1. The content areas covered by the career and technical education standards may include:
   a. act as a responsible and contributing citizen and employee
   b. apply appropriate academic and technical skills
   c. attend to personal health and financial well-being
   d. communicate clearly, effectively, and with reason
   e. consider the environmental, social and economic impacts of decisions
   f. demonstrate creativity and innovation
   g. employ valid and reliable research strategies
   h. utilize critical thinking to make sense of problems and persevere in solving them
   i. model integrity, ethical leadership, and effective management
   j. plan education and career path aligned to personal goals
   k. use technology to enhance productivity
   l. work productively in teams while using cultural/global competence

2. Students will learn career and technical education content across programs of study and integrated with academic content.

3. Programs of study may include:
   a. agriculture, food, and natural resources
   b. architecture and construction
   c. arts, audio-visual technology, and communications
   d. business management and administration
   e. education and training
   f. health sciences
   g. hospitality and tourism
   h. human services
   i. information technology
   j. law, public safety, corrections and security
   k. manufacturing
   l. marketing
   m. transportation, distribution and logistics
THE CAREER AND TECHNICAL EDUCATION STANDARDS FOR KINDERGARTEN

1. The career and technical education standards for kindergarten are that each student will:
   a. Act as a responsible and contributing citizen and employee
      i. explore roles of employees, citizens, and community members
   b. Demonstrate creativity and innovation
      i. identify more than one way to solve a problem
   c. Utilize critical thinking to make sense of problems and persevere in solving them
      i. look for and make use of patterns
      ii. try several methods to solve a problem
   d. Plan education and career path aligned to personal goals
      i. identify and describe various careers
THE CAREER AND TECHNICAL EDUCATION STANDARDS FOR FIRST GRADE

1. The career and technical education standards for first grade are that each student will:
   a. Act as a responsible and contributing citizen and employee
      i. identify the characteristics of citizenship across jobs and communities
   b. Communicate clearly, effectively, and with reason
      i. recognize effective communication and active listening skills to foster positive relationships
   c. Demonstrate creativity and innovation
      i. identify an alternate solution to a problem
   d. Utilize critical thinking to make sense of problems and persevere in solving them
      i. look for and make use of patterns
      ii. try several methods to solve a problem
   e. Plan education and career path aligned to personal goals
      i. identify various careers
      ii. work successfully in small and large groups to accomplish tasks within a time frame
   f. Use technology to enhance productivity
      i. explore how technology is used in different jobs and careers
   g. Work productively in teams while using cultural/global competence
      i. identify strategies to develop a sense of inclusion
THE CAREER AND TECHNICAL EDUCATION STANDARDS FOR SECOND GRADE

1. The career and technical education standards for second grade are that each student will:

   a. Act as a responsible and contributing citizen and employee
      i. recognize the rights and responsibilities of citizenship

   b. Communicate clearly, effectively, and with reason
      i. practice compromise and conflict resolution with support

   c. Consider the environmental, social and economic impacts of decisions
      i. compare and contrast safety procedures for different environments and tasks
      ii. identify and explain the reasons for personal protective equipment for personal use

   d. Demonstrate creativity and innovation
      i. discuss ways people work together

   e. Utilize critical thinking to make sense of problems and persevere in solving them
      i. outline and explain the steps to complete a task
      ii. try several methods to solve a problem

   f. Model integrity, ethical leadership, and effective management
      i. describe the role of a leader

   g. Plan education and career path aligned to personal goals
      i. identify and describe basic work skills that contribute to the success of a team

   h. Use technology to enhance productivity
      i. investigate how technology in school and at work enhances learning and connections with others
      ii. Work productively in teams while using cultural/global competence
         i. work cooperatively to examine issues from multiple viewpoints
THE CAREER AND TECHNICAL EDUCATION STANDARDS FOR THIRD GRADE

1. The career and technical education standards for third grade are that each student will:
   a. Act as a responsible and contributing citizen and employee
      i. Identify characteristics of being an employee
   b. Attend to personal health and financial well-being
      i. describe how consumer actions influence the use of resources
   c. Communicate clearly, effectively, and with reason
      i. apply active listening, compromise, and conflict resolution skills
   d. Consider the environmental, social and economic impacts of decisions
      i. adapt to different environments by adjusting behavior to promote personal
         and group safety
      ii. identify and explain the reasons for personal protective equipment for
         personal and classroom use
   e. Demonstrate creativity and innovation
      i. explore the design cycle
   f. Employ valid and reliable research strategies
      i. represent data in multiple formats
   g. Utilize critical thinking to make sense of problems and persevere in solving them
      i. compare and explain similarities and differences of patterns and
         operations
      ii. plan and execute activities to develop a solution or complete a project
      iii. test and refine methods to solve a problem
   h. Model integrity, ethical leadership, and effective management
      i. explain how actions and attitudes impact others
      ii. define and give examples of leadership roles
   i. Plan education and career path aligned to personal goals
      i. compare career options that align with personal interest
      ii. apply and manage resources efficiently and effectively
   j. Use technology to enhance productivity
      i. explain how technology is used in homes, schools, and jobs
   k. Work productively in teams while using cultural/global competence
      i. identify and mitigate barriers to productive communication
THE CAREER AND TECHNICAL EDUCATION STANDARDS FOR FOURTH GRADE

1. The career and technical education standards for fourth grade are that each student will:
   a. Act as a responsible and contributing citizen and employee
      i. explore consequences of actions in communities and workplace
   b. Attend to personal health and financial well-being
      i. investigate advertising and media that influence behavior
   c. Communicate clearly, effectively, and with reason
      i. practice compromise and conflict resolution
   d. Consider the environmental, social and economic impacts of decisions
      i. adapt to different environments by adjusting behavior to promote personal
         and group safety
      ii. predict potential outcomes of various decisions in a complex environment
      iii. identify and explain the consequences of improper personal protective
         equipment use
   e. Demonstrate creativity and innovation
      i. explore innovations and their creators
   f. Employ valid and reliable research strategies
      i. map data for a culture, community, or state
   g. Utilize critical thinking to make sense of problems and persevere in solving them
      i. identify models that organize and analyze patterns of information
      ii. explain how personal and cultural histories can influence team
         approaches to completing tasks and projects
      iii. test and refine methods to solve a problem
   h. Model integrity, ethical leadership, and effective management
      i. contribute constructively to teams assuming various roles and
         responsibilities to work effectively toward a common goal
   i. Plan education and career path aligned to personal goals
      i. explore education requirements for different career options
      ii. prepare personal communications based upon the intended audience
   j. Use technology to enhance productivity
      i. select appropriate tools to create and communicate
   k. Work productively in teams while using cultural/global competence
      i. engage with learners from diverse cultures through use of available
         technology
THE CAREER AND TECHNICAL EDUCATION STANDARDS FOR FIFTH GRADE

1. The career and technical education standards for fifth grade are that each student will:
   a. Act as a responsible and contributing citizen and employee
      i. identify activities and behaviors that build and strengthen community
      ii. define employability skills
   b. Apply appropriate academic and technical skills
      i. read and comprehend a variety of resources to explain procedures, ideas, or concepts in career pathways
      ii. construct charts, tables, and graphs using mathematical data
      iii. apply scientific methods including data gathering, direct and indirect observation, and prediction to solve workplace problems
   c. Attend to personal health and financial well-being
      i. model the interrelationships between mental, emotional, social, cultural, intellectual, and physical health
   d. Communicate clearly, effectively, and with reason
      i. apply safety, responsibility, and ethical use of information to communicate knowledge of career pathways
      ii. demonstrate employability skills to interact with team members to accomplish group goals
   e. Consider the environmental, social and economic impacts of decisions
      i. evaluate the effectiveness of safety procedures for different environments and tasks
   f. Demonstrate creativity and innovation
      i. communicate complex ideas in creative ways
   g. Employ valid and reliable research strategies
      i. identify valid data from multiple sources for a variety of career-related research projects
   h. Utilize critical thinking to make sense of problems and persevere in solving them
      i. interpret data to observe and explain trends
      ii. compare and contrast multiple approaches to solving a problem or completing a project
      iii. test and refine methods to solve a problem
   i. Model integrity, ethical leadership, and effective management
      i. lead a group activity
   j. Plan education and career path aligned to personal goals
      i. describe how work relates to meeting needs for goods, clothing, shelter, and other necessities for living
      ii. performs basic tasks for personal and workplace communication
   k. Use technology to enhance productivity
      i. demonstrate how to work cooperatively and collaboratively with peers when using technology tools
   l. Work productively in teams while using cultural/global competence
      i. collaboratively set teamwork roles and goals
THE CAREER AND TECHNICAL EDUCATION STANDARDS FOR SIXTH THROUGH EIGHTH GRADES

1. The career and technical education standards for sixth through eighth grades are that each student will:

   a. Act as a responsible and contributing citizen and employee
      i. defend choices related to positive, safe, legal, and ethical behavior
      ii. practice employability skills

   b. Apply appropriate academic and technical skills
      i. develop a product using oral, pictorial, or multimedia
      ii. compose well-organized written documents for the workplace
      iii. communicate mathematical data using charts, tables, and graphs
      iv. integrate and translate scientific methods to technical data using oral, written, and multimedia communications

   c. Attend to personal health and financial well-being
      i. investigate the connection between work and financial well-being
      ii. identify how peers influence personal well-being
      iii. develop a personal budget and savings plan

   d. Communicate clearly, effectively, and with reason
      i. apply employability skills to productively interact with all team members to accomplish group goals
      ii. integrate a variety of multimedia applications to effectively organize and present information

   e. Consider the environmental, social and economic impacts of decisions
      i. evaluate peer behaviors and exhibit personal responsibility to promote personal and group safety in all environments
      ii. identify personal protective equipment for workplace, classroom, and personal use, determining when and where it should be utilized

   f. Demonstrate creativity and innovation
      i. develop or modify an existing innovation to improve the workplace

   g. Employ valid and reliable research strategies
      i. evaluate the accuracy, credibility, perspective, and relevance of information, media, data and other resources
      ii. curate information from multiple sources to make meaningful connections and draw conclusions
      iii. apply fair use and copyright laws

   h. Utilize critical thinking to make sense of problems and persevere in solving them
      i. analyze trends to draw conclusions and explore solutions to problems
      ii. analyze and explain how individual behaviors influence processes and environments
      iii. evaluate resources in testing and refining solutions to problems before asking for assistance

   i. Model integrity, ethical leadership, and effective management
i. examine the importance of professional ethics, cultural, and legal responsibilities of the workplace

ii. evaluate alternative responses to workplace situations

iii. describe the diversity of workplace environments

j. Plan education and career path aligned to personal goals

i. develop programs of study for various career pathways, examining outlook, salary, education, job duties, and lifestyle

ii. organize and synthesize information about career skills and requirements for applications

k. Use technology to enhance productivity

i. explain how scientific and technological changes impact specific careers

ii. describe the role of technology within a community in maintaining safe and healthy environments

l. Work productively in teams while using cultural/global competence

i. evaluate local and global challenges

ii. evaluate diversity and inclusion language in documents and policies
THE CAREER AND TECHNICAL EDUCATION STANDARDS FOR NINTH THROUGH TWELFTH GRADE

1. The career and technical education standards for ninth through twelfth grades are that each student will:
   a. Act as a responsible and contributing citizen and employee
      i. engage in positive, safe, legal, and ethical behavior
      ii. model industry-identified, career-ready skills
   b. Apply appropriate academic and technical skills
      i. compose clear and coherent documents and presentations appropriate to task, purpose, and audience
      ii. demonstrate knowledge of mathematical operations needed to succeed in a selected career pathway
      iii. apply appropriate scientific methods in qualitative and quantitative analysis in a selected career pathway
   c. Attend to personal health and financial well-being
      i. evaluate validity of health and financial information, products, and services
      ii. analyze financial practices including budgeting, banking, savings, investments
      iii. explain significance in achieving personal and business short and long term goals
      iv. develop financial goals based on lifestyle expectations, education plans, and career choices
   d. Communicate clearly, effectively, and with reason
      i. model integrity, ethical leadership, and effective employability skills in all communication
      ii. evaluate and use information systems to prepare technical documents for the workplace
      iii. model appropriate strategies for communicating persuasively in professional settings to effectively interact with individuals from various cultural, ethnic, and language backgrounds
      iv. employ awareness of world cultures and languages in work-based learning opportunities
   e. Consider the environmental, social and economic impacts of decisions
      i. design and construct safe working environments according to government and industry standards
      ii. create plans and policies that reflect deep understanding of individual histories and societal complexities in a work environment
      iii. integrate personal protective equipment use regularly in necessary environments
   f. Demonstrate creativity and innovation
      i. design and implement an innovation to improve the workplace
      ii. evaluate peer innovations and provide feedback
g. Employ valid and reliable research strategies
   i. use evidence from multiple sources to defend a position
   ii. determine various research methodologies based on a defined problem/purpose
   iii. identify research protocols required to ensure legality, validity, and reliability

h. Utilize critical thinking to make sense of problems and persevere in solving them
   i. devise forecasts or solutions to problems that reflect analysis of trends
   ii. utilize understanding of resources and culture to devise collaborative solutions to problems
   iii. utilize multiple resources to test and refine solutions to a problem

i. Model integrity, ethical leadership, and effective management
   i. apply laws and regulations to personnel situations to help employees perform their jobs according to employer rules and expectations
   ii. apply insight to positively influence others’ actions, attitudes, and beliefs based on the needs of the workplace

j. Plan education and career path aligned to personal goals
   i. execute a program of study following a career pathway, evaluating the opportunities for personal and professional lifelong learning
   ii. explore the benefits of having a personal or career mentor
   iii. construct applications, resumes, and necessary work-related documents

k. Use technology to enhance productivity
   i. describe how job market changes have resulted from scientific advancements and the increased use of technology in the global economy
   ii. evaluate the purpose of technology tools and multimedia to analyze their impact on productivity in homes, schools and workplaces
   iii. safely and ethically use current industry-standard and emerging technologies
   iv. model appropriate communication and technological skills to seek, obtain and change jobs/careers

l. Work productively in teams while using cultural/global competence
   i. collaborate to address geographic, economic, cultural, or political issues considering multiple perspectives
Administrative Rules of Montana Chapter 55

CAREER AND /TECHNICAL EDUCATION PROGRAM DELIVERY STANDARDS

10.55.1701

<table>
<thead>
<tr>
<th>Current ARM</th>
<th>Recommendation</th>
<th>Suggested Modification</th>
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<tbody>
<tr>
<td>(1) In general, a basic program in career and /technical education shall:</td>
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<tr>
<td>(a) meet the following conditions:</td>
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<td>(i) skill development leading to lifelong pursuits;</td>
<td>Keep as is</td>
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<td>(ii) program development in consultation with an advisory council; and</td>
<td>Keep as is</td>
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<td>(iii) opportunities for authentic application, work experience, and/or</td>
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<td>articulation with postsecondary education</td>
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<td>(b) include the following practices:</td>
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<td>(i) foster skill development for employment, advanced training, and</td>
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<td>lifelong learning;</td>
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<td>(ii) input from representatives of business and industry;</td>
<td>Keep as is</td>
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<td>(iii) analysis of skills and knowledge required in paid and non-paid</td>
<td>Keep as is</td>
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<td>careers;</td>
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<td>(iv) leadership and character development through participation in career</td>
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<td>and technical student organizations (CTSOs) ;</td>
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<td>(v) progression of skills and knowledge from basic to advanced; and</td>
<td>modify</td>
<td>progression of knowledge and skills from foundational to advanced through a sequence of courses; and</td>
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<td>(vi) integration of career and /technical competencies with academic</td>
<td>Keep as is</td>
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<tr>
<td>knowledge in a contextual setting</td>
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