



# East Helena Public Schools

## Technology Education Curriculum

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## Introduction:

The East Helena K-8 Technology curriculum is based on the Montana Technology Content Standards Framework for grades K-8. It is designed to provide teachers with a guide for the integration of grade level appropriate technology skills, along with performance rubrics for achieving the standards and benchmarks as set by the Montana Office of Public Instruction. The purpose of this document is to enhance the use of technology already in place and to support our children's future educational experiences. It addresses our present and future needs while recognizing that the world and technology are rapidly changing.

Our district goal is to incorporate technology into every classroom and curricular as a tool to enhance learning. Students should utilize technology to express their ideas more clearly; to access information beyond traditional classroom structures and to assist them in collaborating with other students around the world.

The EHPS technology committee used the Montana Board of Public Education's existing MT standards framework was followed to develop the EHPS curriculum to improve student learning. These criteria included the believe that standards are academic in nature and content specific, they are challenging and rigorous, they are clear and understandable, they are measurable and they address diversity, specifically fulfilling the commitment to implementing MCA 20-1-501, Indian Education for All.

Technology is uniquely positioned to encourage learning, to promote critical thinking, creativity, and innovation, and to prepare students to take their place in society as digital citizens. As engaged learners, students are able to acquire and apply content knowledge and skills through active exploration, interaction, and collaboration with others across the globe, challenging them to be engaged in learning, no matter what socioeconomic or ethnic background, or where they live. The systematic integration of technology across the curriculum provides our students with the 21st century skills and the habits that their futures demand.

The East Helena District Technology Curriculum Committee members:

Kate Johnson – Eastgate Elementary  
Marne Bender – Radley Elementary  
Brenda Stoltz – East Valley Middle School  
Jeanette Winslow – District Technology Coordinator  
Mike Agostinelli – EVMS Middle School Vice-Principal

### **Technology Education in the Primary Grades:**

In Kindergarten and 1<sup>st</sup> grade we integrate technology in many areas of our day. In Math we use technology to create graphic organizers, learn about new topics, check the weather, time ourselves counting, and graph data. In Reading we use technology to record our voices and turn them into stories, and take pictures to document the things around us, to research topics and find pictures of things we are learning about. In Science we use technology to add depth to our science experiments with apps and videos. We use technology to record our data and make presentations about the data. In Art we use technology to explore the artwork of the artist we study. We create digital pictures and tell stories about them. In Social Studies we use technology to connect and learn about people around the world.

### **Technology Education in the Elementary Grades**

For grades two through five, technology is integrated throughout the curriculum, and is used to enhance the learning process and content of the curriculum. For reading, students utilize a variety of tools to improve their reading fluency, comprehension, vocabulary skills, and writing skills. Some of these tools include iPad apps to record vocal and written/drawn explanations, presentation based apps, photo and video apps, web 2.0 tools on the internet, blogging, and desktop based tools such as Microsoft Office. In mathematics, the iPad offers many drill based apps, as well as apps that allow them to record and explain their thinking with mathematical concepts. Many apps and desktop based programs also allow students to compile data, draw mathematical conclusions, and share their data with others. Our math program is also accessible from the internet, allowing students opportunities to interact with that as well. With social studies and science, iPads and regular computers allow students to have access to the world through specialized apps, Google tools, and web searches. Programs like Skype also allow students to connect with others via videoconference around the world. Technology is also incorporated into many aspects of our anti-bullying program, Olweus. The iPads allow students to have virtual class meetings and discussions via My Big Campus, as well as share feelings through creation based and explanatory apps. Anti-bullying films have also been produced with the iPads.

### **Technology Education in the Middle School**

#### **6<sup>th</sup> Grade Computer Technology**

This course offers students the opportunity to become acquainted and proficient with the keys of a standard keyboard. "Mavis Beacon Teaches Typing" is the software used to practice typing, finger placement, and graded on Average Words per Minute (AWPM). Other software used are "Typing Web" internet based and "Typing Pal"

Microsoft Word will be used as the word processing program to learn the development of documents after finger placement learned. Students will acquire the ability to type without the need to look at the keyboard. Microsoft Word will be used to create documents, which are professional looking, concise and coherent -letters, memos,

reports, and tables. With this foundation of knowledge, the students can make better judgments and apply more productive reasoning in today's technological world.

Computer Basics - Students will go through a series of basic computer concepts using Intel's "The Journey Inside" – A thorough background of computer hardware and software and how they work.

### **7<sup>th</sup> Grade Computer Technology**

This course offers students the opportunity to become re-acquainted with the keys of a standard keyboard and expand their speed and accuracy. "Mavis Beacon Teaches Typing" is the software used to practice typing, finger placement, and Average Words per Minute. The students will practice keyboarding for the first two weeks and then only on Thursdays and Fridays.

Microsoft Word is the word processing program, which will be used for the processing of documents. Students will advance their knowledge in Microsoft Word with more assignments.

Microsoft Excel will be the final program introduced. The students will complete six step-by-step lessons using Excel. Students are expected to identify and use the functions available with a keyboard to produce high quality products. Students are expected to assess the quality of the product and work on deficiencies. Students are to apply this knowledge to real world problem solving.

### **8<sup>th</sup> Grade Computer Technology**

This course offers students the opportunity to become acquainted with various computer programs. Students will learn Nvu, a web page building program (or future various "free" web building programs); Mindstorm Robotics, a hands on programming course, and Game Maker, a game creation programming download in which students can create and play new games when complete.

The technology used for this class: Computers, iPods, mini microphones, video cameras, tripods, scanners, digital cameras, iPads, and robotic Mindstorm kits

The students will continue their practice of keyboarding on Fridays only.

# Technology Content Standards

## Kindergarten

**Technology Content Standard 1. A student must use digital tools and resources for problem solving and decision making.**

**Benchmark 1, By the end of Grade 4: Identify and investigate a problem and generate possible solutions.**

**Students will be able to:**

- A. identify a problem with teacher assistance
- B. investigate the problem using digital tools (e.g. create a survey, collect data, research a question) with teacher assistance
- C. generate possible solutions using digital tools with teacher assistance

**Benchmark 2, By the end of Grade 4: Collect data and information using digital tools.**

**Students will be able to:**

- A. give an example of data
- B. collect data with a digital tool (e.g. digital thermometer, camera, probe, weather station, survey) with assistance
- C. collect information using digital tools (e.g. Internet, microscopes, database, CD/DVD) with assistance

**Benchmark 3, By the end of Grade 4: Organize collected data and information using a variety of digital tools.**

**Students will be able to:**

- A. name possible categories to be used for sorting data
- B. sort collected data using a digital tool (e.g. graphic organizer, spreadsheet, graphing software) with assistance
- C. organize information using digital tools (e.g. graphic organizers, graphs, pictures) with assistance

**Benchmark 4, By the end of Grade 4: Identify the accuracy, diversity, and point of view, including Montana American Indians, of digital information.**

**Students will be able to:**

- A. recognize, with assistance, that information from digital sources may contain inaccuracies
- B. use digital information that includes diverse perspectives, including information about Montana's American Indians

**Benchmark 5, By the end of Grade 4: Use digital tools and skills to construct new personal understandings**

**Students will be able to:**

- A. not applicable at this level

**Technology Content Standard 2. A student must collaborate and communicate globally in a digital environment.**

**Benchmark 1, By the end of Grade 4: Identify and explore online collaboration and communication tools.**

**Students will be able to:**

- A. experience online communication tools with teacher assistance (e.g. e-mail, Skype, Facetime, chat/IM)

**Benchmark 2, By the end of Grade 4: Identify and explore safe, legal, and responsible use of digital collaboration and communication tools.**

**Students will be able to:**

- A. discuss and follow district and school acceptable use policy
- B. discuss Internet safety: identity protection, bullying prevention, password protection, and personal safety.

**Benchmark 3, By the end of Grade 4: Communicate the results of research and learning with others using digital tools.**

**Students will be able to:**

- A. observe and discuss digital presentations

**Benchmark 4, By the end of Grade 4: Explore how technology has expanded the learning environment beyond the traditional classroom.**

**Students will be able to:**

- A. establish a connection with others using a digital tool with assistance

**Technology Content 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, By the end of Grade 4: Use digital tools for personal expression.**

**Students will be able to:**

- A. use digital tools for personal expression (e.g. use a painting or graphics program to create a project)

**Benchmark 2, By the end of Grade 4: Use various digital media to share information and tell stories.**

**Students will be able to:**

- A. explore various tools to create a digital picture
- B. create a picture using a digital tool
- C. tell a story about the picture

**Benchmark 3, By the end of Grade 4: Use technology to discover connections between facts.**

**Students will be able to:**

- A. use technology to discover facts with assistance

**Benchmark 4, By the end of Grade 4: Understand ownership of digital media.**

**Students will be able to:**

- A. label student's work with their own name

**Benchmark 5, By the end of Grade 4: Use digital tools and skills to construct new personal understandings.**

**Students will be able to:**

- A. identify digital tools

**Technology Content Standard 4. A student must possess a functional understanding of technology concepts and operations.**

**Benchmark 1, By the end of Grade 4: Show skills needed to use communication, information and processing technologies.**

**Students will be able to:**

- A. click on icons or buttons to produce a desired outcome with guidance
- B. locate and use basic parts of various digital devices (power buttons, mouse, controls, screen, keyboard)
- C. follow lab/classroom rules related to responsible use of digital equipment

**Benchmark 2, By the end of Grade 4: Use appropriate terminology when communicating about current technology.**

**Students will be able to:**

- A. use appropriate vocabulary when communicating about current technology

**Benchmark 3, By the end of Grade 4: Transfer current knowledge to learning of new technology skills.**

**Students will be able to:**

- A. Apply prior knowledge when learning different digital tools



## 1st Grade

**Technology Content Standard 1. A student must use digital tools and resources for problem solving and decision making.**

**Benchmark 1, By the end of Grade 4: Identify and investigate a problem and generate possible solutions.**

**Students will be able to:**

- A. identify a problem with teacher assistance
- B. investigate the problem using digital tools (e.g. create a survey, collect data, research a question) with teacher assistance
- C. generate possible solutions using digital tools with teacher assistance

**Benchmark 2, By the end of Grade 4: Collect data and information using digital tools.**

**Students will be able to:**

- A. give an example of data
- B. collect data with a digital tool (e.g. digital thermometer, camera, probe, weather station, survey) with assistance
- C. collect information using digital tools (e.g. Internet, microscopes, database, CD/DVD) with assistance

**Benchmark 3, By the end of Grade 4: Organize collected data and information using a variety of digital tools.**

**Students will be able to:**

- A. list possible categories to be used for sorting data
- B. sort collected data using a digital tool (e.g. graphic organizer, spreadsheet, graphing software) with assistance
- C. organize information using digital tools (e.g. graphic organizers, graphs, pictures) with assistance

**Benchmark 4, By the end of Grade 4: Identify the accuracy, diversity, and point of view, including Montana American Indians, of digital information.**

**Students will be able to:**

- A. recognize, with assistance, that information from digital sources may contain inaccuracies
- B. use digital information that includes diverse perspectives, including information about Montana's American Indians

**Benchmark 5, By the end of Grade 4: Use digital tools and skills to construct new personal understandings**

**Students will be able to:**

- A. not applicable at this level

**Technology Content Standard 2. A student must collaborate and communicate globally in a digital environment.**

**Benchmark 1, By the end of Grade 4: Identify and explore online collaboration and communication tools.**

**Students will be able to:**

- A. experience online communication tools with teacher assistance (e.g. e-mail, Skype, Facetime, chat/IM)
- B. participate in a whole class online collaboration project (e.g. class-to-class, Flat Stanley, author communication, pen pals)

**Benchmark 2, By the end of Grade 4: Identify and explore safe, legal, and responsible use of digital collaboration and communication tools.**

**Students will be able to:**

- A. discuss and follow district and school acceptable use policy
- B. discuss Internet safety: identity protection, bullying prevention, password protection, and personal safety

**Benchmark 3, By the end of Grade 4: Communicate the results of research and learning with others using digital tools.**

**Students will be able to:**

- A. observe and discuss digital presentations

**Benchmark 4, By the end of Grade 4: Explore how technology has expanded the learning environment beyond the traditional classroom.**

**Students will be able to:**

- A. establish a connection with others using a digital tool with assistance

**Technology Content 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, By the end of Grade 4: Use digital tools for personal expression.**

**Students will be able to:**

- A. use digital tools for personal expression (e.g. use a painting or graphics program to create a project)

**Benchmark 2, By the end of Grade 4: Use various digital media to share information and tell stories.**

**Students will be able to:**

- A. explore various digital tools to create an illustrated story
- B. create an illustrated story using a digital tool
- C. share the story

**Benchmark 3, By the end of Grade 4: Use technology to discover connections between facts.**

**Students will be able to:**

- A. use technology to discover facts with guidance

**Benchmark 4, By the end of Grade 4: Understand ownership of digital media.**

**Students will be able to:**

- A. identify self and others as digital authors

**Benchmark 5, By the end of Grade 4: Use digital tools and skills to construct new personal understandings.**

**Students will be able to:**

- A. explore the use of digital tools

**Technology Content Standard 4. A student must possess a functional understanding of technology concepts and operations.**

**Benchmark 1, By the end of Grade 4: Show skills needed to use communication, information and processing technologies.**

**Students will be able to:**

- A. click on icons or buttons to produce a desired outcome with guidance
- B. locate and use basic parts of various digital devices (power buttons, mouse, controls, screen, keyboard)
- C. follow lab/classroom rules related to responsible use of digital equipment

**Benchmark 2, By the end of Grade 4: Use appropriate terminology when communicating about current technology.**

**Students will be able to:**

- A. use appropriate terminology when communicating about current technology.

**Benchmark 3, By the end of Grade 4: Transfer current knowledge to learning of new technology skills.**

**Students will be able to:**

- A. Apply prior knowledge when learning different digital tools

## 2nd Grade

**Technology Content Standard 1. A student must use digital tools and resources for problem solving and decision making.**

**Benchmark 1, By the end of Grade 4: Identify and investigate a problem and generate possible solutions.**

**Students will be able to:**

- A. identify a problem with guidance
- B. investigate the problem using digital tools (e.g. create a survey, collect data, research a question) with guidance
- C. generate possible solutions using digital tools with guidance

**Benchmark 2, By the end of Grade 4: Collect data and information using digital tools.**

**Students will be able to:**

- A. give an example of data
- B. collect data with a digital tool (e.g. digital thermometer, camera, probe, weather station, survey) with guidance
- C. collect information using digital tools (e.g. Internet, microscopes, database, CD/DVD) with guidance

**Benchmark 3, By the end of Grade 4: Organize collected data and information using a variety of digital tools.**

**Students will be able to:**

- A. create and record categories to be used for organizing data
- B. organize collected data using a digital tool (e.g. graphic organizer, spreadsheet, graphing software) with guidance
- C. organize information using digital tools (e.g. graphic organizers, graphs, pictures) with guidance

**Benchmark 4, By the end of Grade 4: Identify the accuracy, diversity, and point of view, including Montana American Indians, of digital information.**

**Students will be able to:**

- A. recognize, with assistance, that information from digital sources may contain inaccuracies
- B. use digital information that includes diverse perspectives, including information about Montana's American Indians

**Benchmark 5, By the end of Grade 4: Use digital tools and skills to construct new personal understandings**

**Students will be able to:**

- A. recognize that the work of others needs to be noted

**Technology Content Standard 2. A student must collaborate and communicate globally in a digital environment.**

**Benchmark 1, By the end of Grade 4: Identify and explore online collaboration and communication tools.**

**Students will be able to:**

- A. experience online communication tools with teacher assistance (e.g. e-mail, Skype, Facetime, chat/IM)
- B. participate in a whole class online collaboration project (e.g. class-to-class, Flat Stanley, author communication, pen pals)

**Benchmark 2, By the end of Grade 4: Identify and explore safe, legal, and responsible use of digital collaboration and communication tools.**

**Students will be able to:**

- A. discuss and follow district and school acceptable use policy
- B. discuss Internet safety: identity protection, bullying prevention, password protection, and personal safety

**Benchmark 3, By the end of Grade 4: Communicate the results of research and learning with others using digital tools.**

**Students will be able to:**

- A. observe and discuss digital presentations
- B. contribute information for a whole class presentation
- C. use a digital tool to create a whole class presentation with assistance

**Benchmark 4, By the end of Grade 4: Explore how technology has expanded the learning environment beyond the traditional classroom.**

**Students will be able to:**

- A. establish a connection with others using a digital tool with assistance

**Technology Content 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, By the end of Grade 4: Use digital tools for personal expression.**

**Students will be able to:**

- A. use digital tools for personal expression (e.g. use music, sound, or video programs to create a project)

**Benchmark 2, By the end of Grade 4: Use various digital media to share information and tell stories.**

**Students will be able to:**

- A. explore various digital tools to create a project
- B. create a project using a digital tool(s)
- C. share the project

**Benchmark 3, By the end of Grade 4: Use technology to discover connections between facts.**

**Students will be able to:**

- A. use technology to discover facts with guidance
- B. use technology to organize facts with assistance

**Benchmark 4, By the end of Grade 4: Understand ownership of digital media.**

**Students will be able to:**

- A. identify self and others as digital authors

**Benchmark 5, By the end of Grade 4: Use digital tools and skills to construct new personal understandings.**

**Students will be able to:**

- A. demonstrate the use of digital tools
- B. explain how digital tools are used in work and play

**Technology Content Standard 4. A student must possess a functional understanding of technology concepts and operations.**

**Benchmark 1, By the end of Grade 4: Show skills needed to use communication, information and processing technologies.**

**Students will be able to:**

- A. click on icons or buttons to produce a desired outcome with guidance
- B. locate and use basic parts of various digital devices (power buttons, mouse, controls, screen, keyboard)
- C. follow lab/classroom rules related to responsible use of digital equipment

**Benchmark 2, By the end of Grade 4: Use appropriate terminology when communicating about current technology.**

**Students will be able to:**

- A. use appropriate terminology when communicating about current technology.

**Benchmark 3, By the end of Grade 4: Transfer current knowledge to learning of new technology skills.**

**Students will be able to:**

- A. Apply prior knowledge when learning different digital tools

## 3rd Grade

**Technology Content Standard 1. A student must use digital tools and resources for problem solving and decision making.**

**Benchmark 1, By the end of Grade 4: Identify and investigate a problem and generate possible solutions.**

**Students will be able to:**

- A. identify a problem independently
- B. investigate the problem using digital tools (e.g. create a survey, collect data, research a question) with guidance
- C. generate possible solutions using digital tools with guidance

**Benchmark 2, By the end of Grade 4: Collect data and information using digital tools.**

**Students will be able to:**

- A. give an example of data
- B. collect data with a digital tool (e.g. e-mail, digital thermometer, camera, probe, weather station, survey) with guidance
- C. collect information using digital tools (e.g. e-mail, Internet, microscopes, database, CD/DVD) with guidance

**Benchmark 3, By the end of Grade 4: Organize collected data and information using a variety of digital tools.**

**Students will be able to:**

- A. decide how to record information, with guidance
- B. collect data and determine which information is useful, with guidance
- C. organize data into categories using a digital tool (e.g. graphic organizer, spreadsheet, graphing software), with guidance

**Benchmark 4, By the end of Grade 4: Identify the accuracy, diversity, and point of view, including Montana American Indians, of digital information.**

**Students will be able to:**

- A. identify basic domain names (e.g. e-mail, .com, .gov, .edu, .org)
- B. recognize authorship of a resource
- C. explain personal bias
- D. evaluate relevance and currency of information with guidance
- E. compare information from multiple sources, including digital sources
- F. identify the accuracy of digital information with guidance
- G. use digital information that includes diverse perspectives, including information about Montana's American Indians

**Benchmark 5, By the end of Grade 4: Use digital tools and skills to construct new personal understandings**

**Students will be able to:**

- A. recognize that the work of others needs to be noted
- B. note the source of information used in a digital project

**Technology Content Standard 2. A student must collaborate and communicate globally in a digital environment.**

**Benchmark 1, By the end of Grade 4: Identify and explore online collaboration and communication tools.**

**Students will be able to:**

- A. experience online communication tools with teacher assistance (e.g. e-mail, Skype, Facetime, chat/IM)
- B. participate in a whole class online collaboration project (e.g. class-to-class, Flat Stanley, author communication, pen pals)

**Benchmark 2, By the end of Grade 4: Identify and explore safe, legal, and responsible use of digital collaboration and communication tools.**

**Students will be able to:**

- A. discuss and follow district and school acceptable use policy
- B. discuss and follow Internet safety: identity protection, bullying prevention, password protection, and personal safety

**Benchmark 3, By the end of Grade 4: Communicate the results of research and learning with others using digital tools.**

**Students will be able to:**

- A. Collect information for a presentation
- B. Use a digital tool to organize the information
- C. Develop original presentation using digital tool(s)
- D. Present original ideas based on research to an audience using digital tools

**Benchmark 4, By the end of Grade 4: Explore how technology has expanded the learning environment beyond the traditional classroom.**

**Students will be able to:**

- A. establish a connection with others using a digital tool with guidance

**Technology Content 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, By the end of Grade 4: Use digital tools for personal expression.**

**Students will be able to:**

- A. use digital tools for personal expression (e.g. e-mail, use music, sound, or video programs to create a project)

**Benchmark 2, By the end of Grade 4: Use various digital media to share information and tell stories.**

**Students will be able to:**

- A. explore various digital tools to create a project
- B. create a project using a digital tool(s)



- C. share the project

**Benchmark 3, By the end of Grade 4: Use technology to discover connections between facts.**

**Students will be able to:**

- A. use technology to discover connections between facts, with assistance
- B. use technology to organize facts with guidance

**Benchmark 4, By the end of Grade 4: Understand ownership of digital media.**

**Students will be able to:**

- A. identify individuals' and groups' ownership of digital media

**Benchmark 5, By the end of Grade 4: Use digital tools and skills to construct new personal understandings.**

**Students will be able to:**

- A. demonstrate the use of digital tools
- B. explain how digital tools are used in work and play

**Technology Content Standard 4. A student must possess a functional understanding of technology concepts and operations.**

**Benchmark 1, By the end of Grade 4: Show skills needed to use communication, information and processing technologies.**

**Students will be able to:**

- A. click on icons, buttons and menus to produce a desired outcome
- B. demonstrate developmentally appropriate keyboarding skills
- C. locate and correctly use basic parts of various digital devices (desktop computer, laptop computer, digital cameras, etc.)
- D. follow lab/classroom rules related to responsible use of digital equipment
- E. effectively use operating systems and user interfaces (file management, settings, control panel, etc.)

**Benchmark 2, By the end of Grade 4: Use appropriate terminology when communicating about current technology.**

**Students will be able to:**

- A. use appropriate terminology when communicating about current technology.

**Benchmark 3, By the end of Grade 4: Transfer current knowledge to learning of new technology skills.**

**Students will be able to:**

- A. apply existing skills to explore the possible uses of a new digital tool (e.g. e-mail, software, hardware)

## 4th Grade

**Technology Content Standard 1. A student must use digital tools and resources for problem solving and decision making.**

**Benchmark 1, By the end of Grade 4: Identify and investigate a problem and generate possible solutions.**

**Students will be able to:**

- A. identify a problem independently
- B. investigate the problem using digital tools (e.g. create a survey, collect data, research a question)
- C. generate possible solutions using digital tools

**Benchmark 2, By the end of Grade 4: Collect data and information using digital tools.**

**Students will be able to:**

- A. give an example of data
- B. collect data with a digital tool (e.g. digital thermometer, camera, probe, weather station, survey)
- C. collect information using digital tools (e.g. Internet, microscopes, database, CD/DVD)

**Benchmark 3, By the end of Grade 4: Organize collected data and information using a variety of digital tools.**

**Students will be able to:**

- A. create and record categories to be used for organizing data
- B. organize collected data using a digital tool (e.g. graphic organizer, spreadsheet, graphing software)
- C. determine which information is useful
- D. decide how to record information
- E. organize information using a digital tool

**Benchmark 4, By the end of Grade 4: Identify the accuracy, diversity, and point of view, including Montana American Indians, of digital information.**

**Students will be able to:**

- A. explain the difference of basic domain names (e.g. .com, .gov, .edu, .org)
- B. recognize that all authors have a personal bias
- C. evaluate relevance and currency of information
- D. compare information from multiple sources, including digital sources
- E. identify the accuracy of digital information with guidance

**Benchmark 5, By the end of Grade 4: Use digital tools and skills to construct new personal understandings**

**Students will be able to:**

- A. create projects using digital information ethically
- B. note digital sources used to complete projects

**Technology Content Standard 2. A student must collaborate and communicate globally in a digital environment.**

**Benchmark 1, By the end of Grade 4: Identify and explore online collaboration and communication tools.**

**Students will be able to:**

- A. experience online communication tools with teacher assistance (e.g. e-mail, Skype, Facetime, chat/IM)
- B. participate in a whole class online collaboration project (e.g. class-to-class, Flat Stanley, author communication, pen pals)

**Benchmark 2, By the end of Grade 4: Identify and explore safe, legal, and responsible use of digital collaboration and communication tools.**

**Students will be able to:**

- A. discuss and follow district and school acceptable use policy
- B. discuss and follow Internet safety practices: identity protection, bullying prevention, password protection, and personal safety

**Benchmark 3, By the end of Grade 4: Communicate the results of research and learning with others using digital tools.**

**Students will be able to:**

- A. Collect information for a presentation
- B. Use a digital tool to organize the information
- C. Develop original presentation using digital tool(s)
- D. Present original ideas based on research to an audience using digital tools

**Benchmark 4, By the end of Grade 4: Explore how technology has expanded the learning environment beyond the traditional classroom.**

**Students will be able to:**

- A. establish a connection with others using a digital tool
- B. collaborate with others outside the classroom
- C. participate in a global learning environment with guidance

**Technology Content 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, By the end of Grade 4: Use digital tools for personal expression.**

**Students will be able to:**

- A. use digital tools for personal expression (e.g. e-mail, use music, sound, or video programs to create a project)

**Benchmark 2, By the end of Grade 4: Use various digital media to share information and tell stories.**

**Students will be able to:**

- A. explore digital tools to create a multimedia project

- B. create a multimedia project using digital tool(s)
- C. share the project

**Benchmark 3, By the end of Grade 4: Use technology to discover connections between facts.**

**Students will be able to:**

- A. use technology to discover facts
- B. use technology to organize facts
- C. use technology to discover connections between facts

**Benchmark 4, By the end of Grade 4: Understand ownership of digital media.**

**Students will be able to:**

- A. discuss and define the rights of the digital author

**Benchmark 5, By the end of Grade 4: Use digital tools and skills to construct new personal understandings.**

**Students will be able to:**

- A. evaluate how technology affects work and play (e.g. compare and contrast life with and without a digital tool)
- B. develop a new personal understanding using digital tools

**Technology Content Standard 4. A student must possess a functional understanding of technology concepts and operations.**

**Benchmark 1, By the end of Grade 4: Show skills needed to use communication, information and processing technologies.**

**Students will be able to:**

- 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, etc.)
- D. follow lab/classroom rules related to responsible use of digital equipment
- E. effectively use operating systems and user interfaces (file management, settings, control panel, etc.)

**Benchmark 2, By the end of Grade 4: Use appropriate terminology when communicating about current technology.**

**Students will be able to:**

- A. use appropriate terminology when communicating about current technology.

**Benchmark 3, By the end of Grade 4: Transfer current knowledge to learning of new technology skills.**

**Students will be able to:**

- A. apply existing skills to explore the possible uses of a new digital tool (e.g. e-mail, software, hardware)

## 5th Grade

**Technology Content Standard 1. A student must use digital tools and resources for problem solving and decision making.**

**Benchmark 1, By the end of Grade 8: Use multiple approaches to explore alternative solutions.**

**Students will be able to:**

- 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 with assistance

**Benchmark 2, By the end of Grade 8: Collect relevant data and information on a subject from a variety of digital resources.**

**Students will be able to:**

- A. define the term “database” and provide examples from everyday life (e.g. library catalogues, school records, telephone directories)
- B. gather data from relevant digital sources
- C. cite sources appropriately
- D. collect and organize data using digital tools (e.g. probeware, handhelds, Global Positioning System [GPS])

**Benchmark 3, By the end of Grade 8: Analyze and ethically use data and information from digital resources.**

**Students will be able to:**

- A. classify data
- B. organize data as needed
- C. identify ethical practices related to privacy, plagiarism, viruses, and file sharing.
- D. Identify copyright law to protect the ownership of intellectual property, and explain possible consequences of violating the law.
- E. identify fair use guidelines for using copyrighted materials (e.g. images, music, video, text) in school projects.

**Benchmark 4, By the end of Grade 8: Compare accuracy, diversity, relevance and point of view, including Montana American Indians, of digital information.**

**Students will be able to:**

- A. use multiple sources to recognize the accuracy of information (e.g. authenticity, validity).
- B. use multiple sources to recognize the diversity of information (e.g. Wikipedia vs. the official tribal Web site).
- C. use multiple sources to recognize the relevance of information.
- D. recognize point of view of multiple sources.

**Benchmark 5, By the end of Grade 8: Share data and information ethically and appropriately cite sources.**

**Students will be able to:**

- A. ethically share data and information from digital resources
- B. cite sources with appropriate formatting, with guidance.

**Technology Content Standard 2. A student must collaborate and communicate globally in a digital environment.**

**Benchmark 1, By the end of Grade 8: Select and use online collaboration and communication tools.**

**Students will be able to:**

- A. with assistance select and use online communication tools
- B. with assistance use online communication to enhance learning
- C. participate in an online collaboration project as a class, individual or small group
- D. explore chat/IM to enhance learning

**Benchmark 2, By the end of Grade 8: Use digital collaboration and communication tools in a safe, legal, and responsible manner.**

**Students will be able to:**

- 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

**Benchmark 3, By the end of Grade 8: Communicate the results of research and learning with others using digital tools.**

**Students will be able to:**

- A. Collect information for a presentation
- B. Use a digital tool to organize the information
- C. Develop an original presentation using digital tool(s)
- D. Present original ideas based on research to an audience using digital tools

**Benchmark 4, By the end of Grade 8: Use technology in a global learning environment.**

**Students will be able to:**

- A. use a digital tool establish a connection with students in learning environments that are studying common curricula
- B. collaborate with others outside the traditional classroom to actively participate in a global learning environment

**Technology Content 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, By the end of Grade 8: Apply a variety of digital tools for personal and group expression..**

**Students will be able to:**

- A. create an original work using a digital tool for personal and/or group expression

**Benchmark 2, By the end of Grade 8: Use a variety of digital tools to create a product.**

**Students will be able to:**

- A. gather knowledge on a topic from a variety of appropriate digital resources including data and graphics
- B. design a simple product that demonstrates the knowledge learned from the research

**Benchmark 3, By the end of Grade 8: Use technology to recognize trends and possible outcomes.**

**Students will be able to:**

- A. access various digital resources to gather data
- B. summarize data with guidance
- C. communicate ideas and concepts using various digital resources

**Benchmark 4, By the end of Grade 8. Examine the relationship of copyright to ownership of digital media.**

**Students will be able to:**

- A. discuss the purpose of the Fair Use Guidelines of the U.S. Copyright Law as it pertains to images, music, video, and text in school projects.

**Benchmark 5, By the end of Grade 8. Use digital tools and skills to construct new personal understandings.**

**Students will be able to:**

- A. evaluate how technology affects life (e.g. compare and contrast life with and without a digital tool)
- B. develop a new personal understanding using digital tools

**Technology Content Standard 4. A student must possess a functional understanding of technology concepts and operations.**

**Benchmark 1, By the end of Grade 8: Apply and refine the skills needed to use communication, information and processing technologies.**

**Students will be able to:**

- 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, etc.)
- D. follow lab/classroom rules related to responsible use of digital tools (software, hardware)
- E. effectively use operating systems and user interfaces (file management, settings, control panel, etc.)

**Benchmark 2, By the end of Grade 8: Use appropriate terminology when communicating about current technology.**

**Students will be able to:**

- A. use appropriate terminology when communicating about current technology.

**Benchmark 3, By the end of Grade 8: Transfer current knowledge to learning of new technology skills.**

**Students will be able to:**

- A. use existing knowledge to explore and implement new technologies as appropriate.



## 6th Grade

**Technology Content Standard 1. A student must use digital tools and resources for problem solving and decision making.**

**Benchmark 1, By the end of Grade 8: Use multiple approaches to explore alternative solutions.**

**Students will be able to:**

- 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 with assistance

**Benchmark 2, By the end of Grade 8: Collect relevant data and information on a subject from a variety of digital resources.**

**Students will be able to:**

- A. use digital tools to collect data (e.g. probeware, handhelds, Global Positioning System [GPS])
- B. use online source(s) to access information, with appropriate citation
- C. compare the content of existing databases (e.g. online library catalog, electronic encyclopedia, InfoTrac)

**Benchmark 3, By the end of Grade 8: Analyze and ethically use data and information from digital resources.**

**Students will be able to:**

- A. classify data
- B. organize and graph data, as needed
- C. discuss ethical practices related to privacy, plagiarism, spam, viruses, hacking, and file sharing
- D. discuss copyright law to protect the ownership of intellectual property, and explain possible consequences of violating the law
- E. discuss fair use guidelines for using copyrighted materials (e.g. images, music, video, text) in school projects

**Benchmark 4, By the end of Grade 8: Compare accuracy, diversity, relevance and point of view, including Montana American Indians, of digital information.**

**Students will be able to:**

- A. use multiple sources to show the accuracy of information (e.g. authenticity, validity)
- B. use multiple sources to show the diversity of information (e.g. Wikipedia vs. the official tribal Web site)
- C. use multiple sources to show the relevance of information
- D. show point of view of multiple sources

**Benchmark 5, By the end of Grade 8: Share data and information ethically and appropriately cite sources.**

**Students will be able to:**

- A. ethically share data and information from digital resources
- B. cite sources with appropriate formatting, with guidance.

**Technology Content Standard 2. A student must collaborate and communicate globally in a digital environment.**

**Benchmark 1, By the end of Grade 8: Select and use online collaboration and communication tools.**

**Students will be able to:**

- A. with assistance select and use online communication tools
- B. with assistance use online communication to enhance learning
- C. with assistance participate in an online collaboration project as a class, individual or small group
- D. with assistance expl

**Benchmark 2, By the end of Grade 8: Use digital collaboration and communication tools in a safe, legal, and responsible manner.**

**Students will be able to:**

- A. with assistance discuss the ethical 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

**Benchmark 3, By the end of Grade 8: Communicate the results of research and learning with others using digital tools.**

**Students will be able to:**

- A. Collect information for a presentation
- B. Use a digital tool to organize the information
- C. Develop an original presentation using digital tool(s)
- D. Present original ideas based on research to an audience using digital tools

**Benchmark 4, By the end of Grade 8: Use technology in a global learning environment.**

**Students will be able to:**

- A. use a digital tool establish a connection with students in learning environments that are studying common curricula
- B. collaborate with others outside the traditional classroom to actively participate in a global learning environment

**Technology Content 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, By the end of Grade 8: Apply a variety of digital tools for personal and group expression..**

**Students will be able to:**

- A. create an original work using a digital tool for personal and/or group expression

**Benchmark 2, By the end of Grade 8: Use a variety of digital tools to create a product.**

**Students will be able to:**

- A. gather knowledge on a topic from a variety of appropriate digital resources including data and graphics
- B. design a simple product that demonstrates the knowledge learned from the research (e.g. quiz in a spreadsheet, graphs or charts, timeline)
- C. develop a product explaining the information

**Benchmark 3, By the end of Grade 8: Use technology to recognize trends and possible outcomes.**

**Students will be able to:**

- A. access various digital resources to gather data
- B. summarize data with guidance
- C. communicate ideas and concepts using various digital resources

**Benchmark 4, By the end of Grade 8. Examine the relationship of copyright to ownership of digital media.**

**Students will be able to:**

- A. define and clarify the limitations of each media resource of the Fair Use Guidelines of the U.S. Copyright Law as it pertains to student projects
- B. discuss student options and choices regarding copyright of digital media

**Benchmark 5, By the end of Grade 8. Use digital tools and skills to construct new personal understandings.**

**Students will be able to:**

- A. evaluate how technology affects life (e.g. compare and contrast life with and without a digital tool)
- B. develop a new personal understanding individually and collaboratively using digital tools

**Technology Content Standard 4. A student must possess a functional understanding of technology concepts and operations.**

**Benchmark 1, By the end of Grade 8: Apply and refine the skills needed to use communication, information and processing technologies.**

**Students will be able to:**

- 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, etc.)
- D. follow lab/classroom rules related to responsible use of digital tools (software, hardware)
- E. effectively use operating systems and user interfaces (file management, settings, control panel, etc.)

**Benchmark 2, By the end of Grade 8: Use appropriate terminology when communicating about current technology.**

**Students will be able to:**

- A. use appropriate terminology when communicating about current technology.

**Benchmark 3, By the end of Grade 8: Transfer current knowledge to learning of new technology skills.**

**Students will be able to:**

- A. use existing knowledge to explore and implement new technologies as appropriate. (e.g. understanding that all menu-driven devices operate in a similar fashion)

## 7th Grade

**Technology Content Standard 1. A student must use digital tools and resources for problem solving and decision making.**

**Benchmark 1, By the end of Grade 8: Use multiple approaches to explore alternative solutions.**

**Students will be able to:**

- 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 proficiently

**Benchmark 2, By the end of Grade 8: Collect relevant data and information on a subject from a variety of digital resources.**

**Students will be able to:**

- A. select and use digital tools to collect data (e.g. probeware, handhelds, Global Positioning System)
- B. use online sources to access information, with appropriate citation
- C. perform searches in a database (e.g. browse, sort, filter, search on selected criteria, delete data, enter data).

**Benchmark 3, By the end of Grade 8: Analyze and ethically use data and information from digital resources.**

**Students will be able to:**

- A. examine data and information from digital resources
- B. organize and manipulate data with digital tools, as needed (e.g. charts, comparisons, tables)
- C. describe ethical practices related to data, privacy, plagiarism, spam, viruses, hacking, and file sharing
- D. describe copyright law to protect the ownership of intellectual property, and explain possible consequences of violating the law
- E. describe fair use guidelines for using copyrighted materials (e.g. images, music, video, text) in school projects

**Benchmark 4, By the end of Grade 8: Compare accuracy, diversity, relevance and point of view, including Montana American Indians, of digital information.**

**Students will be able to:**

- A. use multiple sources to determine the accuracy of information (e.g. authenticity, validity)
- B. use multiple sources to determine the diversity of information (e.g. Wikipedia vs. the official tribal Web site)
- C. use multiple sources to determine the relevance of information
- D. determine point of view of multiple sources

**Benchmark 5, By the end of Grade 8: Share data and information ethically and appropriately cite sources.**

**Students will be able to:**

- A. share data and information in an ethical manner from digital resources
- B. cite sources with appropriate formatting, with guidance

**Technology Content Standard 2. A student must collaborate and communicate globally in a digital environment.**

**Benchmark 1, By the end of Grade 8: Select and use online collaboration and communication tools.**

**Students will be able to:**

- A. select and use online communication tools
- B. use online communication to enhance learning
- C. participate in an online collaboration project as a class, individual or small group
- D. explore chat/IM to enhance learning

**Benchmark 2, By the end of Grade 8: Use digital collaboration and communication tools in a safe, legal, and responsible manner.**

**Students will be able to:**

- 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

**Benchmark 3, By the end of Grade 8: Communicate the results of research and learning with others using digital tools.**

**Students will be able to:**

- A. Collect information for a presentation
- B. Use a digital tool to organize the information
- C. Develop an original presentation using digital tool(s)
- D. Present original ideas based on research to an audience using digital tools

**Benchmark 4, By the end of Grade 8: Use technology in a global learning environment.**

**Students will be able to:**

- A. use a digital tool establish a connection with students in learning environments that are studying common curricula
- B. collaborate with others outside the traditional classroom to actively participate in a global learning environment

**Technology Content 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, By the end of Grade 8: Apply a variety of digital tools for personal and group expression.**

**Students will be able to:**

- A. create an original work using multiple digital tools for personal and/or group expression

**Benchmark 2, By the end of Grade 8: Use a variety of digital tools to create a product.**

**Students will be able to:**

- A. gather knowledge on a topic from a variety of appropriate digital resources including data and graphics
- B. design a simple product that demonstrates the knowledge learned from the research (e.g. quiz in a spreadsheet, graphs or charts, timeline)
- C. develop a product explaining the information

**Benchmark 3, By the end of Grade 8: Use technology to recognize trends and possible outcomes.**

**Students will be able to:**

- A. access various digital resources to gather data
- B. compare and contrast data to identify patterns and trends using various digital resources
- C. communicate ideas and concepts using various digital resources

**Benchmark 4, By the end of Grade 8. Examine the relationship of copyright to ownership of digital media.**

**Students will be able to:**

- 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

**Benchmark 5, By the end of Grade 8. Use digital tools and skills to construct new personal understandings.**

**Students will be able to:**

- A. evaluate how technology affects life (e.g. compare and contrast life with and without a digital tool)
- B. develop a new personal understanding individually and collaboratively using digital tools

**Technology Content Standard 4. A student must possess a functional understanding of technology concepts and operations.**

**Benchmark 1, By the end of Grade 8: Apply and refine the skills needed to use communication, information and processing technologies.**

**Students will be able to:**

- 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, Geographic Information System (GIS), probeware, etc.)
- D. effectively use operating systems and user interfaces (file management, settings, control panel, etc.)

**Benchmark 2, By the end of Grade 8: Use appropriate terminology when communicating about current technology.**

**Students will be able to:**

- A. use appropriate terminology when communicating about current technology.

**Benchmark 3, By the end of Grade 4: Transfer current knowledge to learning of new technology skills.**

**Students will be able to:**

- A. use existing knowledge to explore and implement new technologies as appropriate from situation to situation.



## 8th Grade

**Technology Content Standard 1. A student must use digital tools and resources for problem solving and decision making.**

**Benchmark 1, By the end of Grade 8: Use multiple approaches to explore alternative solutions.**

**Students will be able to:**

- 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.

**Benchmark 2, By the end of Grade 8: Collect relevant data and information on a subject from a variety of digital resources.**

**Students will be able to:**

- 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

**Benchmark 3, By the end of Grade 8: Analyze and ethically use data and information from digital resources.**

**Students will be able to:**

- 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

**Benchmark 4, By the end of Grade 8: Compare accuracy, diversity, relevance and point of view, including Montana American Indians, of digital information.**

**Students will be able to:**

- A. use multiple sources to compare the accuracy of information (e.g. authenticity, validity).
- B. use multiple sources to compare the diversity of information (e.g. Wikipedia vs. the official tribal Web site).
- C. use multiple sources to compare the relevance of information.
- D. use point of view to compare multiple sources.

**Benchmark 5, By the end of Grade 8: Share data and information ethically and appropriately cite sources. Students will be able to:**

- A. share data and information in an ethical manner from digital resources
- B. cite sources with appropriate formatting

**Technology Content Standard 2. A student must collaborate and communicate globally in a digital environment.**

**Benchmark 1, By the end of Grade 8: Select and use online collaboration and communication tools.**

**Students will be able to:**

- A. select and use online communication tools
- B. use online communication to enhance learning
- C. participate in an online collaboration project as a class, individual or small group
- D. explore chat/IM to enhance learning

**Benchmark 2, By the end of Grade 8: Use digital collaboration and communication tools in a safe, legal, and responsible manner.**

**Students will be able to:**

- 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

**Benchmark 3, By the end of Grade 8: Communicate the results of research and learning with others using digital tools.**

**Students will be able to:**

- A. Collect information for a presentation
- B. Use a digital tool to organize the information
- C. Develop an original presentation using digital tool(s)
- D. Present original ideas based on research to an audience using digital tools

**Benchmark 4, By the end of Grade 8: Use technology in a global learning environment.**

**Students will be able to:**

- A. establish a connection with others using a digital tool
- B. collaborate with others outside the traditional classroom to actively participate in a global learning environment

**Technology Content 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, By the end of Grade 8: Apply a variety of digital tools for personal and group expression..**

**Students will be able to:**

- A. create an original work using multiple digital tools for personal and/or group expression

**Benchmark 2, By the end of Grade 8: Use a variety of digital tools to create a product.**

**Students will be able to:**

- A. gather knowledge or information on a topic from a variety of digital resources including data, graphics, or events
- B. design an original multimedia product that demonstrates the knowledge learned from the research
- C. produce an original digital product

**Benchmark 3, By the end of Grade 8: Use technology to recognize trends and possible outcomes.**

**Students will be able to:**

- A. access various digital resources to gather data
- B. evaluate data
- C. interpret and predict trends and outcomes from data using various digital resources

**Benchmark 4, By the end of Grade 8. Examine the relationship of copyright to ownership of digital media.**

**Students will be able to:**

- 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

**Benchmark 5, By the end of Grade 8. Use digital tools and skills to construct new personal understandings.**

**Students will be able to:**

- 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

**Technology Content Standard 4. A student must possess a functional understanding of technology concepts and operations.**

**Benchmark 1, By the end of Grade 8: Apply and refine the skills needed to use communication, information and processing technologies.**

**Students will be able to:**

- 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.)

**Benchmark 2, By the end of Grade 8: Use appropriate terminology when communicating about current technology.**

**Students will be able to:**

- A. use appropriate terminology when communicating about current technology.

**Benchmark 3, By the end of Grade 8: Transfer current knowledge to learning of new technology skills.**

**Students will be able to:**

- A. use existing knowledge to explore and implement new technologies as appropriate.

**Technology Content Standards Performance Rubrics**  
**Content Standard 1: Benchmark 1**

**Technology Content Standard 1. A student must use digital tools and resources for problem solving and decision making.**

**Benchmark 1, By the end of Grade 4: Identify and investigate a problem and generate possible solutions.**

<b>Grade Level</b>	<b>Students will be able to:</b>	<b>Advanced</b>	<b>Proficient</b>	<b>Nearing Proficiency</b>	<b>Novice</b>
Grade 4	A. identify a problem B. investigate the problem using digital tools (e.g. create a survey, collect data, research a question) C. generate possible solutions using digital tools	A. identify a more complex problem B. investigate the problem using digital tools (e.g. create a survey, collect data, research a question) C. generate possible solutions using digital tools	A. identify a problem B. investigate the problem using digital tools (e.g. create a survey, collect data, research a question) C. generate possible solutions using digital tools	A. incompletely identify a problem B. investigate the problem using digital tools with a general understanding C. generate limited or simple solutions using digital tools	A. has a general sense of a problem B. investigate, with a limited understanding, a problem using digital tools C. generate solutions with inaccuracies using digital tools

**Benchmark 1, By the end of Grade 8: Use multiple approaches to explore alternative solutions.**

Grade 8	A. identify a relevant problem B. investigate the problem with multiple approaches using digital tools (e.g. Geographic Information System (GIS), digital camera, computer application) C. explore alternative solutions with assistance	A. compare and contrast relevant problems B. investigate and evaluate the problem with multiple approaches using digital tools C. propose and defend alternative solutions	A. correctly identify a relevant problem B. investigate the problem with multiple approaches using digital tools C. explore alternative solutions	A. incompletely identify a problem B. inconsistently investigate using limited approaches with digital tools C. demonstrate a basic understanding of solutions	A. provide an inaccurate description of a problem B. inaccurately investigate using a single approach with digital tools C. demonstrate solutions without complete understanding
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**Technology Content Standards Performance Rubrics**  
**Content Standard 1: Benchmark 2**

**Technology Content Standard 1. A student must use digital tools and resources for problem solving and decision making.**

**Benchmark 2, By the end of Grade 4: Collect data and information using digital tools.**

<b>Grade Level</b>	<b>Students will be able to:</b>	<b>Advanced</b>	<b>Proficient</b>	<b>Nearing Proficiency</b>	<b>Novice</b>
Grade 4	A. give an example of data B. collect data with a digital tool (e.g. digital thermometer, camera, probe, weather station, survey) C. collect information using digital tools (e.g. Internet, microscopes, database, CD/DVD)	A. compile multiple examples of data B. use multiple digital tools to collect data C. use multiple digital tools to collect information	A. give an example of data B. collect data with a digital tool C. collect information using digital tools	A. give a general example of data B. relies on a single tool to collect data C. relies on a single tool to collect information	A. give an incomplete example of data B. has a vague sense of digital tools used to collect data C. has a vague sense of digital tools used to collect information

**Benchmark 2, By the end of Grade 8: Collect relevant data and information on a subject from a variety of digital resources.**

Grade 8	A. select and use appropriate digital tools to collect data (e.g. probe ware, 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	A. select and integrate the use of multiple digital tools to collect data B. utilize, compare and recommend online tools to access information with precise citation C. perform searches, selects, and evaluates content in existing databases D. critique and defends relevant data and information	A. select and use appropriate digital tools to collect data B. utilize online tools to access information, with appropriate citation C. perform searches and select content in existing databases D. evaluate relevant data and information from multiple digital resources	A. select and use digital tools, with limited accuracy, to collect data B. utilize online tools with limited accuracy and inadequate citation C. inconsistently performs searches and selects a limited number of relevant databases D. inconsistently collects relevant data and information from a limited number of digital	A. inadequately select and use a digital tool to collect data B. inadequately utilize an online tool to access information with inaccurate citation C. inaccurately perform a search of an existing database D. inaccurately identifies relevant data and information from a single digital resource
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	and information from multiple digital resources	from multiple digital resources		resources	
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**Technology Content Standards Performance Rubrics  
Content Standard 1: Benchmark 3**

**Technology Content Standard 1. A student must use digital tools and resources for problem solving and decision making.**

**Benchmark 3, By the end of Grade 4: Organize collected data and information using a variety of digital tools**

<b>Grade Level</b>	<b>Students will be able to:</b>	<b>Advanced</b>	<b>Proficient</b>	<b>Nearing Proficiency</b>	<b>Novice</b>
Grade 4	A. create and record categories to be used for organizing data B. organize collected data using a digital tool (e.g. graphic organizer, spreadsheet, graphing software) C. determine which information is useful D. decide how to record information E. organize information using a digital tool	A. uses a novel approach to create and record categories used for organizing data B. organize collected data using a unique digital tool C. draws complex connections to important information D. quickly decide how to record information E. takes an original approach to organize information using a digital tool	A. create and record categories to be used for organizing data B. organize collected data using a digital tool (e.g. graphic organizer, spreadsheet, graphing software) C. determine which information is useful D. decide how to record information E. organize information using a digital tool	A. uses a simple approach to create and record categories used for organizing data B. organize collected data using a simple digital tool C. has a general understanding of what information is useful D. decide how to record information E. takes a simple approach to organize information using a digital tool	A. uses an incomplete approach to create and record categories used for organizing data B. organize collected data using a conventional tool C. has a limited perception of which information is useful D. Has a general sense of how to record information E. takes a single approach to organize information using a digital tool

**Benchmark 3, By the end of Grade 8: Analyze and ethically use data and information from digital resources.**

Grade 8	A. manipulate, organize and graph data, as needed B. employ ethical practices related to data, privacy, plagiarism, spam, viruses, hacking, and file sharing	A. in detail analyzes and graphs multiple data sources B. justify and model ethical practices related to data, privacy, plagiarism, spam, viruses, hacking, and file sharing	A. manipulate, organize, analyze and graph data B. employ ethical practices related to data, privacy, plagiarism, spam, viruses, hacking, and file sharing	A. manipulate, organize, analyze and graph data with inaccuracies B. demonstrate ethical practices related to data, privacy, plagiarism, spam, viruses, hacking, and file sharing	A. manipulate, organize, analyze and graph data demonstrating incomplete understanding of the concepts B. identify ethical practices related to data, privacy, plagiarism,
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	<p>C. employ copyright law to protect the ownership of intellectual property, and explain possible consequences of violating the law.</p> <p>D. apply fair use guidelines</p>	<p>C. justify and model copyright law to protect the ownership of intellectual property, and explain possible consequences of violating the law</p> <p>D. defend and model fair use guidelines</p>	<p>C. employ copyright law to protect the ownership of intellectual property, and explain possible consequences of violating the law</p> <p>D. apply fair use guidelines</p>	<p>C. demonstrate an understanding of copyright law to protect the ownership of intellectual property, and explain possible consequences of violating the law</p> <p>D. apply fair use guidelines with inconsistencies</p>	<p>spam, viruses, hacking, and file sharing without complete understanding</p> <p>C. identify copyright law to protect the ownership of intellectual property, and explain possible consequences of violating the law</p> <p>D. apply fair use guidelines without complete understanding</p>
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**Technology Content Standards Performance Rubrics  
Content Standard 1: Benchmark 4**

**Technology Content Standard 1. A student must use digital tools and resources for problem solving and decision making.**

**Benchmark 4, By the end of Grade 4: Identify the accuracy, diversity, and point of view, including Montana American Indians, of digital information.**

<b>Grade Level</b>	<b>Students will be able to:</b>	<b>Advanced</b>	<b>Proficient</b>	<b>Nearing Proficiency</b>	<b>Novice</b>
Grade 4	A. explain the difference of basic domain names (e.g. .com, .gov, .edu, .org) B. recognize that all authors have a personal bias C. evaluate relevance and currency of information D. compare information from multiple sources, including digital sources E. identify the accuracy of digital information	A. interpret the difference of basic domain names B. interprets author bias C. evaluates relevance and currency of information using a variety of factors D. compare and contrast information from multiple sources, including digital sources E. independently identifies the accuracy of digital information	A. explain the difference of basic domain names (e.g. .com, .gov, .edu, .org) B. recognize that all authors have a personal bias C. evaluate relevance and currency of information D. compare information from multiple sources, including digital sources E. identify the accuracy of digital information	A. recognize the difference of basic domain names B. have a fundamental understanding of author bias C. evaluate relevance and accuracy of information with limited details D. identify information from a single source E. identify the accuracy of digital information on a limited basis	A. without complete understanding recognizes the difference of basic domain names B. perceive author bias with limited understanding C. identify few connections of relevance and accuracy of information D. identify limited information from a single source E. draw inaccurate conclusions about the accuracy of digital information

**Benchmark 4, By the end of Grade 8: Compare accuracy, diversity, relevance and point of view, including Montana American Indians, of digital information.**

Grade 8	A. use multiple sources to compare the accuracy of information. B. use multiple sources to compare the diversity of information C. use multiple sources to compare the relevance of	A. evaluate and defend multiple sources to justify the accuracy of information B. evaluate and defend multiple sources to present the diversity of information C. evaluate multiple sources to justify the	A. use multiple sources to compare the accuracy of information B. use multiple sources to compare the diversity of information C. use multiple	A. use limited sources to compare the accuracy of information B. use limited sources to compare the diversity of information C. use limited sources to compare the relevance of	A. inaccurate use of sources to compare the accuracy of information B. understand the use of sources to compare the diversity of information C. understand the use of sources to
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	information. D. use point of view to compare multiple sources.	relevance of information D. distinguish multiple points of view and articulate the student's personal point of view to compare multiple sources	sources to compare the relevance of information D. use point of view to compare multiple sources	information D. use point of view to compare multiple sources with limited success	compare the relevance of information D. compare sources with limited understanding of point of view
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**Technology Content Standards Performance Rubrics  
Content Standard 1: Benchmark 5**

**Technology Content Standard 1. A student must use digital tools and resources for problem solving and decision making.**

**Benchmark 5, By the end of Grade 4: Share information ethically and note sources.**

<b>Grade Level</b>	<b>Students will be able to:</b>	<b>Advanced</b>	<b>Proficient</b>	<b>Nearing Proficiency</b>	<b>Novice</b>
Grade 4	A. create projects using digital information ethically B. note digital sources used to complete projects	A. take an original, unique, imaginative approach to create projects using digital information ethically B. cite digital sources with correct format	A. create projects using digital information ethically B. note digital sources used to complete projects	A. create projects using digital information ethically B. recognize digital sources used to complete projects	A. create projects with general sense of digital information ethics B. generally explains digital sources used to complete projects

**Benchmark 5, By the end of Grade 8: Share data and information ethically and appropriately cite sources.**

Grade 8	A. share data and information in an ethical manner from digital resources B. cite sources with appropriate formatting	A. promote and share data and information consistently from digital resources in an ethical manner B. cite sources with precise formatting and model for others	A. share data and information in an ethical manner from digital resources B. cite sources with appropriate formatting	A. share data and information from digital resources with inconsistent consideration of ethical standards B. cite sources with formatting inconsistencies	A. share data and information from digital resources with limited consideration of ethical standards B. cite sources with limited formatting understanding
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**Technology Content Standards Performance Rubrics  
Content Standard 2: Benchmark 1**

**Technology Content Standard 2. A student must collaborate and communicate globally in a digital environment.**

**Benchmark 1, By the end of Grade 4: Identify and explore online collaboration and communication tools.**

<b>Grade Level</b>	<b>Students will be able to:</b>	<b>Advanced</b>	<b>Proficient</b>	<b>Nearing Proficiency</b>	<b>Novice</b>
Grade 4	A. experience online communication tools with teacher assistance (e.g. e-mail, Skype, Facetime, chat/IM) B. participate in a whole class online collaboration project (e.g. class-to-class, Flat Stanley, author communication, pen pals)	A. experience online communication tools B. participate in a global online collaboration project	A. experience online communication tools with teacher assistance (e.g. e-mail, Skype, Facetime, chat/IM) B. participate in a whole class online collaboration project (e.g. class-to-class, Flat Stanley, author communication, pen pals)	A. identify online communication tools with teacher assistance B. participate in a whole class online collaboration project with peer support	A. recognize online communication tools with teacher assistance B. participate in a whole class online collaboration project with teacher support

**Benchmark 1, By the end of Grade 8: Select and use online collaboration and communication tools.**

Grade 8	A. select and use online communication tools B. use online communication to enhance learning C. participate in an online collaboration project as a class, individual or small group D. explore chat/IM to enhance learning	A. select and use online communication tools both synchronous and asynchronous with multiple groups B. use and model multiple online communication to enhance learning C. participate in a world wide online collaboration project as a class, individual or small group D. explore chat/IM to enhance	A. select and use online communication tools B. use online communication to enhance learning C. participate in an online collaboration project as a class, individual or small group D. explore chat/IM to enhance learning	A. select and use one online communication tools B. with assistance use online communication to enhance learning C. with assistance participate in an online collaboration project as a class, individual or small group D. with assistance explore chat/IM to enhance learning	A. with assistance select and use one online communication tool B. with assistance use a simple online communication tool to enhance learning C. with assistance participate in an online collaboration project as a class D. with assistance explore chat/IM to enhance learning in a closed
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		learning in a world wide environment			classroom
Grade 8	1. Select and use online collaboration and communication.	A. Consistently and effectively accesses the Internet through a browser(s), IM client(s), or email client(s) B. Applies and personalizes the functions of the browser(s), IM client(s), or email client(s) C. Evaluates and justifies the use of multiple emails, chat clients, and social networking sites	A. Access the Internet through a browser(s), IM client(s), or email client(s) B. Use functions of the browser(s), IM client(s), or email client(s) C. Select and use multiple email, chat clients, and social networking sites	A. Ineffectively accesses the Internet through a browser(s), IM client(s), or email client(s) B. Randomly uses functions of the browser(s), IM client(s), or email client(s) C. Limited selection and use of multiple emails, chat clients, and social networking sites	A. Struggles to efficiently access the Internet through a browser(s), IM client(s), or email client(s) B. Ineffectively uses functions of the browser(s), IM client(s), or email client(s) C. Randomly selects and uses multiple emails, chat clients, and social networking sites

**Technology Content Standards Performance Rubrics**  
**Content Standard 2: Benchmark 2**

**Technology Content Standard 2. A student must collaborate and communicate globally in a digital environment.**

**Benchmark 2, By the end of Grade 4: Identify and explore safe, legal, and responsible use of digital collaboration and communication tools.**

<b>Grade Level</b>	<b>Students will be able to:</b>	<b>Advanced</b>	<b>Proficient</b>	<b>Nearing Proficiency</b>	<b>Novice</b>
Grade 4	A. discuss and follow district and school acceptable use policy B. discuss and follow Internet safety practices: identity protection, bullying prevention, password protection, and personal safety	A. discuss and follow district and school acceptable use policy with an advanced level of understanding B. analyze Internet safety: identity protection, bullying prevention, password protection, and personal safety	A. discuss and follow district and school acceptable use policy B. discuss Internet safety: identity protection, bullying prevention, password protection, and personal safety	A. discuss and follow district and school acceptable use policy with fundamental understanding B. discuss with general understanding Internet safety: identity protection, bullying prevention, password protection, and personal safety	A. discuss and follow district and school acceptable use policy with limited understanding B. discuss with limited understanding Internet safety: identity protection, bullying prevention, password protection, and personal safety

**Benchmark 2, By the end of Grade 8: Use digital collaboration and communication tools in a safe, legal, and responsible manner.**

Grade 8	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	A. discuss, model and teach district and school acceptable use policy to other students B. operate within the guidelines of the law to collaborate and communicate ethically, safely, and responsibly and teach others C. discuss, model and teach Internet safety practices and responsible cyber citizenship: personal safety, identity	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	A. with assistance discuss and follow district and school acceptable use policy B. with assistance operate within the guidelines of the law to collaborate and communicate ethically, safely, and responsibly C. with assistance discuss and follow Internet safety practices and responsible cyber citizenship:	A. with assistance discuss and follow district and school acceptable use policy with some errors in understanding B. with assistance, but with errors operate within the guidelines of the law to collaborate and communicate ethically, safely, and responsibly C. with assistance, but with repeated errors discuss
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	prevention, and password protection	protection, bullying prevention, and password protection	prevention, and password protection	personal safety, identity protection, bullying prevention, and password protection	and follow Internet safety practices and responsible cyber citizenship: personal safety, identity protection, bullying prevention, and password protection
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**Technology Content Standards Performance Rubrics  
Content Standard 2: Benchmark 3**

**Technology Content Standard 2. A student must collaborate and communicate globally in a digital environment.**

**Benchmark 3, By the end of Grade 4: Communicate the results of research and learning with others using digital tools.**

<b>Grade Level</b>	<b>Students will be able to:</b>	<b>Advanced</b>	<b>Proficient</b>	<b>Nearing Proficiency</b>	<b>Novice</b>
Grade 4	A. observe and discuss digital presentations	A. create and discuss digital presentations with teacher assistance	A. observe and discuss digital presentations	A. observe and discuss digital presentations with fundamental understanding	A. observe and discuss digital presentations with limited understanding

**Benchmark 3, By the end of Grade 8: Communicate the results of research and learning with others using digital tools.**

Grade 8	A. Collect information for a presentation B. Use digital tools to organize the information C. Develop original presentation using multiple digital tools D. Present original ideas based on research to an audience using digital tools	A. In elaborate detail select, evaluate, and defend information for a presentation B. Use multiple digital tools to organize the information C. Develop a unique, impressive presentation using multiple digital tools D. takes an original, unique, imaginative approach to present original ideas based on research to an audience using digital tools	A. Collect information for a presentation B. Use digital tools to organize the information C. Develop original presentation using multiple digital tools D. Present original ideas based on research to an audience using digital tools	A. Collect information with limited accuracy for a presentation B. Use a limited number of digital tools to organize the information C. Develop original presentation, with inaccuracies, using limited digital tools D. superficially present original ideas based on research to an audience using digital tools	A. ineffectively collect information for a presentation B. inadequately use a digital tool to organize the information C. with guidance, develop original presentation using a digital tool D. inadequately present original ideas based on research to an audience using a digital tool
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**Technology Content Standards Performance Rubrics  
Content Standard 2: Benchmark 4**

**Technology Content Standard 2. A student must collaborate and communicate globally in a digital environment.**

**Benchmark 4, By the end of Grade 4: Explore how technology has expanded the learning environment beyond the traditional classroom.**

Grade Level	Students will be able to:	Advanced	Proficient	Nearing Proficiency	Novice
Grade 4	A. establish a connection with others using a digital tool B. collaborate with others outside the classroom C. participate in a global learning environment with guidance	A. establish a connection with others using multiple digital tools B. draws complex connections with others outside the classroom C. participate in a global learning environment	A. establish a connection with others using a digital tool B. collaborate with others outside the classroom C. participate in a global learning environment with guidance	A. establish a connection with others using a digital tool with guidance B. collaborate with others outside the classroom C. participate in a global learning environment with guidance	A. recognize a connection with others using a digital tool B. communicate with others outside the classroom C. participate in a global learning environment with assistance

**Benchmark 4, By the end of Grade 8: Use technology in a global learning environment.**

Grade 8	A. establish a connection with others using a digital tool B. collaborate with others outside the traditional classroom to actively participate in a global learning environment	A. Model and guide how to connect with students in learning environments that are studying common curricula B. Collaborate with others outside of the traditional classroom to actively participate in a global learning environment	A. establish a connection with others using a digital tool B. collaborate with others outside the traditional classroom to actively participate in a global learning environment	A. With inaccuracies, establish a connection with students in learning environments that are studying common curricula B. with assistance collaborate with others outside of the traditional classroom to actively participate in a global learning environment	A. Recognize the capability to establish a connection with students in learning environments that are studying common curricula B. Recognize the capability to collaborate with others outside of the traditional classroom to actively participate in a global learning environment
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**Technology Content Standards Performance Rubrics  
Content Standard 3: Benchmark 1**

**Technology Content 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, By the end of Grade 4: Use digital tools for personal expression.**

<b>Grade Level</b>	<b>Students will be able to:</b>	<b>Advanced</b>	<b>Proficient</b>	<b>Nearing Proficiency</b>	<b>Novice</b>
Grade 4	A. use digital tools for personal expression (e.g. use music, sound, or video programs to create a project)	A. use digital tools for personal expression in an original, unique, or imaginative approach	A. use digital tools for personal expression (e.g. use a painting or graphics program to create a project)	A. use a digital tool for personal expression with limited skill	A. use a digital tool for personal expression with beginning understanding

**Benchmark 1, By the end of Grade 8: Apply a variety of digital tools for personal and group expression.**

Grade 8	A. use digital tools to create an original work for personal and/or group expression	A. create an original work with elaborate detail using multiple digital tools for personal and/or group expression	A. use digital tools to create an original work for personal and/or group expression	A. use digital tool with limited skill to create an original work for personal and/or group expression	A. struggle to use digital tools to create an original work
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**Technology Content Standards Performance Rubrics  
Content Standard 3: Benchmark 2**

**Technology Content Standard 3. A student must apply digital tools and skills with creativity and innovation to express his/herself, construct knowledge and develop products**

**Benchmark 2, By the end of Grade 4: Use various digital media to share information and tell stories.**

<b>Grade Level</b>	<b>Students will be able to:</b>	<b>Advanced</b>	<b>Proficient</b>	<b>Nearing Proficiency</b>	<b>Novice</b>
Grade 4	A. explore various digital tools to create multimedia projects B. create multimedia projects using multiple digital tools C. share the projects with others	A. compare and contrast various digital tools to create multimedia projects B. create innovative multimedia projects using multiple digital tools C. share the projects on a global level	A. explore various digital tools to create multimedia projects B. create multimedia projects using multiple digital tools C. share the projects with others	A. explore a digital tool to create multimedia projects B. create a multimedia project using a digital tool C. share the project with others	A. explore a digital tool to create a simple project B. create a project using a digital tool C. share the project within the class

**Benchmark 2, By the end of Grade 8: Use a variety of digital tools to create a product.**

Grade 8	A. gather knowledge or information on a topic from a variety of digital resources including data, graphics, or events B. design an original multimedia product that demonstrates the knowledge learned from the research C. produce an original digital product explaining the information or concepts learned (e.g. pamphlet on safety)	A. takes an original, unique, imaginative approach to gather knowledge or information on a topic from a variety of digital resources including data, graphics, or events B. design an original multimedia product that demonstrates the knowledge learned from the research C. compose an elaborate, detailed, original digital product with an	A. gather knowledge or information on a topic from a variety of digital resources including data, graphics, or events B. design an original multimedia product that demonstrates the knowledge learned from the research C. produce an original digital product explaining the information or concepts learned D. present the	A. gather knowledge or information with limited details on a topic from a variety of digital resources including data, graphics, or events with inconsistencies B. design an original multimedia product that demonstrates, with inconsistencies, the knowledge learned from the research C. produce an original digital product with incomplete explanations of	A. incomplete attempt to gather knowledge or information on a topic from a variety of digital resources including data, graphics, or events B. design a common, conventional multimedia product that demonstrates limited knowledge learned from the research C. produce an original digital product with inconsistencies and vague explanations of
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	<p>guidelines, Web quest, or a movie or slideshow presentation)  D. present the finished product using a variety of digital tools to a targeted audience</p>	<p>impressive level of explaining the information or concepts learned  D. in a original, unique, imaginative approach present the finished product using innovative digital tools to target multiple audiences</p>	<p>finished product using a variety of digital tools to a targeted audience</p>	<p>the information or concepts learned  D. present the finished product with inaccuracies, using a variety of digital tools to a targeted audience</p>	<p>the information or concepts learned  D. present the finished product using a limited number of digital tools to a targeted audience</p>
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**Technology Content Standards Performance Rubrics  
Content Standard 3: Benchmark 3**

**Technology Content Standard 3. A student must apply digital tools and skills with creativity and innovation to express his/herself, construct knowledge and develop products**

**Benchmark 3, By the end of Grade 4: Use technology to discover connections between facts.**

<b>Grade Level</b>	<b>Students will be able to:</b>	<b>Advanced</b>	<b>Proficient</b>	<b>Nearing Proficiency</b>	<b>Novice</b>
Grade 4	A. use technology to discover facts B. use technology to organize facts C. use technology to discover connections between facts	A. use technology to discover facts through a metacognitive approach B. use technology to organize facts from a variety of perspectives C. use technology to discover connections and draw logical conclusions between facts	A. use technology to discover facts B. use technology to organize facts C. use technology to discover connections between facts	A. use technology to discover facts using a common approach B. use technology to organize facts C. use technology to discover connections between facts without complete understanding of the characteristics	A. use technology to discover facts with limited understanding of method B. use technology to organize facts using a simple method C. use technology to create connections between facts with limited success

**Benchmark 3, By the end of Grade 8: Use technology to recognize trends and possible outcomes.**

Grade 8	A. access various digital resources to gather data B. evaluate data C. interpret and predict trends and outcomes from data using various digital resources	A. uses multiple sources to access digital resources to gather data using a higher level of abstraction B. evaluate data with a high level of abstraction, analytical, and creative thinking C. draws complex connections when interpreting and predicting trends and outcomes from data using various digital resources	A. access various digital resources to gather data B. evaluate data C. interpret and predict trends and outcomes from data using various digital resources	A. access various digital resources, with errors, to gather data B. evaluate data with limited details C. general sense of interpreting and predicting trends and outcomes from data using various digital resources	A. limited access to various digital resources to gather data with limited detail B. incomplete attempt to evaluate data C. Demonstrates a beginning understanding of interpreting data using various digital resources but is unable to apply the information to make future predictions
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**Technology Content Standards Performance Rubrics  
Content Standard 3: Benchmark 4**

**Technology Content Standard 3. A student must apply digital tools and skills with creativity and innovation to express his/herself, construct knowledge and develop products**

**Benchmark 4, By the end of Grade 4: Understand ownership of digital media**

<b>Grade Level</b>	<b>Students will be able to:</b>	<b>Advanced</b>	<b>Proficient</b>	<b>Nearing Proficiency</b>	<b>Novice</b>
Grade 4	A. discuss and define the rights of the digital author	A. draws complex connections concerning the rights of the digital author	A. discuss and define the rights of the digital author	A. discuss and define the rights of the digital author with incomplete understanding	A. begin to understand the rights of the digital author

**Benchmark 4, By the end of Grade 8. Examine the relationship of copyright to ownership of digital media.**

Grade 8	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	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. draws logical conclusions which are not immediately obvious when comparing and contrasting student options and choices regarding copyright 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	A. recognizes and briefly defines and clarifies the limitations of various media resources of the Fair Use Guidelines of the U.S. Copyright Law as it pertains to student projects B. overlooks critical details when comparing and contrasting student options and choices regarding copyright of digital media	A. incomplete attempt to 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. general, fundamental understanding of student options and choices regarding copyright of digital media
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**Technology Content Standards Performance Rubrics  
Content Standard 3: Benchmark 5**

**Technology Content 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 5, By the end of Grade 4: Use digital tools and skills to construct new personal understandings.**

<b>Grade Level</b>	<b>Students will be able to:</b>	<b>Advanced</b>	<b>Proficient</b>	<b>Nearing Proficiency</b>	<b>Novice</b>
Grade 4	A. evaluate how technology affects work and play (e.g. compare and contrast life with and without a digital tool) B. develop a new personal understanding using digital tools	A. provide a comprehensive analysis of how technology affects work and play B. formulate and assess a new personal understanding using digital tools	A. evaluate how technology affects work and play (e.g. compare and contrast life with and without a digital tool) B. develop a new personal understanding using digital tools	A. interpret how technology affects work and play B. develop a new personal understanding with limited details using digital tools	A. vaguely describe how technology affects work and play B. develop a new personal understanding with few connections using a digital tool

**Benchmark 5, By the end of Grade 8. Use digital tools and skills to construct new personal understandings.**

Grade 8	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	A. evaluate and predict how technology affects life B. develop a sophisticated new personal understanding individually and collaboratively using digital tools	A. evaluate how technology affects life B. develop a new personal understanding individually and collaboratively using digital tools	A. discuss how technology affects life B. recognize and discuss a new personal understanding individually and collaboratively using digital tools	A. recognize how technology affects life B. begin to recognize and discuss a new personal understanding individually and collaboratively
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**Technology Content Standards Performance Rubrics  
Content Standard 4: Benchmark 1**

**Technology Content Standard 4. A student must possess a functional understanding of technology concepts and operations.**

**Benchmark 1, By the end of Grade 4: Show skills needed to use communication, information and processing technologies.**

<b>Grade Level</b>	<b>Students will be able to:</b>	<b>Advanced</b>	<b>Proficient</b>	<b>Nearing Proficiency</b>	<b>Novice</b>
Grade 4	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, etc.) D. follow lab/classroom rules related to responsible use of digital equipment E. effectively use operating systems and user interfaces (file management, settings, control panel, etc.)	A. deeper understanding of software and computer systems and skills and produces complex outcomes B. demonstrate developmentally appropriate keyboarding skills with automaticity C. manipulate and correctly use the functions of various digital devices to create novel products D. anticipate and demonstrate lab/classroom rules related to responsible use of digital equipment E. effectively use operating systems and user interfaces with clear reasoning	A. click on icons, buttons and menus to produce a desired outcome B. demonstrate developmentally appropriate keyboarding skills C. locate and correctly use functions of various digital devices (desktop computer, laptop computer, digital cameras, etc.) D. follow lab/classroom rules related to responsible use of digital equipment E. effectively use operating systems and user interfaces (file management, settings, control panel, etc.)	A. click on icons, buttons and menus to produce a desired outcome with some errors B. demonstrate developmentally appropriate keyboarding skills with errors C. general sense of the correct functions of various digital devices D. follow lab/classroom rules related to responsible use of digital equipment with guidance E. use operating systems and user interfaces with beginning understanding	A. click on icons, buttons and menus without complete understanding B. demonstrates beginning keyboarding skills C. vague understanding of the functions and uses of various digital devices D. follow lab/classroom rules related to responsible use of digital equipment with direct intervention E. ineffectively use operating systems and user interfaces

**Benchmark 1, By the end of Grade 8: Apply and refine the skills needed to use communication, information and processing technologies.**

Grade 8	<p>A. click on icons, buttons and menus to produce a desired outcome</p> <p>B. demonstrate developmentally appropriate keyboarding skills</p> <p>C. locate and correctly use parts of various digital devices (desktop computer, laptop computer, digital cameras, Global Positioning System (GPS), probeware, etc.)</p> <p>D. effectively use operating systems and user interfaces</p>	<p>A. demonstrate efficiently an understanding of all the characteristics of GUI</p> <p>B. demonstrate developmentally appropriate keyboarding skills</p> <p>C. locate and correctly use and model parts of various digital devices</p> <p>D. shows an impressive level of depth in the use of operating systems and user interfaces</p>	<p>A. click on icons, buttons and menus to produce a desired outcome</p> <p>B. demonstrate developmentally appropriate keyboarding skills</p> <p>C. locate and correctly use parts of various digital devices</p> <p>D. effectively use operating systems and user interfaces</p>	<p>A. describe and explain the elements of a graphic user interface (GUI)</p> <p>B. demonstrate developmentally appropriate keyboarding skills</p> <p>C. locate and correctly use parts of various digital devices</p> <p>D. beginning use of operating systems and user interfaces</p>	<p>A. discovery of the elements of a graphic user interface (GUI)</p> <p>B. demonstrate developmentally appropriate keyboarding skills</p> <p>C. locate and correctly use parts of a limited number of digital devices</p> <p>D. incomplete attempt to use operating systems and user interfaces</p>
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**Technology Content Standards Performance Rubrics  
Content Standard 4: Benchmark 2**

**Technology Content Standard 4. A student must possess a functional understanding of technology concepts and operations.**

**Benchmark 1, By the end of Grade 4: Use appropriate terminology when communicating about current technology.**

<b>Grade Level</b>	<b>Students will be able to:</b>	<b>Advanced</b>	<b>Proficient</b>	<b>Nearing Proficiency</b>	<b>Novice</b>
Grade 4	A. use appropriate terminology when communicating about current technology	A. use appropriate terminology when communicating about current technology with extensive understanding	A. use appropriate terminology when communicating about current technology	A. use terminology with limited understanding when communicating about current technology	A. use inaccurate terminology when communicating about current technology

**Benchmark 2, By the end of Grade 8: Use appropriate terminology when communicating about current technology.**

Grade 8	A. use appropriate terminology when communicating about current technology.	A. thorough mastery of the use of appropriate terminology when communicating about current technology	A. use appropriate terminology when communicating about current technology	A. beginning use of appropriate terminology when communicating about current technology	A. vague or incomplete use of appropriate terminology when communicating about current technology
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**Technology Content Standards Performance Rubrics  
Content Standard 4: Benchmark 3**

**Technology Content Standard 4. A student must possess a functional understanding of technology concepts and operations.**

**Benchmark 1, By the end of Grade 4: Transfer current knowledge to learning of new technology skills.**

<b>Grade Level</b>	<b>Students will be able to:</b>	<b>Advanced</b>	<b>Proficient</b>	<b>Nearing Proficiency</b>	<b>Novice</b>
Grade 4	A. apply existing skills to assess the possible uses of a new digital tool (e.g. software, hardware)	A. transfer existing skills to create complex uses of a new digital tool	A. apply existing skills to assess the possible uses of a new digital tool (e.g. software, hardware)	A. apply existing skills to assess the possible uses of a new digital tool with guidance	A. applies limited skills to assess the possible uses of a new digital tool

**Benchmark 3, By the end of Grade 8: Transfer current knowledge to learning of new technology skills.**

Grade 8	A. use existing knowledge to explore and implement new technologies in appropriate situations.	A. use complex knowledge to explore and implement new technologies as appropriate	A. use existing knowledge to explore and implement new technologies as appropriate B. click on icons, buttons and menus to produce a desired outcome C. demonstrate developmentally appropriate keyboarding skills D. locate and correctly use parts of various digital devices E. effectively use operating systems and user interfaces	A. use existing incomplete knowledge to explore and implement new technologies as appropriate	A. use existing limited knowledge to explore and implement new technologies as appropriate
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### Proposed Technology Curriculum Expenditures

Keyboard Jackets: 30 @ \$12.95	\$388.50
Mavis Beacon: Teaching Typing Software	799.00
Typing Pal:	360.00
Microsoft Office Suite Pro:	1700.00
Game Maker:	300.00
Lego Robotics ~ EV3: (2) 12 Packs	8400.00
On Your Own Software:	399.00
iMovie 300 copies	750.00
Near Pod School Edition	<u>3,000.00</u>
Estimated Total	\$16,096.50