Montana Small Schools Alliance

Presents

2022
Curriculum Guide

Technology Integration

K-8

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.

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.

K	1	2	3	4	5	6-8
identify a variety of technologies that will help in learning	identify a variety of technologies that will help in learning	identify a variety of technologies that will help in learning	use appropriate tools to set and support a personal learning goal	develop learning goals and choose the appropriate technology tools to achieve them	develop learning goals, select the technology tools to achieve them and reflect on and revise the learning process as needed to achieve goals	define personal learning goals, select and manage appropriate technologies to achieve them and reflect on successess and areas of improvement in working toward those goals
			recognize how skills can be transferred between tools	explore technologies and transfer skills to different tools or learning environments	transfer learned skills to different tools or learning environments	navigate a variety of technologies and transfer personal knowledge and skills to learn how to use new 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.

K	1	2	3	4	5	6-8
practice appropriate use of devices	practice appropriate use of devices	practice appropriate use of devices	practice appropriate use of devices, and practice how to be safe online	recognize the role an online identity plays in the digital world and in real life	recognize the role an online identity plays in the digital world and the permanence of decisions when interacting online	manage digital identities and demonstrates an understanding of how the digital footprint is permanent and can impact reputation
	practice responsible use of technology	practice responsible use of technology	practice responsible use of technology	practice safe, legal, and ethical behavior when using technology and interacting online	engage in safe, legal, and ethical behavior when using technology and interacting online	demonstrate positive, safe, legal, and ethical habits when using technology and interacting with others online
share information and respect the use of others	share information and respect the use of others	recognize ownership of information	identify ownership of information and acknowledge the work of others	identify ownership of intellectual property and acknowledge the work of others	demonstrate respect for intellectual property when using and sharing the work of others	demonstrate and model the appropriate use of intellectual property of print and digital media, including copyright, permission and fair use, by creating a variety of media products that include appropriate citation and attribution elements
recognize the importance of keeping personal information private	recognize the importance of keeping personal information private	explain the importance of keeping personal information private and how to be safe online	recognize the importance of keeping personal information private	identify what personal data is, the importance of keeping it private, and how it might be shared online	explain what personal data is, how to keep it private, and how it might be shared online	demonstrate how to keep personal data secure and understand how data-collection technologies work

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.

K	1	2	3	4	5	6-8
		use a tool to organize information	use a variety of tools to organize information	use a variety of tools to organize information and make meaningful connections between resources	organize information and make meaningful connections between resources	locate and collect resources from a variety of sources and organize into collections for a range of projects and purposes
			identify digital tools and resources to find information on topics of interest	use research techniques to locate digital resources	employ appropriate research techniques to locate digital resources	use research strategies effectively to locate appropriate digital resources in support of learning
			explore the accuracy, credibility, and relevance of sources	explore the accuracy, perspective, cultural sensitivity, credibility, and relevance of sources	evaluate the accuracy, perspective, cultural sensitivity, credibility, and relevance of sources	evaluate the accuracy, perspective, cultural sensitivity, credibility, and relevance of resources
						define and consider potential biases resources

Technology Integration
Standard Four

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

K	1	2	3	4	5	6-8
use a design process with digital and non-digital tools	use a design process to develop ideas or creations	use a design process to develop ideas or creations	use digital and non-digital tools to design a product with a step-by-step process	use design process to solve a problem	use design process to develop and test prototypes	engage in design process to develop, test and revise prototypes or create innovative products
	use digital and non-digital tools to design a product	use digital and non-digital tools to design a product	define questions, find solutions, test ideas to solve problems and share learning	practice using digital and non-digital tools to plan and manage a design process	use digital and non-digital tools to plan and manage a design process	select and use digital tools to support design processes, identify constraints and trade-offs and weigh risks
						engage in design process to develop, test and revise prototypes or create innovative products
						use the process of trial and error and understand problems or setbacks as potential opportunities for improvement

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.

K	1	2	3	4	5	6-8
identify how technology is used to make a task easier		explain how technology can make a task easier	evaluate how technology is used to make a task easier or repeatable			
	break down a problem into parts and identify ways to solve the problem	break down a problem into parts and identify ways to solve the problem	break down problems into smaller parts, identify key information, and propose solutions	break down problems into smaller parts, identify key information, and propose solutions	break down problems into smaller parts, identify key information, and propose solutions	break down problems into component parts, identify key pieces and use that information to problem solve
			define a problem and select appropriate technology tools to explore and find solutions	solve problems by selecting technology, analyzing data, and creating models	explore or solve problems by selecting technology for data analysis, modeling, and algorithmic thinking	investigate and practice solving problems by using data analysis, modeling or algorithmic thinking
			identify patterns and categories in a data set			demonstrate an understanding of how automation works and use algorithmic thinking to design and automate solutions
						organize data and use technology to display, analyze, solve problems and make decisions

Technology Integration
Standard Six

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

K	1	2	3	4	5	6-8
		use tools to create something that communicates an idea to others	create digital objects to communicate ideas visually and graphically	create digital objects to communicate ideas visually and graphically	create digital objects to communicate ideas visually and graphically	create original works or responsibly remix and repurpose other digital resources into new creative works
				identify the features and functions of a variety of creation or communication tools	identify and use the features of a variety of creation or communication tools	select appropriate platforms and tools to create, share, and communicate work
			use strategies for remixing or repurposing resources to create new works	create original works by practicing strategies for remixing or repurposing	use a variety of strategies for remixing or repurposing to create new works	communicate complex ideas clearly using various digital tools to convey the concepts in a variety of accessible formats

Technology Integration
Standard Seven

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

K	1	2	3	4	5	6-8
			practice working with others using collaborative technologies	use collaborative technologies to connect with people from different backgrounds or cultures, including peers, experts, and community members, to explore different points of view on various topics	use appropriate digital tools to to work with people from a variety of different backgrounds of cultures	identify and use collaborative technologies to connect with others
					perform a variety of roles within a team using age-appropriate technology to complete a project or solve a problem	identify and select a role within a team to meet goals, based on knowledge of technology and content, as well as personal preference

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.

K	1	2	3	4	5	6-8
						evaluate personal preferences for use of technology tools for different tasks or purposes.