5th and 6th Grade Technology Standards

NOTE: Throughout this document, learning targets are identified by type as Knowledge ("K"), Reasoning ("R"), Skill ("S"), or Product ("P").

5<u>th</u> and 6<u>th</u> Grade Technology Standard 1: A student must use digital tools and resources for problem solving and decision making.

Benchmark 1: The student can use multiple approaches to explore alternative solutions.

Learning Targets *(Type)* **1.1:**

a. I can use digital tools to identify and define an authentic problem and write significant questions for investigation. *(S)*
b. I can predict and use key words and phrases that narrow or broaden information searches. *(R)*
c. I can use digital tools, data bases, and digital resources to organize a project or solve a problem. *(S,R)*
d. I can investigate a problem using digital tools (e.g., create a survey, collect data, and research a question). *(S)*
e. I can use digital tools to help me generate alternative solutions using collected resources and data. *(R)*

Benchmark 2: Collect relevant data and information on a subject from a variety of digital resources.

Learning Targets *(Type)* **1.2:**

a. I can use online sources to access and gather information, with appropriate citation, for research projects. *(S)*
b. I can select and use authoritative primary and/or secondary sources. *(K,S)*
c. I can select and use appropriate digital tools to collect data. *(K,R)*
d. I can select the appropriate search engines or directories to find data. *(K)*
e. I can use basic functions of search engines and databases. *(S)*
f. I can predict which information sources will provide the desired data. *(R)*

Benchmark 3: Analyze and ethically use data and information from digital resources.

Learning Targets *(Type)* **1.3:**

a. I can examine data and information from digital resources. *(S)*
b. I can organize and manipulate data with digital tools, as needed (e.g., charts, comparisons, tables). *(S)*
c. I can synthesize information from separate sources to produce, support, and counter arguments. *(R)*

Benchmark 4: The student can compare accuracy, diversity, relevance, and point of view (including that of Montana American Indians) of digital information.

Learning Targets *(Type)* **1.4:**

a. I can use multiple sources to determine the accuracy of information (e.g., authenticity, validity). *(R)*

Benchmark 5: The student can share data and information ethically and appropriately cite sources.

Learning Targets *(Type)* **1.5:**

a. I can describe ethical practices related to data, privacy, plagiarism, spam, viruses, hacking, and file sharing. *(K)*
b. I can describe copyright law to protect the ownership of intellectual property, and explain possible consequences of violating the law. *(K)*
c. I can describe fair use guidelines for using copyrighted materials (e.g., images, music, video, text) in school projects point of view, including Montana American Indians, of digital information. *(K)*

5th and 6th Grade Technology Standard 2: A student must collaborate and communicate globally in a digital environment.

Benchmark 1: The student can select and use online collaboration and communication tools.

Learning Targets *(Type)* 2.1:

a. I can explore online communication tools with teacher assistance. *(K,S)*
b. I can participate in a whole class online collaboration project. *(K.S)*
c. I can interact and collaborate with others using a variety of digital tools. *(K.S)*
d. I can communicate information and ideas effectively to multiple audiences using a variety of media and formats. *(K,S,R)*

Benchmark 2: The student can use collaboration and communication tools in a safe, legal, and responsible manner.

Learning Targets *(Type)* 2.2:

a. I can discuss and follow district and school acceptable use policy. *(K)*
b. I can discuss and follow Internet safety practices and responsible cyber citizenship: personal safety, identity protection, bullying prevention, and password protection. *(K)*
c. I can contribute to a cooperative learning project respectfully. *(K,S,R)*
d. I can demonstrate effective group behaviors while using digital collaborative resources. *(K,S,R)*

Benchmark 3: The student can communicate the results of research and learning with others using digital tools.

Learning Targets *(Type)* 2.3:

a. I can observe and discuss digital presentations. *(K)*
b. I can create and share a group digital project. *(K,S)*
c. I can comment on a writing project using online tools. *(K,S,R)*

Benchmark 4: The student can use technology in a global learning environment.

Learning Targets *(Type)* 2.4:

a. I can establish a connection with others using a digital tool. *(K,S,R)*
b. I can collaborate with students in other learning environments that are studying common topics. *(K,S,R)*
c. I can participate in a global learning project with guidance. *(K,S)*
d. I can participate in a live video conference. *(K,S)*

5th and 6th Grade Technology Standard 3: A student must apply digital tools and skills with creativity and innovation to express his/herself, construct knowledge, and develop products and processes.

Benchmark 1: The student can apply a variety of digital tools for personal and group expression.

Learning Targets *(Type)* 3.1:
a. I can create products using a combination of text, images, and sound. *(K,S,R)*
b. I can use online creativity tools to create multimedia projects. *(K,S,R)*
c. I can use presentation software to deliver information effectively. *(K,S)*
d. I can use concept mapping applications to plan a project. *(K,S,R)*
e. I can generate categories and subcategories using concept mapping software. *(K)*
f. I can group related ideas using concept mapping software. *(K)*
g. I can generate creative solutions and present ideas effectively. *(K,S,R)*
h. I can judge the strengths and weaknesses of different presentation tools. *(K,R)*
i. I can contribute my own ideas to collaborative forums in a positive manner. *(K,S,R)*

Benchmark 2: The student can use a variety of digital tools to create a product.

Learning Targets *(Type)* **3.2:**

a. I can gather knowledge or information on a topic from a variety of digital resources. *(K)*
b. I can name different sources of online information (e.g., library catalog, subscription database). *(K)*
c. I can select the most suitable digital resources for school assignments. *(K,R)*
d. I can use bookmarking tools to organize online sources for easy access. *(K,R)*
e. I can display search results in different way (e.g., Wonder Wheel, Google Squared). *(K,S,P)*
f. I can design an original product that demonstrates the knowledge learned from research. *(K,S,P)*
g. I can create a storyboard to organize and sequence information. *(K,S,P)*
h. I can write a narrative to accompany a series of images. *(K,S,R,P)*
i. I can develop a product explaining the information or concepts learned. *(K,S,R,P)*
j. I can show a sequence of events using a time-line application. *(K,S,R,P)*
k. I can demonstrate the steps in a process using a slide-show application. *(K,S,R,P)*
l. I can present the product to a targeted audience using a variety of digital tools. *(K,S,R,P)*
m. I can make my presentations more engaging with the help of technology. *(K,S)*
n. I can predict how my choice of digital images and music influence my audience. *(K,R)*

Benchmark 3: The student can use technology to recognize trends and possible outcomes.

Learning Targets *(Type)* **3.3:**

a. I can use online simulations to explore systems and draw conclusions. *(K,S)*
b. I can access various digital resources to gather data. *(K,S)*
c. I can make predictions based on information gathered on line. *(K,R)*
d. I can compare and contrast data to identify patterns and trends using various digital resources. *(K,R)*
e. I can collect information from real-time data sources, such as the National Weather Service. *(K)*
f. I can record observations over time via live video streams, such as animal cams. *(K,S,R)*
g. I can communicate ideas and concepts using various digital resources. *(K,S)*
h. I can work on shared documents with others. *(K,S)*
i. I can communicate across geographic and political boundaries in real-time, using face-to-face video conferencing tools. *(K,S,R)*
j. I can use data-collection devices (such as online forms or polls) to gather feedback. *(K,S)*

Benchmark 4: The student can examine the relationship of copyright to ownership of digital media.

Learning Targets *(Type)* **3.4:**

a. I can credit the creators of digital content as directed. *(K)*
b. I can identify examples of copyright infringement in student projects. *(K)*
c. I can explain why copyright laws are needed. *(K)*
d. I can compare and contrast student options and choices regarding copyright of digital media. *(K,R)*
e. I can explain how online piracy affects the creators of artistic and intellectual works. *(K)*
f. I can find Creative Commons materials to use in my projects. *(K)*
g. I can recognize examples of plagiarism. *(K,R)*

Benchmark 5: The student can use digital tools and skills to construct new personal understandings.

Learning Targets *(Type)* **3.5:**

a. I can evaluate how technology affects life (e.g., compare and contrast life with and without a digital tool). *(K.R)*
b. I can reflect on how online environments are a forum for differing points of view. *(K,R)*
c. I can identify how media messages affect my own decision making. *(K,R)*
d. I can develop a new personal understanding, individually and collaboratively, using digital tools. *(K,S,R)*
e. I can make personal connections with others through my work online. *(K,S)*
f. I can communicate with individuals that share my interests online. *(K,S)*

5ᵗʰ and 6ᵗʰ Grade Technology Standard 4: A student must possess a

functional understanding of technology concepts and operations.

Benchmark 1: The student can apply and refine the skills needed to use communication, information, and processing technologies.

Learning Targets *(Type)* **4.1:**

a. I can click on icons, buttons, and menus to produce a desired outcome. *(K)*
b. I can use bullets, columns, and other intermediate formatting as directed. *(K)*
c. I can make formatting decisions that make my documents more readable and attractive. *(K,S,R)*
d. I can effectively apply grammar and spell-check tools. *(K)*
e. I can use a thesaurus tool to improve my writing. *(K)*
f. I can demonstrate developmentally appropriate keyboarding skills. *(K,S)*
g. I can insert the correct punctuation while typing. *(K)*
h. I can type with adequate speed and accuracy to complete assignments as given. *(K,S)*
i. I can enter numerical data into a spreadsheet expediently. *(K,S)*
j. I can locate and correctly use parts of various digital devices. *(K)*
k. I can use a digital camera and download the image files to my computer. *(K)*
l. I can use imaging devices (e.g., scanner) to make digital files. *(K)*
m. I can make and download a digital sound file of my own voice. *(K,S)*
n. I can effectively use operating systems and user interfaces (file management, settings, control panel, etc.). *(K)*
o. I can select from multiple printers. *(K)*
p. I can manage my own files and sub folders. *(K)*
q. I can use network storage drives to access and share files. *(K)*
r. I can work within a shared document effectively. *(K)*
s. I can send an attachment via email. *(K)*

Benchmark 2: The student can use appropriate terminology when communicating about current technology.

Learning Targets *(Type)* **4.2:**

a. I can use appropriate terminology when communicating about current technology. *(K)*
b. I can identify examples of spreadsheets, word processing documents, and presentations. *(K)*
c. I can specify the meanings of some commonly used file extensions, URL suffixes, acronyms and abbreviations pertaining to technology. *(K)*
d. I can read "text speak" and know when it is appropriate to use in my own communication. *(K,R)*

Benchmark 3: The student can transfer current knowledge to learning of new technology skills.

Learning Targets *(Type)* **4.3:**

a. I can use existing knowledge to explore and implement new technologies as appropriate from situation to situation. *(K,S,R)*
b. I can recognize similarities between applications and transfer skills between programs. *(K,S,R)*
c. I can generalize my knowledge of a word processing application to online word processing. *(K)*
d. I can personalize my work environment to meet my needs and interests. *(K,S,R)*