

Technology Curriculum
An Integrated Curriculum
6TH -8TH GRADE

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TECHNOLOGY- An Integrated K-12 Curriculum

GRADE: SIXTH - EIGHTH

STANDARD 1: The student will use digital tools and resources for problem solving and decision making.

<p align="center">END OF GRADE 8 BENCHMARKS</p> <p><i>A proficient student will:</i></p>	<p align="center">MONTANA ELE & VOCABULARY 8TH GRADE</p>	<p align="center">RELATED MCCS FOR 8TH GRADE</p>	<p align="center">SAMPLE TASKS FOR 6TH -8TH GRADE</p>
<p>1.1 Use multiple approaches to explore alternative solutions.</p>	<p>A. identify a problem B. investigate using multiple approaches with digital tools (e.g. Geographic Information System (GIS), digital camera, computer application) C. explore alternative solutions independently. Essential Vocabulary: Geographic Information System</p>		<p>- Students will use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources (i.e. research paper, available presentation software, etc.).</p>
<p>1.2 Collect relevant data and information on a subject from a variety of digital resources.</p>	<p>A. select and use appropriate digital tools to collect data (e.g., probeware, handhelds, Global Positioning System (GPS) B. utilize online tools to access information, with appropriate citation C. perform searches and select content in existing databases (e.g., online library catalog, digital encyclopedia, library databases) D. evaluate relevant data and information from multiple digital resources</p>	<p>W.8.1b – Support claim(s) with logical reasoning and relevant evidence, using accurate, credible sources, including oral sources, and demonstrating an understanding of the topic or text.</p> <p>W.8.7 – Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration. Include sources and/or topics by and about American Indians.</p> <p>W.8.8 – Gather relevant information from multiple oral, print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.</p> <p>SL.8.1a – Come to discussions prepared, having read or researched material under study; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion.</p>	<p>- Students will work independently to gather information to produce and present a project while demonstrating appropriate and responsible use of sources (i.e. citation – <i>MLA, APA, etc.</i>).</p>

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		<p>L.8.4c – Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning or its part of speech.</p>	
<p>1.3 Analyze and ethically use data and information from digital resources.</p>	<p>A. manipulate, organize and graph data, as needed B. employ ethical practices related to data, privacy, plagiarism, spam, viruses, hacking, and file sharing C. employ copyright law to protect the ownership of intellectual property, and explain possible consequences of violating the law. D. apply fair use guidelines</p>	<p>RL.8.7 – Analyze the extent to which a filmed or live production of a story or drama stays faithful to or departs from the text or script, evaluating the choices made by the director or actors.</p> <p>RI.8.7 – Evaluate the advantages and disadvantages of using different mediums (e.g., print or digital text, video, multimedia) to present a particular topic or idea.</p> <p>W.8.1b – Support claim(s) with logical reasoning and relevant evidence, using accurate, credible sources, including oral sources, and demonstrating an understanding of the topic or text.</p> <p>W.8.8 – Gather relevant information from multiple oral, print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.</p> <p>L.8.4c – Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning or its part of speech.</p>	<p>- Students will communicate information and ideas effectively to multiple audiences using a variety of media and formats (i.e. blogs, wikis, voice thread, online collaboration software, online language reference tools, online video collaboration – Skype, Facetime, etc.).</p>

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<p>1.4 Compare accuracy, diversity, relevance and point of view, including Montana American Indians, of digital information.</p>	<p>A. use multiple sources to compare the accuracy of information (e.g., authenticity, validity).</p> <p>B. use multiple sources to compare the diversity of information (e.g., Wikipedia vs. the official tribal Web site)</p> <p>C. use multiple sources to compare the relevance of information</p> <p>D. determine point of view of multiple sources</p>	<p>W.8.7 - Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration. Include sources and/or topics by and about American Indians.</p>	<p>- Students will work independently to gather information to produce and present a project while demonstrating appropriate and responsible use of sources (i.e. citation – <i>MLA, APA</i>, etc.) including and accessing digital materials and topics specific to Montana American Indians.</p> <p>- Students will demonstrate responsible use of sources by recognizing the limitations and differences of various gTLDs (.com, .gov, .org, .edu).</p>
<p>1.5 Share data and information ethically and appropriately cite sources.</p>	<p>A. share data and information in an ethical manner from digital resources</p> <p>B. cite sources with appropriate formatting</p>	<p>RL.8.1 - Cite the textual evidence that most strongly supports an analysis of what the text says explicitly as well as inferences drawn from the text.</p> <p>RI.8.1 - Cite the textual evidence that most strongly supports an analysis of what the text says explicitly as well as inferences drawn from the text.</p> <p>W.8.8 - Gather relevant information from multiple oral, print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.</p>	<p>- Students will practice digital citizenship while gathering information to produce and present a project while demonstrating appropriate and responsible use of sources (i.e. citation – <i>MLA, APA</i>, etc.).</p> <p>-Students will describe and illustrate a content-related concept or process using a model, simulation, or concept-mapping software.</p>

TECHNOLOGY- An Integrated K-12 Curriculum

GRADE: SIXTH - EIGHTH

STANDARD 2: The student will collaborate and communicate globally in a digital environment.

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<p>2.1 Select and use online collaboration and communication tools</p>	<p>A. experience online communication tools with teacher assistance (e.g., e-mail, VoIP, chat/IM) B. participate in a whole class online collaboration project (e.g., class-to-class, Flat Stanley, author communication, pen pals)</p>	<p>W.8.6 - Use technology, including the Internet, to produce and publish writing and present the relationships between information and ideas efficiently as well as to interact and collaborate with others.</p>	<p>- Students will communicate information and ideas effectively to multiple audiences using a variety of media and formats (i.e. blogs, wikis, voice thread, online collaboration software, online language reference tools, etc.).</p> <p>- With guidance and modeling, students will construct meaning on the impacts of technology on society, economy and the environment.</p>
<p>2.2 Use digital collaboration and communication tools in a safe, legal, and responsible manner</p>	<p>A. discuss and follow district and school acceptable use policy B. operate within the guidelines of the law to collaborate and communicate ethically, safely, and responsibly C. discuss and follow Internet safety practices and responsible cyber citizenship: personal safety, identity protection, bullying prevention, and password protection</p> <p>Essential Vocabulary: Acceptable Use Policy</p>	<p>W.8.1b - Support claim(s) with logical reasoning and relevant evidence, using accurate, credible sources, including oral sources, and demonstrating an understanding of the topic or text.</p> <p>W.8.6 - Use technology, including the Internet, to produce and publish writing and present the relationships between information and ideas efficiently as well as to interact and collaborate with others.</p>	<p>- Students will demonstrate positive ethical and social behavior when using technology (follow rules, site sources, hardware use, software piracy, digital citizenship, positive social behavior)</p> <p>-Students will, with guidance, gain an understanding of the importance of creating a positive digital footprint both in and outside the classroom environment (reputation online, personal posts and photos, use of social media).</p>

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2.3 Communicate the results of research and learning with others using digital tools	A. observe and discuss digital presentations	W.8.2a - Introduce a topic clearly, previewing what is to follow; organize ideas, concepts, and information into broader categories; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension.	- With guided practice, students will select digital tools to communicate ideas and collaborate with multiple audiences while participating in online projects. (web pages, Smart Board, Networks, GIS, email).
2.4 Use technology in a global learning environment	A. establish a connection with others using a digital tool B. collaborate with students in other learning environments that are studying common topics C. participate in a global learning project Essential Vocabulary: global learning environment		- Students will develop cultural understanding and global awareness by engaging with learners of other cultures (i.e. Montana American Indians, experts, peers, or others). -Students will, with guidance, create original animations or videos documenting school, community, or local events.

TECHNOLOGY- An Integrated K-12 Curriculum

GRADE: SIXTH - EIGHTH

STANDARD 3: The student will apply digital tools and skills with creativity and innovation to express his/herself, construct knowledge and develop products and processes.

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<p>3.1 Apply a variety of digital tools for personal and group expression</p>	<p>A. create an original work using multiple digital tools for personal and/or group expression</p>	<p>W.8.2a - Introduce a topic clearly, previewing what is to follow; organize ideas, concepts, and information into broader categories; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension.</p> <p>SL.8.4 - Present claims and findings, emphasizing salient points in a focused, coherent manner with relevant evidence, sound valid reasoning, and well-chosen details; use appropriate eye contact, adequate volume, and clear pronunciation.</p> <p>SL.8.5 - Integrate multimedia and visual displays into presentations to clarify information, strengthen claims and evidence, and add interest.</p>	<p>- Students will independently continue to create, collect, and organize a digital portfolio of original work.</p> <p>- Students will, with guided practice, choose the most efficient technology tool to complete a specific task.</p>
<p>3.2 Use a variety of digital tools to create a product</p>	<p>A. gather knowledge or information on a topic from a variety of digital resources including data, graphics, or events</p> <p>B. design an original multimedia product that demonstrates the knowledge learned from the research</p> <p>C. produce an original digital product explaining the information or concepts learned (e.g., pamphlet on safety guidelines, Web quest, or a movie or slideshow presentation)</p>	<p>W.8.2a - Introduce a topic clearly, previewing what is to follow; organize ideas, concepts, and information into broader categories; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension.</p> <p>W.8.6 - Use technology, including the Internet, to produce and publish writing and present the relationships between information and ideas efficiently as well as to interact and collaborate with others.</p> <p>SL.8.4 - Present claims and findings, emphasizing salient points in a focused, coherent manner with relevant evidence, sound valid reasoning, and well-chosen details; use appropriate eye contact, adequate volume, and clear pronunciation.</p>	<p>- With guided practice, students will invent or create an innovative solution to an authentic problem using a variety of technologies. (scientific knowledge, solving hypothesis).</p>

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	D. present the finished product using a variety of digital tools to a targeted audience	SL.8.5 - Integrate multimedia and visual displays into presentations to clarify information, strengthen claims and evidence, and add interest.	
3.3 Use technology to recognize trends and possible outcomes	A. access various digital resources to gather data B. evaluate data C. interpret and predict trends and outcomes from data using various digital resources		- Students will transfer current knowledge to learning of new technologies (i.e. social media – Twitter, Facebook, Instagram, etc., mobile device apps, Google forms, surveys, and polls). -Students will, with guidance, employ data-collection technology such as probes, handheld devices, and geographic mapping systems to gather, view, analyze, and report results for content-related problems.
3.4 Examine the relationship of copyright to ownership of digital media	A. define and clarify the limitations of various media resources of the Fair Use Guidelines of the U.S. Copyright Law as it pertains to student projects. B. compare and contrast student options and choices regarding copyright of digital media	RL.8.1 - Cite the textual evidence that most strongly supports an analysis of what the text says explicitly as well as inferences drawn from the text. RL.8.7 - Analyze the extent to which a filmed or live production of a story or drama stays faithful to or departs from the text or script, evaluating the choices made by the director or actors. RI.8.1 - Cite the textual evidence that most strongly supports an analysis of what the text says explicitly as well as inferences drawn from the text. RI.8.7 - Evaluate the advantages and disadvantages of using different mediums (e.g., print or digital text, video, multimedia) to present a particular topic or idea.	- Students will, with some guidance, advocate and practice safe, legal, and responsible use of information and technology while exhibiting leadership for digital citizenship (i.e. correct citation for digital print items, as well as, photography, music, videos).

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		<p>W.8.8 - Gather relevant information from multiple oral, print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.</p>	
<p>3.5 Use digital tools and skills to construct new personal understandings</p>	<p>A. evaluate how technology affects life (e.g., compare and contrast local community life with and without digital tools) B. develop a new personal understanding individually and collaboratively using digital tools</p>	<p>W.8.7 - Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration. Include sources and/or topics by and about American Indians.</p> <p>SL.8.2 - Analyze the purpose of information presented in diverse media and formats (e.g., visually, quantitatively, orally) and evaluate the motives (e.g., social, commercial, political) behind its presentation.</p>	<ul style="list-style-type: none"> - With guidance, students will forecast possibilities of latest new trends using online digital sources (i.e. examine several news sources, identify a problem, and provide solutions). - Students will collect and analyze data to identify solutions and/or make informed decisions (Google forms, surveys and polls). - Use multiple processes and diverse perspectives to explore alternative solutions.

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STANDARD 4: The student will possess a functional understanding of technology concepts and operations.

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<p>4.1 Apply and refine the skills needed to use communication, information and processing technologies</p>	<p>A. click on icons, buttons and menus to produce a desired outcome B. demonstrate developmentally appropriate keyboarding skills C. locate and correctly use parts of various digital devices (desktop computer, laptop computer, digital cameras, Global Positioning System (GPS), probeware, etc.) D. effectively use operating systems and user interfaces (file management, settings, control panel, etc.)</p>	<p>W.8.2a - Introduce a topic clearly, previewing what is to follow; organize ideas, concepts, and information into broader categories; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension.</p> <p>W.8.6 - Use technology, including the Internet, to produce and publish writing and present the relationships between information and ideas efficiently as well as to interact and collaborate with others.</p> <p>SL.8.5 - Integrate multimedia and visual displays into presentations to clarify information, strengthen claims and evidence, and add interest.</p> <p>MP.5 - Use appropriate tools strategically.</p>	<p>- Students will, with guided practice, use multiple operating systems across software applications and devices (wiki, website, blog).</p> <p>- Mathematically proficient students will be able to consider the available technology/digital tools appropriate for their grade level or course such as a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software using digital devices and/or apps (Google Forms, surveys, and polls).</p>
<p>4.2 Use appropriate terminology when communicating about current technology</p>	<p>A. use appropriate terminology when communicating about current technology.</p> <p>Essential Vocabulary: digital tools, Global Positioning System (GPS), Geographic Information System (GIS), digital, database terms: category, field, records, online, e-mail, chat, IM (instant messaging), texting, VoIP), acceptable use, wiki, blog</p>		<p>- Students will, with guided practice, apply strategies for identifying and solving routine technology problems (troubleshoot) that occur during everyday use.</p> <p>- With guided practice, students will locate and identify technology concepts, systems, operations and components including mobile devices.</p>

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4.3 Transfer current knowledge to learning of new technology skills	A. use existing knowledge to explore and implement new technologies as appropriate.	L.8.4c - Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning or its part of speech.	<ul style="list-style-type: none">- Students will master keyboarding skills at a proficient level with speed and accuracy and with ergonomic posture.- Students will care for and safely operate equipment.- Students will master organization of documents into folders and navigate between various applications.