
Career and Technical Education Curriculum Guide 2021



CONTENTS

Acknowledgements.....	4
Introduction	5
What is a curriculum guide?	5
Theory and Research Supporting a Curriculum guide.....	6
Referring to the Giants	6
Structure of Knowledge.....	7
How People Learn	8
What do Teachers Need from Curriculum Guides?	9
Indian Education for All Integration	10
IEFA Integration Process.....	11
Identifying and selecting IEFA curricular resources	11
IEFA Foundational Documents	11
Curriculum Development Guidance and Resources.....	12
Administrative Rules of Montana	12
Curriculum Development Phases	13
Readiness Checklist for Curriculum Development	14
Curriculum Development Stakeholders and Participants	15
Curriculum Development Work Session Goals	17
Program Delivery Planning.....	18
Administrative rules of Montana.....	18
10.55.1003 PROGRAM FOUNDATION STANDARDS.....	18
Career and technical education program Delivery Standards	19
Coding the Standards.....	20
Coding Scheme	20
Standards	21
Overview	21
2000 to 2021 Comparison.....	21

Changes to the Standards	21
Career Ready Practices	22
Career and Technical Education in K-5.....	22
For more information visit the OPI Career and Technical Education webpage.	25
Grade Level Standards and Resources	26
Kindergarten.....	26
Standards.....	26
Resources.....	26
First Grade	27
Standards.....	27
Resources.....	27
Second Grade	29
Standards.....	29
Resources.....	29
Third Grade	31
Standards.....	31
Resources.....	32
Fourth Grade	33
Standards.....	33
Resources.....	34
Fifth Grade.....	35
Standards.....	35
Resources.....	36
Sixth-Eighth Grades	38
Standards.....	38
Resources.....	40
Ninth-Twelfth Grades	42
Standards.....	42

Resources..... 44

Adapting Curriculum to Meet the Needs of Exceptional Learners..... 48

Model Curriculum Macro- or Overarching Concepts 50

Instructional Materials Selection Guidance..... 52

 Selection Guides and Criteria 52

 Questions Trustees Should Ask..... 52

Works Cited..... 53

ACKNOWLEDGEMENTS

The following individuals contributed their time, expertise, and commitment to Montana's students through their participation in the standards adoption process.

Career and Technical Education Writing Team

- Joanna Krogstad
- Dana Grupenhoff
- Tara Berg
- Charla Wetsch
- Carl Igo
- Mary Igo

OPI Staff

- Eric Swenson
- Mike Houghton
- Shannon Boswell
- Renee Erlandsen
- Megan Vincent

Negotiated Rulemaking Committee

- Heather Jarrett
- Roch Turner
- Daniel Lantis
- Justin Helvik
- J. Glenn Bradbury
- Vaughn Kauffman
- David Hood
- David Pafford
- Ruthanne Hansen
- Martha Potter
- Dee Hensley-Maclean
- Lisa Fant
- Ryan Schrenk
- Jolene Tollenaar
- David Smith

INTRODUCTION

WHAT IS A CURRICULUM GUIDE?

Montana Code Annotated TITLE 20. EDUCATION | CHAPTER 3. ELECTED OFFICIALS | Part 1.
Superintendent of Public Instruction

[20-3-106. Supervision of schools -- powers and duties.](#) The superintendent of public instruction has the general supervision of the public schools and districts of the state and shall perform the following duties or acts in implementing and enforcing the provisions of this title: (19) collect and *maintain a file of curriculum guides* and assist schools with instructional programs in accordance with the provisions of [20-7-113](#) and [20-7-114](#);

This guide is designed to provide resources and guidance to schools, districts, curriculum consortia and others at multiple access points and stages of curriculum development. It allows educators to find pertinent information for a wide range of topics that inform the curriculum development process--from the legal foundations in Montana law and rules to classroom level instructional strategies and assessment. Use the topic outline to access information across the curriculum development spectrum.

This is a guide. It is not exhaustive in its depth or in the number of resources, but it is specifically designed for Montana educators to look with intention and clear guidance at improving the process of curriculum development in Montana schools.

THEORY AND RESEARCH SUPPORTING A CURRICULUM GUIDE

Delineating the underpinnings for a theory of a model curriculum guide is a challenging task. First, the theory needs to refer to the giants—the writers and thinkers in the field whose work helps to define our task. The theory should explain how the structure of knowledge is related to a model for curriculum. It should also reference what research tells us about how people learn best. Finally, the theory should provide users of the curriculum guide with enough direction to help ensure that materials, tasks, and products exemplify the principles around which the theory has been developed—in a user-friendly format.

REFERRING TO THE GIANTS

In looking to the leading thinkers in the field to find out what is known about the hallmarks of good curricula, these heroes surfaced: William James, Alfred North Whitehead, John Dewey, Hilda Taba, Ralph Tyler, Benjamin Bloom, Jerome Bruner, Carol Ann Tomlinson, Sandra Kaplan, Jann Leppien, Jean Purcell, H. Lynn Erickson, Grant Wiggins, Jay McTighe, Larry Lezotte, and Robert Marzano.

A synthesis of their thinking suggests that good curriculum should:

- Be organized around the structure of knowledge
- Reflect content selection and procedures (student tasks) that will help maximize the in-depth understanding and transfer of knowledge, understanding and skills
- Have a clear focus on the essential facts, understandings and skills that professionals in the disciplines value most (delineated in the state standards) and select content (representative topics) that best represent the essential structure of the disciplines
 - Respect the unique characteristics of the learner
 - Recognize and support the need of each learner to make sense of ideas and information, reconstructing older understandings with new ones
 - Address interest and readiness levels
 - Place a premium on the development of process skills (including skills of inquiry, thinking skills and technology integration skills) as well as the appropriate use of methodology within content fields
 - Be aligned
 - all component parts
 - with the goal of in-depth understanding (Tomlinson)

STRUCTURE OF KNOWLEDGE

The content teachers and students wrestle within the classroom--history, science, mathematics, the study of language--all comes from the disciplines.

“The disciplines have evolved as discrete entities over centuries as the result of the different kinds of questions researchers have asked and the different research methodologies they have developed to answer them.” (Renzulli)

Knowing that in order to design effective curriculum it is necessary to better understand how knowledge within a discipline is constructed, Hilda Taba, a powerful and insightful educator in the 1950s and 60s became a primary source. She advocated teaching to the deeper understanding of concepts and main ideas (transferrable, conceptual understandings) rather than focusing on superficial coverage of the factual information (Taba).

Theories: Explanations of the nature or behavior of a specified set of phenomena based on the best evidence available. “The big bang theory of the universe.” “The land bridge of early human migration.”

Principles: Two or more concepts stated in a relationship. Usually considered to be the foundational truths of a discipline. “The supply and demand of goods and services affect cost.” “Any straight line can be extended indefinitely in a straight line.”

Generalizations: Two or more concepts stated as a relationship – essential learnings or understandings; the "big ideas" related to the critical concepts and topics of a study (e.g., “Organisms adapt to changing environments in order to survive.” “Numbers can be added together in different ways to reach a common sum.”)

Concepts: One- or two-word concepts are abstract, timeless, transferable and universal. Concepts may be very broad macro-concepts, such as “change,” “system,” or “interdependence”; or they may be more topic specific, such as “organism,” “habitat,” or “culture.”

Topics: The lens through which content is explored such as “Causes of the Revolution,” “Rocks and Minerals,” or “Geometry.”

Facts: Defined in the Montana Content Standards

Skills: Defined in the Montana Content Standards (Erickson)

HOW PEOPLE LEARN

In creating a conceptualization about how people learn best, sources such as *How People Learn* (Bransford), *How Students Learn History, Science and Mathematics in the Classroom* (Donovan), curriculum models of Understanding by Design and the Parallel Curriculum Model provided research and insight. All of them support the notion that helping students organize their learning around big ideas and transferable concepts is essential.

The 2005 publication *How People Learn: Brain, Mind, Experience, and School* delves into scientific findings from studies of people who have developed expertise in a variety of areas. Of course, not all school children are expected to become experts, but the study of expertise does show what the results of successful learning look like. “The studies found that experts’ knowledge is not simply a list of facts and formulas that are relevant to their domain; instead, their knowledge is organized around core concepts or “big ideas” that guide their thinking about their domains.” (Bransford)

“The idea that experts recognize features and patterns that are not noticed by novices is potentially important for improving instruction. Research on expertise suggests the importance of providing students with learning experiences that specifically enhance their abilities to recognize meaningful patterns of information.” (Bransford)

“The fact that experts’ knowledge is organized around important ideas or concepts suggests that curricula should also be organized in ways that lead to conceptual understanding. Many approaches to curriculum design make it difficult for students to organize knowledge meaningfully. Often there is only superficial coverage of facts before moving on to the next topic; there is little time to develop important, organizing ideas.” (Bransford)

To apply this important research to what actually happens in classrooms, the National Academies Press published *How Students Learn: History, Mathematics, and Science in the Classroom*. The authors make the following points:

1. Students come to the classroom with preconceptions about how the world works. If their initial understanding is not engaged, they may fail to grasp the new concepts and information, or they may learn them for purposes of a test but revert to their preconceptions outside the classroom.
2. To develop competence in an area of inquiry, students must (a) have a deep foundation of factual knowledge, (b) understand facts and ideas in the context of a conceptual framework, and (c) organize knowledge in ways that facilitate retrieval and application.

3. A “metacognitive” approach to instruction can help students learn to take control of their own learning by defining learning goals and monitoring their progress in achieving them. (Donovan)

WHAT DO TEACHERS NEED FROM CURRICULUM GUIDES?

The last consideration in developing the theoretical underpinnings of the guide is that all component parts be aligned, lead to in-depth understanding and be responsive to teacher needs. From a September 2010 article in *Educational Leadership* “Among Colleagues: What do Teachers need from Curriculum Guides,” the following comments informed development of this guide:

“Begin with the end in mind. What do I want students to understand when teachers have finished instruction?”

“My advice is to err on the side of less. Give teachers a guide, not an ‘everything’ bagel.”

“The staff development that supports the new curriculum is as important as the new curriculum itself.” (Among colleagues: what do teachers need from curriculum guides?)

The Third International Mathematics and Science Survey (TIMSS) criticized curricula that were “a mile wide and an inch deep” and argued that this is much more of a problem in America than in most other countries. Research on expertise suggests that a superficial coverage of many topics in the domain may be a poor way to help students develop the competencies that will prepare them for future learning and work. This guide to curriculum development seeks to help address this fundamental issue of American schools. (Wang)

INDIAN EDUCATION FOR ALL INTEGRATION

Montana's [constitutional requirement and duly enacted policy](#) require recognition of the distinct and unique cultural heritage of American Indians and a commitment in our educational goals to preserve their cultural heritage. Every Montanan, whether Indian or non-Indian, should be encouraged to learn about the distinct and unique heritage of American Indians in a culturally responsive manner. The OPI Indian Education for All (IEFA) Unit works with districts, tribes, and other entities to ensure all schools have the knowledge, tools and resources necessary to honor the IEFA requirement and integrate it into their teaching materials and methods.

Article X of the Montana Constitution

Education and Public Lands (1972)

Section 1

(1) It is the goal of the people to establish a system of education which will develop the full educational potential of each person. Equality of educational opportunity is guaranteed to each person of the state.

(2) The state recognizes the distinct and unique cultural heritage of the American Indians and is committed in its educational goals to the preservation of their cultural integrity.

Indian Education for All (1999) MCA 20-1-501

(2) It is the intent of the legislature that in accordance with Article X, section 1(2), of the Montana constitution:

(a) every Montanan, whether Indian or non-Indian, be encouraged to learn about the distinct and unique heritage of American Indians in a culturally responsive manner; and

(b) every educational agency and all educational personnel will work cooperatively with Montana tribes or those tribes that are in close proximity, when providing instruction.....to include information specific to the cultural heritage and contemporary contributions of American Indians, with particular emphasis on Montana Indian tribal groups and governments.

(3) It is also the intent of this part, predicated on the belief that all school personnel should have an understanding and awareness of Indian tribes to help them relate effectively with Indian students and parents...

IEFA INTEGRATION PROCESS

- Be sure you are familiar with the [Essential Understandings Regarding Montana Indians](#) (EUs).
- Find content area standards that specifically mention IEFA or could include an IEFA connection.
- Consider existing or new curricular areas where standards might be addressed.
- Identify and connect the appropriate EU(s).
- Select and identify any new curricular resources needed for solid IEFA integration.

IDENTIFYING AND SELECTING IEFA CURRICULAR RESOURCES

- Check with your librarian to see what IEFA resources might be available. You can also review the [list of IEFA resources](#) that should be in your library.
- Visit the MT OPI [Indian Education for All website](#) for possible resources and ideas.
- Be sure that resources are culturally authentic and tribally specific.
- Utilize the MT OPI IEFA Publication: [Evaluating American Indian Materials and Resources for the Classroom](#) when necessary.
- Reach out to the MT OPI IEFA unit with any with any questions, ideas, or PD requests.

IEFA FOUNDATIONAL DOCUMENTS

- [Essential Understandings Regarding Montana Indians](#)
 - [Essential Understandings Key Concepts](#)
 - [Essential Understandings Poster](#)
- [Evaluating American Indian Materials and Resources for the Classroom](#)
- [The Framework: A Practical Guide for Montana Teachers and Administrators Implementing Indian Education for All](#)
- [Funding Spectrum Guide - Indian Education for All](#)
- [History and Foundation of American Indian Education](#)
- [Montana Indian Education for All Evaluation](#)

CURRICULUM DEVELOPMENT GUIDANCE AND RESOURCES

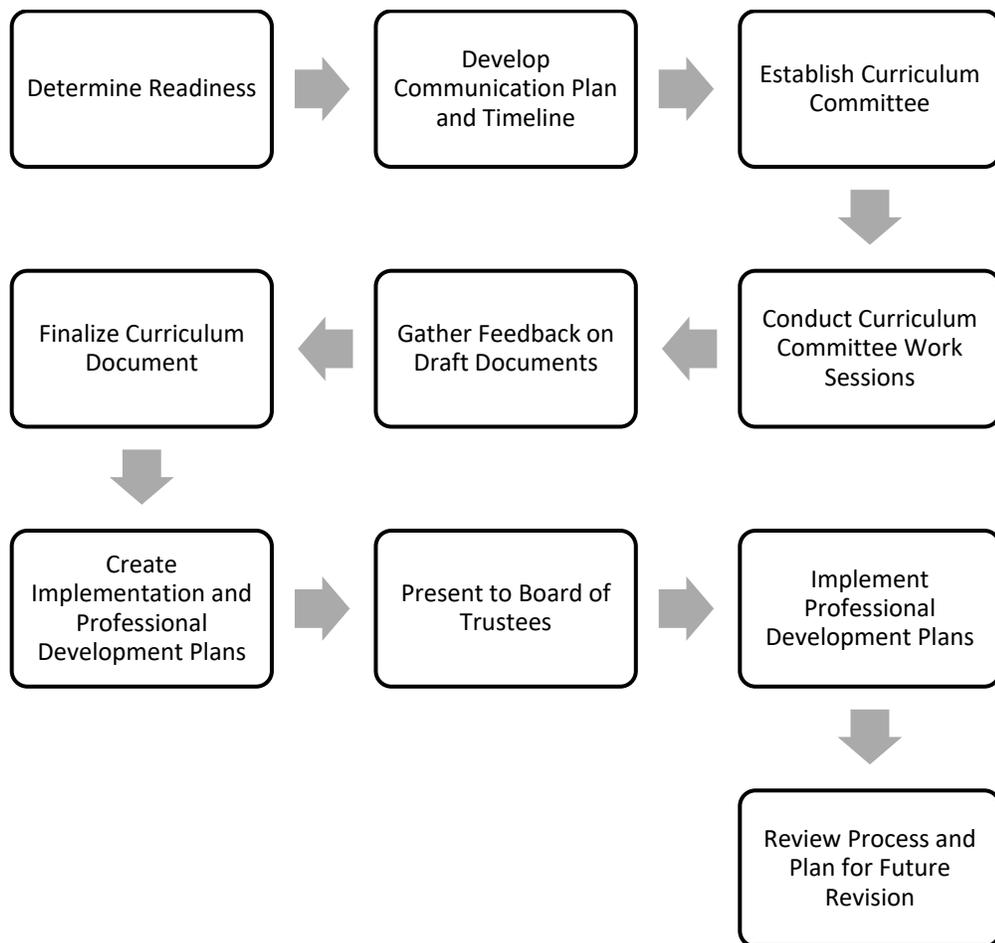
Montana teachers from all grade levels and content areas must include instruction that is aligned to state standards. It is up to local schools and teachers to design instructional strategies, select content to teach, and assess student progress toward those standards.

ADMINISTRATIVE RULES OF MONTANA

10.55.603	CURRICULUM AND ASSESSMENT (1) Local school districts shall ensure their curriculum is aligned to all content standards and the appropriate learning progression for each grade level.
10.55.1001	PROGRAM STANDARDS (1) It is the local board of trustees' responsibility to ensure the district's curricula align with the state content standards and content-specific grade-level learning progressions.

CURRICULUM DEVELOPMENT PHASES

Curriculum development is a continuous process. The phases described in this chart are a suggested progression. An emphasis on examination of resources, stakeholder involvement, professional feedback, and implementation planning is essential to ensure a successful outcome for curriculum development and revision.



READINESS CHECKLIST FOR CURRICULUM DEVELOPMENT

Outcomes	Level of Readiness	Notes/Dates
The content standards and learning expectations for each grade and subject area have been identified and are known to the teachers expected to teach them.	<ul style="list-style-type: none"> ○ Have Not Begun ○ Just Underway ○ Making Good Progress ○ Successfully Completed ○ Prepared to Share with Others 	
Teachers have “mapped” their grade level and/or subject matter standards onto an annual school calendar thus producing instructional “pacing charts” where critical milestones and benchmarks are known.	<ul style="list-style-type: none"> ○ Have Not Begun ○ Just Underway ○ Making Good Progress ○ Successfully Completed ○ Prepared to Share with Others 	
Student assessments have been identified or developed and aligned with the standards.	<ul style="list-style-type: none"> ○ Have Not Begun ○ Just Underway ○ Making Good Progress ○ Successfully Completed ○ Prepared to Share with Others 	
Individual teachers use the pacing charts and formative assessments to plan and deliver classroom instruction.	<ul style="list-style-type: none"> ○ Have Not Begun ○ Just Underway ○ Making Good Progress ○ Successfully Completed ○ Prepared to Share with Others 	
Throughout the school year teachers engage in horizontal (e.g., grade level) and vertical (e.g., cross-grade level) conversations to be sure that every student has an opportunity to master ALL learning expectations required for student success at the next grade level.	<ul style="list-style-type: none"> ○ Have Not Begun ○ Just Underway ○ Making Good Progress ○ Successfully Completed ○ Prepared to Share with Others 	

(Lezotte)

 CURRICULUM DEVELOPMENT STAKEHOLDERS AND PARTICIPANTS

Consider the list below when selecting members for curriculum development focus groups and committees. The curriculum committee should be inclusive of all stakeholders. The committee chair should be determined by the district leadership team. Determine which stakeholders will participate in the full process and those who will help to provide feedback and expert review during the development cycle.

Stakeholder Group	Suggested Roles	Expertise
District Leadership <ul style="list-style-type: none"> • superintendent • curriculum director • building principal(s) 	committee chair committee member focus group facilitator	<ul style="list-style-type: none"> • manage process • provide resources to support process
Trustee Representative(s)	committee member	<ul style="list-style-type: none"> • link to Board of Trustees • link to community
Teachers <ul style="list-style-type: none"> • primary grades • middle grades • high school 	committee chair committee member focus group participant	<ul style="list-style-type: none"> • content specialized teachers verify content • content specialized teachers verify learning progressions K-12 • provide assessment expertise
Teacher-librarians	committee member focus group participant	<ul style="list-style-type: none"> • provide insight into resources and instructional practice • provide expertise in the inclusion of information and technology literacy in all curricula
Specialists <ul style="list-style-type: none"> • instructional coaches • gifted and talented • technology • special education 	committee member focus group participant	<ul style="list-style-type: none"> • provide cross-curricular representation • provide cross-grade expertise • provide instructional expertise

Stakeholder Group	Suggested Roles	Expertise
<ul style="list-style-type: none"> • career and technical education • fine and performing arts 		
Indian Education for All (IEFA) Specialists	committee member focus group participant	<ul style="list-style-type: none"> • link to resources and best practices for implementing IEFA in curriculum
Guidance Counselors	focus group participant	<ul style="list-style-type: none"> • link to career development • link to students
Parent Representative(s)	committee member focus group participant	<ul style="list-style-type: none"> • link to community • link to local concerns and issues
Student Representative(s)	committee member focus group participant	<ul style="list-style-type: none"> • link to learners • help check for relevance and engagement
Business and Community Representative(s)	focus group participant	<ul style="list-style-type: none"> • link to community • link to local concerns and issues

CURRICULUM DEVELOPMENT WORK SESSION GOALS

The work of the curriculum committee can be organized and framed in each of the work sessions described below. This process and suggested goals should be adapted, and the number of sessions should be adjusted according to the scope of the revision or re-writing of the curriculum documents. An emphasis on examination of resources, public comment, professional feedback and implementation planning is essential to ensure a successful outcome for curriculum development and revision.

<p>Work Session 1</p>	<ul style="list-style-type: none"> •Establish Roles •Review Montana program delivery standards •Review Montana content standards •Review local curriculum documents •Review curriculum consortia documents (if applicable) •Review other Montana district curriculum documents
<p>Work Session 2</p>	<ul style="list-style-type: none"> •Revision and writing of curriculum documents •Compare local curriculum to Montana content standards •Identify gaps in existing curriculum documents
<p>Work Session 3</p>	<ul style="list-style-type: none"> •Revision and writing of curriculum documents •Examine learning progressions •Gather feedback from content area teachers •Gather feedback from community members, parents and students
<p>Work Session 4</p>	<ul style="list-style-type: none"> •Revision and writing of curriculum documents •Review feedback from content area teachers •Review feedback from community members, parents and students •Analyze for inclusion of Indian Education for All Resources and Seven Essential Understandings Regarding Montana Indians
<p>Work Session 5</p>	<ul style="list-style-type: none"> •Revision and writing of curriculum documents •Match resources to curriculum •Identify additional resources needed •Create implementation plan •Create professional development plan
<p>Work Session 6</p>	<ul style="list-style-type: none"> •Review Goals •Check Vertical and Horizontal Alignment •Check learning progressions •Prepare final document(s) •Prepare for public comment and feedback •Prepare for presentation to Board of Trustees

PROGRAM DELIVERY PLANNING

ADMINISTRATIVE RULES OF MONTANA

10.55.1003 PROGRAM FOUNDATION STANDARDS

- The purpose of all programs is to develop and apply knowledge and skills necessary to pursue lifelong goals and opportunities.
- Program foundation standards are the common conditions and practices that will be evident in all programs within a school system to ensure that all students have educational opportunity to learn, develop, and demonstrate learning in the content standards and content-specific grade-level learning progressions. All programs shall follow the content standards in the accreditation rules of Montana. The local board of trustees shall:
 - meet the following **conditions**:
 - ensure integration of the history, contemporary portrayals, and contributions of American Indians, with an emphasis on Montana Indians, for all students, across all content areas;
 - ensure an educational climate that promotes academic freedom and respect for diversity with prejudice toward none;
 - maintain high expectations for student performance, behavior, and lifelong learning; and
 - encourage collaboration among school personnel to plan, assess, and support instruction.
 - include the following **practices**:
 - offer engaging and relevant experiences that enable students to develop effective communication skills in their personal lives, workplaces, and communities;
 - teach ethical behavior, including use of technology (social media) and the implications of one's choices;
 - implement research-based instructional skills and strategies to improve student learning;
 - challenge students to think creatively and critically, and use the inquiry process to solve problems and make informed decisions;
 - encourage interdisciplinary instruction;
 - use relevant data to inform decision making, modify instruction, and increase student learning;

- integrate information literacy skills, technology tools, and workplace competencies to support learning in all curricular areas; and
- provide equitable access to all facilities, technology, equipment, materials, and services necessary to support the instructional process.

CAREER AND TECHNICAL EDUCATION PROGRAM DELIVERY STANDARDS

In general, a basic program in career and vocational/technical education shall:

- meet the following **conditions**:
 - skill development leading to lifelong pursuits;
 - program development in consultation with an advisory council; and
 - opportunities for authentic application, work experience, and/or articulation with postsecondary education.
- include the following **practices**:
 - foster skill development for employment, advanced training, and lifelong learning;
 - input from representatives of business and industry;
 - analysis of skills and knowledge required in paid and non-paid careers;
 - leadership and character development through participation in career and technical student organizations (CTSOs) ;
 - progression of skills and knowledge from basic to advanced; and
 - integration of career and vocational/technical competencies with academic knowledge in a contextual setting. (ARM [10.55.1701](#))

CODING THE STANDARDS

CODING SCHEME

SUBJECT.GradeLevel.STANDARD.SUBSTANDARD.sub-substandard

Example

CTE.1.1	The career and technical education standards for first grade are that each student will
CTE.1.1.1	act as a responsible and contributing citizen and employee by identifying the characteristics of citizenship across jobs and communities
CTE.1.1.2	communicate clearly, effectively, and with reason by recognizing effective communication and active listening skills to foster positive relationships

Note on identifying subjects and sub-content areas

As a rule, when a content area has sub-content areas, (i.e. Civics and Government within Social Studies or Algorithms and Programming within Computer Science) the content area abbreviation is listed first before grade level and the sub-content area is listed second before grade level. For example: SS.CG.K is the coding for Social Studies> Civics and Government> Kindergarten. When a content area does not have specifically designated sub-content areas, such as in Career and Technical Education and Library Media, then the content area is used solely to identify the subject. For example: CTE.K is the human code for Career and Technical Education in Kindergarten.

STANDARDS

OVERVIEW

2000 TO 2021 COMPARISON

2000 - Students will . . .	2021 - Students will . . .	
experience various career opportunities and assess personal career pathways	act as a responsible and contributing citizen and employee	employ valid and reliable research strategies
demonstrate an understanding and apply principles of Resource Management (i.e., financial, time, personal management)	apply appropriate academic and technical skills	utilize critical thinking to make sense of problems and persevere in solving them
acquire and utilize personal and leadership skills to become successful, productive citizens	attend to personal health and financial well-being	model integrity, ethical leadership, and effective management
acquire and demonstrate current technical skills leading to an occupation	communicate clearly, effectively, and with reason	plan education and career path aligned to personal goals
know and demonstrate the requirements of the workplace through authentic application	consider the environmental, social and economic impacts of decisions	use technology to enhance productivity
	demonstrate creativity and innovation	work productively in teams while using cultural/global competence

CHANGES TO THE STANDARDS

- Combines Workplace Competencies and Career and Vocational Technical Standards
- Total rewrite based on [Advance CTE’s Common Career and Technical Core](#)
- Aligns with [Perkins V](#)
- Standards purposefully incorporate Indian Education for All
- Encourages cross-curricular integration
- Emphasizes higher order thinking such as problem solving

CAREER READY PRACTICES

- The Career Ready Practices were designed to serve as cross-cutting expectations to be embedded in all CTE programs of study for all learner levels while most industry-based standards focus on narrower, occupational-specific knowledge and skills.
- As the economy has changed in the past decade, many Career Technical Education (CTE) programs have transitioned from helping students prepare for an entry-level *job* to helping students prepare for a *career*.
- Montana CTE Content Standards are intended to teach skills that will develop and be reinforced over the time students are in school as well as throughout their work life.

CAREER AND TECHNICAL EDUCATION IN K-5

- Career and Technical Education effectively brings all content together
- Practical applications of Mathematics
- Purposeful use of communication skills including writing and speaking
- Skills taught in K-5 build the foundation for future learning
- You are already teaching the skills; all you need to do is rethink lessons through a CTE lens
- When teaching mathematics, consider adding a personal finance emphasis.
- Career exploration takes many forms: field trips, guest speakers, independent research and more.

	MONTANA CONTENT STANDARDS FOR CAREER AND TECHNICAL EDUCATION
CTE.K12	The content areas covered by the career and technical education standards may include
CTE.K12.1	act as a responsible and contributing citizen and employee
CTE.K12.2	apply appropriate academic and technical skills
CTE.K12.3	attend to personal health and financial well-being
CTE.K12.4	communicate clearly, effectively, and with reason
CTE.K12.5	consider the environmental, social and economic impacts of decisions
CTE.K12.6	demonstrate creativity and innovation
CTE.K12.7	employ valid and reliable research strategies
CTE.K12.8	utilize critical thinking to make sense of problems and persevere in solving them
CTE.K12.9	model integrity, ethical leadership, and effective management
CTE.K12.10	plan education and career path aligned to personal goals
CTE.K12.11	use technology to enhance productivity and
CTE.K12.12	work productively in teams while using cultural/global competence

CTE.PATHWAY	Students will learn career and technical education content across programs of study, also known as Career Pathways, and integrated with academic content.
	Programs of study may include
CTE.PATHWAY.1	agriculture, food, and natural resources
CTE.PATHWAY.2	architecture and construction
CTE.PATHWAY.3	arts, audio/visual technology, and communications
CTE.PATHWAY.4	business management and administration
CTE.PATHWAY.5	education and training
CTE.PATHWAY.6	finance
CTE.PATHWAY.7	government and public administration
CTE.PATHWAY.8	health science
CTE.PATHWAY.9	hospitality and tourism
CTE.PATHWAY.10	human services
CTE.PATHWAY.11	information technology
CTE.PATHWAY.12	law, public safety, corrections and security
CTE.PATHWAY.13	manufacturing
CTE.PATHWAY.14	marketing
CTE.PATHWAY.15	STEM (science, technology, engineering, math) and
CTE.PATHWAY.16	transportation, distribution and logistics

Montana Career Pathways is a vital education and workforce strategy. Montana Career Pathways helps students learn about career options that are in demand in Montana, and the types of activities they can engage in to prepare for their next step after high school graduation.

In 2017, Montana completed a major overhaul of its career pathways program, from individual pathway agreements between one college and one high school (Big Sky Pathways), to statewide pathways scalable to all high schools and connected to all MUS colleges.

Montana Career Pathways (MCP) changes the way career pathways are developed, displayed, documented, and implemented.

It improves how students, parents, and educators get information about in-demand career options in Montana and provides actionable information for students to explore and engage in careers while in high school.

Montana Career Pathways is supported in part by Perkins Rural Reserve Funds. Strengthening Montana Career Pathways Grants build collaboration between secondary and postsecondary educators across the state to expand access to dual enrollment, work-based learning, and industry recognized credentials that support a career pathway.

FOR MORE INFORMATION VISIT THE [OPI CAREER AND TECHNICAL EDUCATION WEBPAGE](#).

GRADE LEVEL STANDARDS AND RESOURCES

KINDERGARTEN

STANDARDS

CTE.K	CAREER AND TECHNICAL EDUCATION STANDARDS FOR KINDERGARTEN
CTE.K.1	The career and technical education standards for kindergarten are that each student will
CTE.K.1.1	act as a responsible and contributing citizen and employee by exploring roles of employees, citizens, and community members
CTE.K.1.2	demonstrate creativity and innovation by exploring more than one way to solve a problem
CTE.K.1.3	utilize critical thinking to make sense of problems and persevere in solving them
CTE.K.1.3.a	look for and make use of patterns and
CTE.K.1.3.b	try several methods to solve a problem
CTE.K.1.4	plan education and career path aligned to personal goals by identifying various careers

RESOURCES

Title/Source	Link
Montana Career Lab -Careers Build a Community	https://lmi.mt.gov/Career/Educators
EconEdLink-Resources for Grades K-2	https://www.econedlink.org/resources/grade/k-2/
EVERFI-WORD Force: A Literacy Adventure for K-2 Students	https://everfi.com/k-12/wordforce/
Montana Career Lab-A to Z Alphabet Trading Cards	https://lmi.mt.gov/Career/Educators
Montana Career Lab-I Can Be . . . Series	https://lmi.mt.gov/Career/Educators

FIRST GRADE

STANDARDS

CTE.1	CAREER AND TECHNICAL EDUCATION STANDARDS FOR FIRST GRADE
CTE.1.1	The career and technical education standards for first grade are that each student will
CTE.1.1.1	act as a responsible and contributing citizen and employee by identifying the characteristics of citizenship across jobs and communities
CTE.1.1.2	communicate clearly, effectively, and with reason by recognizing effective communication and active listening skills to foster positive relationships
CTE.1.1.3	demonstrate creativity and innovation by identifying an alternate solution to a problem
CTE.1.1.4	utilize critical thinking to make sense of problems and persevere in solving them
CTE.1.1.4.a	look for and make use of patterns and
CTE.1.1.4.b	try several methods to solve a problem
CTE.1.1.5	plan education and career paths aligned to personal goals
CTE.1.1.5.a	identify and describe various careers
CTE.1.1.5.b	work successfully in small and large groups to accomplish tasks within a time frame
CTE.1.1.6	use technology to enhance productivity by exploring how technology is used in different jobs and careers
CTE.1.1.7	work productively in teams while using cultural/global competence by exploring an awareness of cultural differences to develop a sense of inclusion

RESOURCES

Title/Source	Link
Montana Career Lab-Careers Build a Community	https://lmi.mt.gov/Career/Educators
EconEdLink-Resources for Grades K-2	https://www.econedlink.org/resources/grade/k-2/
Money Instructor-Public Speaking	https://www.moneyinstructor.com/publicspeaking.asp

Title/Source	Link
EVERFI-WORD Force: A Literacy Adventure for K-2 Students	https://everfi.com/k-12/wordforce/
Montana Career Lab -Careers Build a Community	https://lmi.mt.gov/Career/Educators
Montana Career Lab-Career Peaks: A Career Awareness Activity Book	https://lmi.mt.gov/Career/Educators

SECOND GRADE

STANDARDS

CTE.2	CAREER AND TECHNICAL EDUCATION STANDARDS FOR SECOND GRADE
CTE.2.1	The career and technical education standards for second grade are that each student will
CTE.2.1.1	act as a responsible and contributing citizen and employee by recognizing the rights and responsibilities of citizenship
CTE.2.1.2	communicate clearly, effectively, and with reason by practicing compromise and conflict resolution with support
CTE.2.1.3	consider the environmental, social and economic impacts of decisions
CTE.2.1.3.a	compare and contrast safety procedures for different environments and tasks
CTE.2.1.3.b	identify and explain the reasons for personal protective equipment for personal use
CTE.2.1.4	demonstrate creativity and innovation by discussing ways people work together to solve problems
CTE.2.1.5	utilize critical thinking to make sense of problems and persevere in solving them
CTE.2.1.5.a	outline and explain the steps to complete a task
CTE.2.1.5.b	try several methods to solve a problem
CTE.2.1.6	model integrity, ethical leadership, and effective management by describing the role of a leader
CTE.2.1.7	plan education and career paths aligned to personal goals by identifying and describing basic work skills that contribute to the success of a team
CTE.2.1.8	use technology to enhance productivity by investigating how technology in school and at work enhances learning and connections with others
CTE.2.1.9	work productively in teams while using cultural/global competence by working cooperatively to examine issues from multiple viewpoints

RESOURCES

Title/Source	Link
Montana Career Lab-Careers Build a Community	https://lmi.mt.gov/Career/Educators

Title/Source	Link
EconEdLink-Resources for Grades K-2	https://www.econedlink.org/resources/grade/k-2/
Money Instructor-Public Speaking	https://www.moneyinstructor.com/publicspeaking.asp
EVERFI-The Compassion Project - SEL Curriculum Elementary	https://everfi.com/courses/k-12/lesson-plans-empathy-compassion-elementary/
EVERFI-WORD Force: A Literacy Adventure for K-2 Students	https://everfi.com/k-12/wordforce/
Montana Career Lab-Career Peaks: A Career Awareness Activity Book	https://lmi.mt.gov/Career/Educators

THIRD GRADE

STANDARDS

CTE.3	CAREER AND TECHNICAL EDUCATION STANDARDS FOR THIRD GRADE
CTE.3.1	The career and technical education standards for third grade are that each student will
CTE.3.1.1	act as a responsible and contributing citizen and employee by identifying characteristics of being a productive employee
CTE.3.1.2	attend to personal health and financial well-being by describing how consumer actions influence the use of resources
CTE.3.1.3	communicate clearly, effectively, and with reason by applying active listening, compromise, and conflict resolution skills
CTE.3.1.4	consider the environmental, social and economic impacts of decisions
CTE.3.1.4.a	adapt to different environments by adjusting behavior to promote personal and group safety
CTE.3.1.4.b	identify and explain the reasons for personal protective equipment for personal and classroom use
CTE.3.1.5	demonstrate creativity and innovation by exploring the design cycle
CTE.3.1.6	employ valid and reliable research strategies by representing data in multiple formats
CTE.3.1.7	utilize critical thinking to make sense of problems and persevere in solving them
CTE.3.1.7.a	compare and explain similarities and differences of patterns and operations
CTE.3.1.7.b	plan and execute activities to develop a solution or complete a project and
CTE.3.1.7.c	test and refine methods to solve a problem
CTE.3.1.8	model integrity, ethical leadership, and effective management
CTE.3.1.8.a	explain how actions and attitudes impact others
CTE.3.1.8.b	define and give examples of leadership roles
CTE.3.1.9	plan education and career paths aligned to personal goals
CTE.3.1.9.a	explore career options that align with a variety of personal interests and
CTE.3.1.9.b	explore how work relates to meeting needs for goods, clothing, shelter, and other necessities for living

CTE.3	CAREER AND TECHNICAL EDUCATION STANDARDS FOR THIRD GRADE
CTE.3.1.10	use technology to enhance productivity by explaining how technology is used in homes, schools, and jobs
CTE.3.1.11	work productively in teams while using cultural/global competence by recognizing and understanding barriers to productive communication

RESOURCES

Title/Source	Link
Montana Career Lab-Careers Build a Community	https://lmi.mt.gov/Career/Educators
EconEdLink-Resources for Grades 3-5	https://www.econedlink.org/resources/grade/3-5/
Money Instructor-Basic Money Skills	https://www.moneyinstructor.com/skills.asp
Money Instructor-Elementary Economics Lessons	https://www.moneyinstructor.com/elementary.asp
EVERFI-Healthier Me	https://everfi.com/courses/k-12/health-curriculum-elementary-school/
Money Instructor-Public Speaking	https://www.moneyinstructor.com/publicspeaking.asp
EVERFI-The Compassion Project - SEL Curriculum Elementary	https://everfi.com/courses/k-12/lesson-plans-empathy-compassion-elementary/
Montana Career Lab-Career Heroes: A Career Awareness Workbook	https://lmi.mt.gov/Career/Educators

FOURTH GRADE

STANDARDS

CTE.4	CAREER AND TECHNICAL EDUCATION STANDARDS FOR FOURTH GRADE
CTE.4.1	The career and technical education standards for fourth grade are that each student will
CTE.4.1.1	act as a responsible and contributing citizen and employee by exploring consequences of actions in communities and workplace
CTE.4.1.2	attend to personal health and financial well-being by investigating advertising and media that influence behavior
CTE.4.1.3	communicate clearly, effectively, and with reason by practicing compromise, consensus, and conflict resolution
CTE.4.1.4	consider the environmental, social and economic impacts of decisions
CTE.4.1.4.a	adapt to different environments by adjusting behavior to promote personal and group safety
CTE.4.1.4.b	predict potential outcomes of various decisions in a complex environment and
CTE.4.1.4.c	identify and explain the consequences of both proper and improper personal protective equipment use
CTE.4.1.5	demonstrate creativity and innovation by exploring innovations and inventions and their originators
CTE.4.1.6	employ valid and reliable research strategies by mapping data for a culture, community, or state
CTE.4.1.7	utilize critical thinking to make sense of problems and persevere in solving them
CTE.4.1.7.a	identify models that organize and analyze patterns of information
CTE.4.1.7.b	test and refine methods to solve a problem
CTE.4.1.8	model integrity, ethical leadership, and effective management by contributing constructively to teams assuming various roles and responsibilities to work effectively toward a common goal
CTE.4.1.9	plan education and career paths aligned to personal goals
CTE.4.1.9.a	describe how work relates to meeting needs for goods, clothing, shelter, and other necessities for living
CTE.4.1.9.b	prepare personal communications based upon the intended audience

CTE.4.1.10	use technology to enhance productivity by selecting appropriate tools to create and communicate
CTE.4.1.11	work productively in teams while using cultural/global competence
CTE.4.1.11.a	engage with learners from diverse cultures through use of available technology
CTE.4.1.11.b	explain how personal and cultural histories can influence team approaches to completing tasks and projects

RESOURCES

Title/Source	Link
EconEdLink-Resources for Grades 3-5	https://www.econedlink.org/resources/grade/3-5/
Media Literacy Now-Resources for Educators & Librarians	https://medialiteracynow.org/resources-for-teachers/
Money Instructor-Kids and Money	https://www.moneyinstructor.com/kids.asp
EVERFI-Healthier Me	https://everfi.com/courses/k-12/health-curriculum-elementary-school/
Money Instructor-Public Speaking	https://www.moneyinstructor.com/publicspeaking.asp
EVERFI-The Compassion Project - SEL Curriculum Elementary	https://everfi.com/courses/k-12/lesson-plans-empathy-compassion-elementary/
EVERFI-Summer Slugger - Student Summer Learning	https://everfi.com/courses/k-12/student-summer-learning-program/
Montana Career Lab-Career Heroes: A Career Awareness Workbook	https://lmi.mt.gov/Career/Educators
EVERFI-Vault - Financial Literacy for Kids	https://everfi.com/courses/k-12/financial-literacy-elementary-students/

FIFTH GRADE

STANDARDS

CTE.5	CAREER AND TECHNICAL EDUCATION STANDARDS FOR FIFTH GRADE
CTE.5.1	The career and technical education standards for fifth grade are that each student will
CTE.5.1.1	act as a responsible and contributing citizen and employee
CTE.5.1.1.a	identify activities and behaviors that build and strengthen community
CTE.5.1.1.b	define employability skills
CTE.5.1.2	apply appropriate academic and technical skills
CTE.5.1.2.a	read and comprehend a variety of resources to explain procedures, ideas, or concepts in Career Pathways
CTE.5.1.2.b	construct charts, tables, and graphs using mathematical data
CTE.5.1.2.c	apply scientific methods including data gathering, direct and indirect observation, and prediction to solve workplace problems
CTE.5.1.3	attend to personal health and financial well-being by modeling the interrelationships between mental, emotional, social, cultural, intellectual, and physical health
CTE.5.1.4	communicate clearly, effectively, and with reason
CTE.5.1.4.a	apply safety, responsibility, and ethical use of information to communicate knowledge of Career Pathways
CTE.5.1.4.b	demonstrate employability skills to interact with team members to accomplish group goals
CTE.5.1.5	consider the environmental, social and economic impacts of decisions by evaluating the effectiveness of safety procedures for different environments and tasks
CTE.5.1.6	demonstrate creativity and innovation by communicating complex ideas in creative ways
CTE.5.1.7	employ valid and reliable research strategies by identifying valid data from multiple sources for a variety of career-related research projects
CTE.5.1.8	utilize critical thinking to make sense of problems and persevere in solving them
CTE.5.1.8.a	interpret data to observe and explain trends

CTE.5	CAREER AND TECHNICAL EDUCATION STANDARDS FOR FIFTH GRADE
CTE.5.1.8.b	compare and contrast multiple approaches to solving a problem or completing a project
CTE.5.1.8.c	test and refine methods to solve a problem
CTE.5.1.9	model integrity, ethical leadership, and effective management by leading a group activity
CTE.5.1.10	plan education and career paths aligned to personal goals
CTE.5.1.10.a	explore education expectations for different career options
CTE.5.1.10.b	performs basic tasks for personal and workplace communication
CTE.5.1.11	use technology to enhance productivity by demonstrating how to work cooperatively and collaboratively with peers when using technology tools
CTE.5.1.12	work productively in teams while using cultural/global competence by collaborate across cultures when setting teamwork roles and goals

RESOURCES

Title/Source	Link
EconEdLink-Resources for Grades 3-5	https://www.econedlink.org/resources/grade/3-5/
EVERFI-Endeavor - STEM Career Exploration Activities for Middle School	https://everfi.com/courses/k-12/endeavor-stem-career-activities-middle-school/
EVERFI-Future Goals - Hockey Scholar	https://everfi.com/courses/k-12/hockey-scholar-stem/
EVERFI-Summer Slugger - Student Summer Learning	https://everfi.com/courses/k-12/student-summer-learning-program/
Money Instructor-Health, Diet, Nutrition, and Fitness	https://www.moneyinstructor.com/health.asp
Montana Career Lab-Soft Skills Checklist	https://lmi.mt.gov/docs/Publications/Career-Pubs/CG-SoftSkills.pdf
EVERFI-Sustainability Foundations	https://everfi.com/courses/k-12/sustainability-foundations/

Title/Source	Link
EVERFI-Sustainability Foundations: Plants, Animals and Our World	https://everfi.com/courses/k-12/plants-animals-our-world/
Montana Career Lab-Jacob and Emily Skip School	https://lmi.mt.gov/Career/Educators

SIXTH-EIGHTH GRADES

STANDARDS

CTE.6-8	CAREER AND TECHNICAL EDUCATION STANDARDS FOR SIXTH THROUGH EIGHTH GRADE
CTE.6-8.1	The career and technical education standards for sixth through eighth grades are that each student will
CTE.6-8.1.1	act as a responsible and contributing citizen and employee
CTE.6-8.1.1.a	defend choices related to positive, safe, legal, and ethical behavior and
CTE.6-8.1.1.b	practice employability skills
CTE.6-8.1.2	apply appropriate academic and technical skills
CTE.6-8.1.2.a	develop a product using oral, illustrative, or multimedia communications
CTE.6-8.1.2.b	compose well-organized written documents for the workplace
CTE.6-8.1.2.c	communicate mathematical data using charts, tables, and graphs
CTE.6-8.1.2.d	integrate and translate scientific methods to technical data using oral, written, and multimedia communications
CTE.6-8.1.3	attend to personal health and financial well-being
CTE.6-8.1.3.a	investigate the connection between work and financial well-being
CTE.6-8.1.3.b	identify how peers positively or negatively influence personal well-being
CTE.6-8.1.3.c	develop a personal budget and savings plan
CTE.6-8.1.4	communicate clearly, effectively, and with reason
CTE.6-8.1.4.a	apply employability skills to productively interact with all team members to accomplish group goals
CTE.6-8.1.4.b	integrate a variety of multimedia applications to effectively organize and present information
CTE.6-8.1.5	consider the environmental, social and economic impacts of decisions
CTE.6-8.1.5.a	evaluate peer behaviors and exhibit personal responsibility to promote personal and group safety in all environments
CTE.6-8.1.5.b	identify personal protective equipment for workplace, classroom, and personal use, determining when and where it should be utilized
CTE.6-8.1.6	demonstrate creativity and innovation by developing or modifying an existing innovation to improve the workplace
CTE.6-8.1.7	employ valid and reliable research strategies

CTE.6-8	CAREER AND TECHNICAL EDUCATION STANDARDS FOR SIXTH THROUGH EIGHTH GRADE
CTE.6-8.1.7.a	evaluate the accuracy, credibility, perspective, and relevance of information, media, data, and other resources
CTE.6-8.1.7.b	curate information from multiple sources to make meaningful connections and draw conclusions
CTE.6-8.1.7.c	apply fair use and copyright laws
CTE.6-8.1.8	utilize critical thinking to make sense of problems and persevere in solving them
CTE.6-8.1.8.a	analyze trends to draw conclusions and explore solutions to problems
CTE.6-8.1.8.b	analyze and explain how individual behaviors influence processes and environments
CTE.6-8.1.8.c	evaluate resources in testing and refining solutions to problems before asking for assistance
CTE.6-8.1.9	model integrity, ethical leadership, and effective management
CTE.6-8.1.9.a	examine the importance of professional ethics, cultural, and legal responsibilities of the workplace
CTE.6-8.1.9.b	analyze and explain how individual behaviors influence processes and environments
CTE.6-8.1.9.c	describe the diversity of workplace environments
CTE.6-8.1.10	plan education and career paths aligned to personal goals
CTE.6-8.1.10.a	develop programs of study for various Career Pathways, examining outlook, salary, education, job duties, and lifestyle
CTE.6-8.1.10.b	identify job opportunities, and organize and synthesize information about career skills and requirements for applications
CTE.6-8.1.11	use technology to enhance productivity
CTE.6-8.1.11.a	explain how scientific and technological changes impact specific careers
CTE.6-8.1.11.b	describe the role of technology within a community in maintaining safe and healthy environments
CTE.6-8.12	work productively in teams while using cultural/global competence
CTE.6-8.1.12.a	evaluate local and global challenges
CTE.6-8.1.12.b	evaluate diversity and inclusion language in documents and policies

RESOURCES

Title/Source	Link
EVERFI-FutureSmart	https://everfi.com/courses/k-12/financial-literacy-middle-school/
EVERFI-Social Emotional Learning Activities for Middle & High School Students	https://everfi.com/courses/k-12/social-emotional-learning-middle-high-school/
EconEdLink-Resources for Grades 6-8	https://www.econedlink.org/resources/grade/6-8/
EVERFI-NFTE Venture - Entrepreneurial Expedition	https://everfi.com/courses/k-12/youth-entrepreneurship-curriculum/
EVERFI-Honor Code - Bullying Prevention	https://everfi.com/courses/k-12/bullying-prevention-resources-curriculum/
EVERFI-Endeavor - STEM Career Exploration Activities for Middle School	https://everfi.com/courses/k-12/endeavor-stem-career-activities-middle-school/
Money Instructor-Business Writing	http://www.moneyinstructor.com/businesswriting.asp
EVERFI-Future Goals - Hockey Scholar	https://everfi.com/courses/k-12/hockey-scholar-stem/
Montana Career Lab-Curriculum in MCIS, Financial Literacy	https://lmi.mt.gov/docs/Publications/Career-Pubs/For%20Educators/MCIS%20Resources/Curricula/FinanceCurriculum.pdf
EVERFI-Vaping: Know the Truth	https://everfi.com/courses/k-12/vaping-prevention/
EVERFI-AlcoholEdu - Underage Drinking Prevention	https://everfi.com/courses/k-12/alcoholedu-awareness-prevention-high-school/
Money Instructor-Kids and Money	https://www.moneyinstructor.com/kids.asp
EVERFI-Vault - Financial Literacy for Kids	https://everfi.com/courses/k-12/financial-literacy-elementary-students/
Montana Career Lab-Soft Skills Checklist	https://lmi.mt.gov/docs/Publications/Career-Pubs/CG-SoftSkills.pdf

Title/Source	Link
Money Instructor-Public Speaking	https://www.moneyinstructor.com/publicspeaking.asp
EVERFI-Sustainability Foundations: Plants, Animals and Our World	https://everfi.com/courses/k-12/plants-animals-our-world/
EVERFI-306 - Black History Curriculum for High School	https://everfi.com/courses/k-12/online-african-american-history-curriculum/

NINTH-TWELFTH GRADES

STANDARDS

CTE.9-12	CAREER AND TECHNICAL EDUCATION STANDARDS FOR NINTH THROUGH TWELFTH GRADE
CTE.9-12.1	The career and technical education standards for ninth through twelfth grades are that each student will
CTE.9-12.1.1	act as a responsible and contributing citizen and employee
CTE.9-12.1.1.a	engage in positive, safe, legal, and ethical behavior
CTE.9-12.1.1.b	model industry-identified, career-ready skills
CTE.9-12.1.2	apply appropriate academic and technical skills
CTE.9-12.1.2.a	compose clear and coherent documents and presentations appropriate to task, purpose, and audience
CTE.9-12.1.2.b	demonstrate knowledge of mathematical operations needed to succeed in a selected Career Pathway
CTE.9-12.1.2.c	apply appropriate scientific methods in qualitative and quantitative analysis in a selected Career Pathway
CTE.9-12.1.3	attend to personal health and financial well-being
CTE.9-12.1.3.a	evaluate validity of health and financial information, products, and services
CTE.9-12.1.3.b	analyze financial practices including budgeting, banking, savings, investments
CTE.9-12.1.3.c	explain significance in achieving personal and business short- and long-term goals
CTE.9-12.1.3.d	develop financial goals based on lifestyle expectations, education plans, and career choices
CTE.9-12.1.4	communicate clearly, effectively, and with reason
CTE.9-12.1.4.a	model integrity, ethical leadership, and effective employability skills in all communication
CTE.9-12.1.4.b	evaluate and use information systems to prepare technical documents for the workplace
CTE.9-12.1.4.c	model appropriate strategies for communicating persuasively in professional settings to effectively interact with individuals from various cultural, ethnic, and language backgrounds
CTE.9-12.1.4.d	employ awareness of world cultures and languages in work-based learning opportunities

CTE.9-12	CAREER AND TECHNICAL EDUCATION STANDARDS FOR NINTH THROUGH TWELFTH GRADE
CTE.9-12.1.5	consider the environmental, social, and economic impacts of decisions
CTE.9-12.1.5.a	design and construct safe working environments according to government and industry standards
CTE.9-12.1.5.b	create plans and policies that reflect deep understanding of individual histories and societal complexities in a work environment
CTE.9-12.1.5.c	integrate personal protective equipment use regularly in necessary environments
CTE.9-12.1.6	demonstrate creativity and innovation
CTE.9-12.1.6.a	design and implement an innovation
CTE.9-12.1.6.b	evaluate peer innovations and provide feedback
CTE.9-12.1.7	employ valid and reliable research strategies
CTE.9-12.1.7.a	use evidence from multiple sources to defend a position
CTE.9-12.1.7.b	determine various research methodologies based on a defined problem/purpose
CTE.9-12.1.7.c	identify research protocols required to ensure legality, validity, and reliability
CTE.9-12.1.8	utilize critical thinking to make sense of problems and persevere in solving them
CTE.9-12.1.8.a	devise forecasts or solutions to problems that reflect analysis of trends
CTE.9-12.1.8.b	utilize understanding of resources and culture to devise collaborative solutions to problems
CTE.9-12.1.8.c	utilize multiple resources to test and refine solutions to a problem
CTE.9-12.1.9	model integrity, ethical leadership, and effective management
CTE.9-12.1.9.a	apply laws, regulations, and policies to personnel situations that help employees perform their jobs according to employer rules and expectations
CTE.9-12.1.9.b	apply insight to positively influence others' actions, attitudes, and beliefs based on the needs of the workplace
CTE.9-12.1.9.c	create and modify procedures to most effectively function within laws, regulations, and policies
CTE.9-12.1.10	plan education and career paths aligned to personal goals

CTE.9-12	CAREER AND TECHNICAL EDUCATION STANDARDS FOR NINTH THROUGH TWELFTH GRADE
CTE.9-12.1.10.a	execute a program of study following a Career Pathway, evaluating the opportunities for personal and professional lifelong learning
CTE.9-12.1.10.b	explore the benefits of having a personal or career mentor
CTE.9-12.1.10.c	construct and complete resumes, applications, and other necessary work-related documents
CTE.9-12.1.10.d	evaluate job descriptions that align to a selected Career Pathway and the necessary skill set
CTE.9-12.1.10.e	prepare and practice for, and demonstrate skills needed for job interviews in a selected Career Pathway
CTE.9-12.1.11	use technology to enhance productivity
CTE.9-12.1.11.a	describe how job market changes have resulted from scientific advancements and the increased use of technology in the global economy
CTE.9-12.1.11.b	evaluate the purpose of technology tools and multimedia to analyze their impact on productivity in homes, schools, and workplaces
CTE.9-12.1.11.c	safely and ethically use current industry-standard and emerging technologies
CTE.9-12.1.11.d	model appropriate communication and technological skills to seek, obtain, and change jobs/careers
CTE.9-12.1.12	work productively in teams while using cultural/global competence by collaborating to address geographic, economic, cultural, or political issues considering multiple perspectives.

RESOURCES

Title/Source	Link
Money Instructor-Business Writing	http://www.moneyinstructor.com/businesswriting.asp
EVERFI-NFTE Venture - Entrepreneurial Expedition	https://everfi.com/courses/k-12/youth-entrepreneurship-curriculum/
Youth Entrepreneurs-Foundational Values	https://yeacademy.org/lessons/?topic=foundational-values

Title/Source	Link
Youth Entrepreneurs-Entrepreneurial Mindset	https://yeacademy.org/lessons/?topic=entrepreneurial-mindset
Youth Entrepreneurs-Economics	https://yeacademy.org/lessons/?topic=economics
Youth Entrepreneurs-Marketing	https://yeacademy.org/lessons/?topic=marketing
Youth Entrepreneurs-Business Finance	https://yeacademy.org/lessons/?topic=business-finance
Money Instructor-Money Math	http://www.moneyinstructor.com/moneymath.asp
EVERFI-Marketplaces - Investing Basics	https://everfi.com/courses/k-12/investment-education-high-school/
Money Instructor-Money, Finance, and Careers: Advice and Information	https://www.moneyinstructor.com/morefinancial.asp
EVERFI-Vaping: Know the Truth	https://everfi.com/courses/k-12/vaping-prevention/
EVERFI-Prescription Drug Safety	https://everfi.com/courses/k-12/prescription-drug-safety-high-school/
EVERFI-Pathways: Financing Higher Education	https://everfi.com/courses/k-12/pathways-financing-higher-education/
EVERFI-Money Moves: Modern Banking & Identity Protection™	https://everfi.com/courses/k-12/money-moves-modern-banking-identity-protection/
EVERFI-High School Financial Literacy Lessons	https://everfi.com/courses/k-12/financial-literacy-high-school/
Money Instructor-Investing and Financial Planning	https://www.moneyinstructor.com/invest.asp
EVERFI-Keys to Your Future - College And Career Readiness	https://everfi.com/courses/k-12/college-career-readiness/
Montana Career Lab-Curriculum in MCIS, Financial Literacy	https://lmi.mt.gov/docs/Publications/Career-Pubs/For%20Educators/MCIS%20Resources/Curricula/FinanceCurriculum.pdf

Title/Source	Link
Education Planner-Student	http://www.educationplanner.org/students/index.shtml
Education Planner-Counselor; Setting up a Job Shadowing Program	http://www.educationplanner.org/counselors/job-shadowing.shtml
Montana Career Lab-Soft Skills Checklist	https://lmi.mt.gov/docs/Publications/Career-Pubs/CG-SoftSkills.pdf
EVERFI-Social Emotional Learning Activities for Middle & High School Students	https://everfi.com/courses/k-12/social-emotional-learning-middle-high-school/
Money Instructor-Public Speaking	https://www.moneyinstructor.com/publicspeaking.asp
EVERFI-BINAH: Building Insights to Navigate Antisemitism & Hate	https://everfi.com/courses/k-12/binah/
EVERFI-Diversity Foundations for High School	https://everfi.com/courses/k-12/diversity-foundations/
EVERFI-Honor Code - Bullying Prevention	https://everfi.com/courses/k-12/bullying-prevention-resources-curriculum/
Money Instructor-Business Training: Cultural Diversity in the Workplace	https://www.moneyinstructor.com/lesson/diversity.asp
EVERFI-306 - Black History Curriculum for High School	https://everfi.com/courses/k-12/online-african-american-history-curriculum/
EVERFI-306: Continuing the Story - Black History Curriculum	https://everfi.com/courses/k-12/306-continuing-the-story-digital-african-american-history-curriculum/
EconEdLink Resources 9-12	https://www.econedlink.org/resources/grade/9-12/
Money Instructor-Starting a Business	https://www.moneyinstructor.com/startbusiness.asp
EVERFI-Endeavor - STEM Career Exploration Activities for Middle School	https://everfi.com/courses/k-12/endeavor-stem-career-activities-middle-school/
EVERFI-AlcoholEdu - Underage Drinking Prevention	https://everfi.com/courses/k-12/alchooledu-awareness-prevention-high-school/

Title/Source	Link
Montana Career Lab-Montana Career Guide	http://lmi.mt.gov/Publications/PublicationsContainer/montana-career-guide
Montana Career Lab-Curriculum in MCIS, Career and Technical	https://lmi.mt.gov/Portals/193/Publications/Career-Pubs/For%20Educators/MCIS%20Resources/Curricula/CareerCurriculum.pdf
Montana Career Lab-MCIS Career Plan: Career Development Framework	http://lmi.mt.gov/Publications/PublicationsContainer/mcis-career-plan-career-development-framework-online-only
Montana Career Lab-Pocket Resume	http://lmi.mt.gov/Publications/PublicationsContainer/pocket-resume-online-only
Money Instructor-Resume Writing and Cover Letter Lessons	https://www.moneyinstructor.com/resumes.asp
Montana Career Lab-Mock Job Interview Activity	http://lmi.mt.gov/Publications/PublicationsContainer/mock-job-interview-activity-online-only
Money Instructor-Job Interviews: Interviewing Skills Lessons	https://www.moneyinstructor.com/interview.asp
EVERFI-Ignition: Digital Literacy	https://everfi.com/courses/k-12/digital-literacy-wellness-safety/

ADAPTING CURRICULUM TO MEET THE NEEDS OF EXCEPTIONAL LEARNERS

Good curriculum must respect the unique characteristics of the learner. It should recognize and support the need of each learner to make sense of ideas and information, reconstructing older understandings with new ones. Good curriculum will address interest and readiness levels.

When implementing the Montana Content Standards, schools must provide *all* students with appropriate challenges. In the words of Carol Ann Tomlinson in the foreword to her book *How to Differentiate Instruction in a Mixed-Ability Classroom*,

Acknowledging that students learn at different speeds and that they differ widely in their ability to think abstractly or understand complex ideas is like acknowledging that students at any given age aren't the same height: It is not a statement of worth, but of reality. To accommodate this reality, teachers can create "user-friendly" environment, one in which they flexibly adapt pacing, approaches to learning and channels for expressing learning in response to their students' differing needs. While the goal of each student is challenge and substantial growth, teachers must often define challenge and growth differently in response to students' varying interests and readiness levels (Tomlinson, 2001).

All learning happens on a continuum from novice to expert. Each stage of the continuum has different learning characteristics and learning needs. In The Parallel Curriculum Model, this continuum is called Ascending Levels of Intellectual Demand (ALID), and the learner characteristics are described as:

Novice

- Experiences content at a concrete level
- Manipulates micro-concepts one-at-a-time
- Needs skills instruction and guided practice
- Requires support, encouragement and guidance
- Seeks affirmation of competency in order to complete a task

Apprentice

- Understands the connections among micro-concepts within the discipline
- Connects information within a micro-concept
- Begins to interpret generalizations and themes that connect concepts
- Applies skills with limited supervision

- Seeks confirmation at the end of the task
- Reflects upon content and skills when prompted

Practitioner

- Manipulates two or more micro-concepts simultaneously
- Creates generalizations that explain connections among concepts
- Selects and utilizes skills in order to complete a task
- Seeks input from others as needed
- Exhibits task commitment and persistence when challenges are moderate
- Reflects upon both content and skills in order to improve understanding and performance

Expert

- Utilizes concepts with and among disciplines in order to derive theories and principles
- Creates innovations within a field
- Practices skill development independently and for the purpose of improvement
- Seeks input from other experts in a field for a specific purpose
- Works to achieve flow and derives pleasure from the experience (high challenge, advanced skill/ knowledge)
- Independent and self-directed
- Seeks experiences that cause a return to previous levels in varying degrees

This information guides curriculum design and instructional delivery by articulating the changes that characterize each learner at the stages between novice and expert. It provides a framework for thinking about how to challenge each learner with incremental sophistication—where each learning experience is just above easy reach of the learner who remains challenged and engaged. With a clear understanding of the characteristics and needs of each learner, the teacher can select assessment tools, interpret assessment data with accuracy and use the data to create responsive curriculum and instruction. Teachers can use scaffolding techniques and instructional strategies appropriate to the needs of each student (Tomlinson, Parallel curriculum model: a design to develop high potential and challenge high-ability learners).

MODEL CURRICULUM MACRO- OR OVERARCHING CONCEPTS

Change

- Change generates additional change
- Change can be either positive or negative
- Change is inevitable
- Change is necessary for growth
- Change can be evolutionary or revolutionary

Conflict

- Conflict is composed of opposing forces or needs
- Conflict may be natural or human made
- Conflict may be intentional or unintentional
- Conflict may allow for synthesis and change
- Conflict can inspire fights or flight
- Conflict may inspire interest and attention

Exploration

- Exploration requires recognizing purpose and responding to it
- Exploration confronts “the unknown”
- Exploration may result in “new findings” or the confirmation of “old findings”

Force or Influence

- Force attracts, holds or repels
- Force affects or changes
- Force and inertia are co-dependent
- Force may be countered with equal or greater force

Order or Chaos

- Order may be natural or constructed
- Order may allow for prediction
- Order is a form of communication
- Order may have repeated patterns
- Order and chaos are reciprocals
- Order leads to chaos and chaos leads to order

Patterns

- Patterns have segments that are repeated
- Patterns allow for prediction
- Patterns have internal order
- Patterns are enablers
- Patterns have limits

Power

- Power is the ability to influence
- Power may be used or abused

- Power is always present in some form
- Power may take many forms (chemical, electrical, mechanical, spiritual, political)

Structure

- Structures have parts that interrelate
- Parts of structures support and are supported by other parts
- Smaller structures may be combined to form larger structures
- A structure is no stronger than its weakest component parts

Systems

- Systems have parts that work to complete a task
- Systems are composed of sub-systems
- Parts of systems are interdependent upon one another and form symbiotic relationships
- A system may be influenced by another system
- System interaction
- Systems follow rules

Relationships

- Everything is related in some way
- All relationships are purposeful
- Relationships change over time

(Curry)

INSTRUCTIONAL MATERIALS SELECTION GUIDANCE

SELECTION GUIDES AND CRITERIA

- [Guide for Selecting Materials Aligned to Montana's Content Standards \(word version\)](#)
- [Criteria for Selecting Materials \(word version\)](#) guides.
- [Evaluating American Indian Materials and Resources for the Classroom](#)

QUESTIONS TRUSTEES SHOULD ASK

Before the adoption process

- What are the state guidelines and recommendations for curricular and instructional matters?
- How long has it been since the last time new materials were selected in each subject area?
- What is the budget for new materials?
- What is the timeline for selection?
- What is the district's [instructional vision](#)?
- What community values, needs, and curricular concerns should we be aware of?
- How will you engage stakeholders?
- Who will be on the adoption committee?
- How can you ensure diverse perspectives in the selection process?
- How will the adoption process be communicated to all stakeholders?
- How will you determine alignment to college and career-ready standards?
- Will you be using external or independent vetting such as EdReports.org?
- What is the plan for curriculum rollout, implementation, and professional learning?

("How School Boards . . .")

WORKS CITED

"Among colleagues: what do teachers need from curriculum guides?" *Educational Leadership* September 2010: 96.

Bransford, John D. *How people learn: brain, mind, experience and school*. Washington, D.C.: The National Academies Press, 1999.

Curry, J. *Curriculum Guide or the Education of Gifted High School Students*. Retrieved 12,1, 2010, from www.eric.ed.gov: 1993.

Donovan, M. Suzanne. *How people learn: history, mathematics and science in the classroom*. Washington, D.C.: The National Academies Press, 2005.

Erickson, H. Lynn. *Concept-based curriculum and instruction for the thinking classroom*. Thousand Oaks, CA: Corwin Press, 2007.

"How School Boards Can Support Districts to Adopt Quality Instructional Materials." *EdReports*, edreports.org/resources/article/how-school-boards-can-support-districts-to-adopt-quality-instructional-materials.

Lezotte, Larry "What Do Effective Schools Do?" *Effective Schools*, www.effectiveschools.com/#.

Tomlinson, Carol Ann. *The parallel curriculum: a design to develop learner potential and challenge advanced learners*. Thousand Oaks, CA: Corwin Press, 2009.

Tomlinson, C. A. (2001). *How to differentiate instruction in a mixed-ability classroom*. Alexandria, VA: Association for Supervision and Curriculum Development.

Tomlinson, C. A. (2009). *The parallel curriculum: a design to develop learner potential and challenge advanced learners*. Thousand Oaks, CA: Corwin Press.

Wang, H.A., and William Schmidt. "History, philosophy and sociology of science in science education: results from the third international mathematics and science study." *Science & Education* (2001): 51-70.

Wiggins, Grant and Jay McTighe. *Understanding by Design*. Expanded 2nd Ed. Alexandria: ASCD, 2005.
—. *Understanding by Design Professional Development Workbook*. Alexandria, VA: ASCD, 2004.

