



Montana Small Schools Alliance

Presents

*2022
Curriculum Guide*

Technology Integration

9-12

Compiled by

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(1) In general, a basic program in technology integration education shall:

(a) meet the following conditions:

- (i) development of skills that lead to lifelong pursuits;
- (ii) provide opportunities for authentic application, work experience, and/or articulation with postsecondary education;
- (iii) integrate and transfer technology skills across grade levels, content areas, and programs; and
- (iv) provide access to emerging technology across grade levels, content areas, and programs;

(b) include the following practices:

- (i) progression of skills and knowledge from basic to advanced;
- (ii) integration of technology competencies with academic knowledge in a contextual setting; and
- (iii) incorporate a range of instructional strategies, including personalized learning.

(1) The content areas covered by the technology integration standards include skills for:

- (a) empowered learners;**
- (b) digital citizens;**
- (c) knowledge constructors;**
- (d) innovative designers;**
- (e) computational thinkers;**
- (f) creative communicators;**
- (g) global collaborators; and**
- (h) reflective users.**

This page adopted from the Montana State Curriculum provided by the Office of Public Instruction.

Technology Integration

Standard One

Students will become empowered learners by taking ownership of their learning goals and the technology tools needed to accomplish those goals.

9-12
set personal learning goals, develop strategies leveraging technology to achieve them and reflect on the learning process to improve learning outcomes
build personal learning networks and customize learning environments in ways that support the learning process
use technology to seek feedback that informs and improves practice and to demonstrate learning in a variety of ways
demonstrate the ability to choose, use, and troubleshoot current technologies, and transfer knowledge to explore emerging technologies

Technology Integration
Standard Two

Students will act as digital citizens by practicing safe, legal, responsible, and ethical behavior when online, while working with others, and when using the intellectual property of others.

9-12
engage in positive, safe, legal and ethical behavior when using technology, including social interactions online or when using networked devices
cultivate and manage a positive digital identity and demonstrate an understanding of how the digital footprint is permanent and can impact reputation
respect the rights and obligations of creating, using, and sharing intellectual property
manage personal data to maintain digital privacy and security

Technology Integration

Standard Three

Students will act as knowledge constructors when using technology to research, organize information, and evaluate sources of information for use in projects, reports, and displays.

9-12
curate information from digital resources using a variety of tools and methods to create collections of artifacts that are connected to a theme or support a thesis
use research strategies to locate information and resources for intellectual or creative pursuits
evaluate the accuracy, perspective, cultural sensitivity, credibility, and relevance of information, media, data, or other resources
evaluate potential biases in resources

Technology Integration
Standard Four

Students will become innovative designers to use digital and non-digital tools in the design process.

9-12
select and use digital tools to plan and manage design process that considers design constraints and calculated risks
develop, test, and refine prototypes as part of cyclical design process
initiate a deliberate design process for generating ideas, testing theories, creating innovative artifacts, or solving authentic problems

Technology Integration

Standard Five

Students will act as computational thinkers to evaluate problems, identify the role technology plays in solving problems, and evaluate patterns and algorithms used in technology.

9-12
break down problems into component parts, extract key information and develop descriptive models to understand complex systems or facilitate problem-solving
identify problems suited for technology-assisted methods for data analysis, abstract models, and algorithmic thinking
explain how automation works and use algorithmic thinking to develop a sequence of steps to create and test automate solutions
collect data or identify relevant data sets, use digital tools to analyze them, and represent data in various ways to facilitate problem-solving and decision-making

Technology Integration
Standard Six

Students will become creative communicators using technology to create visuals, graphics, simulations, and models to share ideas and present information.

9-12
communicate complex ideas clearly and effectively by creating or using a variety of digital objects such as visualizations, models or simulations
publish, present, and defend content that customizes the message and medium for the intended audiences
create original works or responsibly repurpose or remix digital resources into new creative works
choose the appropriate platforms and tools for meeting the desired objectives of their creation or communication

Technology Integration
Standard Seven

Students will use technology to become global collaborators by communicating with others and working as part of a team.

9-12
identify and use digital tools to connect with learners from a variety of backgrounds and cultures, engaging with them in ways that broaden mutual understanding and learning of others
identify and use collaborative technologies to work with others to examine global and local issues, problems and solutions from multiple viewpoints
contribute constructively to project teams, assuming various roles and responsibilities to work effectively toward a common goal

Technology Integration
Standard Eight

Students will be reflective users of technology through the use and evaluation of the effectiveness of technology for varied tasks and purposes.

9-12
evaluate historical, cultural, and social impacts of technology innovations on individuals and groups, including urban, rural and reservation communities
reflect on and explain how technological innovations influence selection of tools and resources appropriate to a task