manufacturing_Clusters_Competencies

- Wyoming, <u>Career /Vocational Education Content and Performance Standards</u>. 2008.
  http://edu.wyoming.gov/sf-docs/publications/Standards_2008_Career_Vocational_PDF

- Wyoming, <u>Department of Education Chapter 31. Graduation Requirements</u>. 2012.
  http://edu.wyoming.gov/sf-docs/standards/chapter-31-rules-clean-nov-2012.pdf?sfvrsn=2

All Standards Documents can be found on the Wyoming Department of Education Standards Page at http://edu.wyoming.gov/educators/standards

2014 WYOMING CAREER & VOCATIONAL EDUCATION
CONTENT AND PERFORMANCE STANDARDS
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