

GRADE 4

Strand 1: Creativity and Innovation

This strand requires that students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology.

Concept 1: Knowledge and Ideas

Use digital models and simulations to examine real-world connections, explore complex systems and issues, and enhance understanding.

Performance Objectives	Curriculum Connections	Explanations and Examples
PO 1. Evaluate information to generate ideas and processes.	Writing 04-S1C1-01 Generate ideas through a variety of activities (e.g., brainstorming, graphic organizers , drawing, writer’s notebook, group discussion, printed material). SC 04-S1C1-02 Differentiate inferences from observations. SC 04-S4C1-02 SC 04-S4C4-01 SC 04-S4C4-02	Explanation: Students will share their ideas using concept mapping or digital creativity tools. Example: Students will investigate a topic (e.g. animal habitats, adaptations, ecosystems, plant systems, AZ land regions) and generate questions using a variety of online tools.

Strand 1: Creativity and Innovation

Concept 2: Models and Simulations

Use digital models and simulations to examine real-world connections, explore complex systems and issues, and enhance understanding.

Performance Objectives	Curriculum Connections	Explanations and Examples
PO 1. Recognize and explain relevant interdependent elements of a digital model or simulation.	SC 04-S5C3-01 SC 04-S5C3-02 SC 04-S5C3-03 SC 04-S5C3-05 Understand characteristics of weather conditions and climate. M 04-S4C1-07 M 04-S4C3-01 M 04-S4C3-02	Explanation: Students will use virtual simulations or models Example: Using digital resources (National Geographic, Discovery Channel, BBC, etc.) students will create different types of volcanoes and identify different elements, components of a volcano. (Hint: Searching with the keyword, “virtual” or “simulation” will often yield more results.) -Math models e.g. polygons, 3D shapes, equations and functions,

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Performance Objectives	Curriculum Connections	Explanations and Examples
	<p>M 04-S4C3-03 Use coordinates to describe positions in the first quadrant on a grid. They plot line segments and connect the segments to construct geometric figures.</p>	<p>ordered pairs and graphing coordinates. -Science models and simulations e.g. tectonic plates, volcanoes, solar system, frog dissections, moon phases, circuits, magnets.</p>
<p>PO 2. Explore and experiment with system variables using models or simulations.</p>	<p>SC 04-S5C3-01 SC 04-S5C3-02 SC 04-S5C3-03 SC 04-S5C3-05 Understand characteristics of weather conditions and climate.</p> <p>SC 04-S6C2-01 SC 04-S6C2-02 SC 04-S6C2-03 SC 04-S6C2-04 SC 04-S6C2-05 SC 04-S6C2-06 Understand the processes acting on the Earth and their interaction with the Earth systems.</p> <p>Reading 04-S3C1-07 Identify, analyze, and apply knowledge of the purpose, structures, and elements of expository text.</p>	<p>Explanation: Using simulations or virtual models, students will explore variables dealing with a specific system</p> <p>Example: Students will participate in interactive games and weather simulations (Weather.com, Scholastic, Climate.org) allowing them to understand the following:</p> <ul style="list-style-type: none"> -Landforms and their effect on ecosystems -Weather simulations -Erosion -How natural disasters effect the shaping of the Earth
<p>PO 3. Transfer understanding of how one system operates by comparing it to another system.</p>	<p>SC 04-S5C3-01 SC 04-S5C3-02 SC 04-S5C3-03 SC 04-S5C3-05 SC 04-S6C2-01 SC 04-S6C2-02 SC 04-S6C2-03 SC 04-S6C2-04 SC 04-S6C2-05 SC 04-S6C2-06 Understand the processes acting on the Earth and their interaction with the Earth systems.</p>	<p>Explanation: Compare and contrast systems to identify similarities and differences. System examples include but are not limited to the following:</p> <p>Examples -Plant simulation: how does watering effect the plant's growth? Changing the amount of sunlight the plant gets?</p> <ul style="list-style-type: none"> -Friction models: increasing the friction? decreasing the friction? -Volcano model: (Discovery Channel website) change the pressure and gas to create different eruptions.

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Performance Objectives	Curriculum Connections	Explanations and Examples
	Reading 04-S3C1-07 Distinguish cause and effect.	

Strand 1: Creativity and Innovation

Concept 3: Trends and Possibilities

Use technology to forecast trends and possibilities.

Performance Objectives	Curriculum Connections	Explanations and Examples
PO 1. Identify patterns and trends to generate questions and draw conclusions.	SC 04-S6C2-06 Understand the processes acting on the Earth and their interaction with the Earth systems. SC 04-S6C3-04 Reading 04-S3C1-08 Draw valid conclusions based on information gathered from expository text.	Explanation: Students will post results and questions using a digital collaborative tool. Example: Over the course of one month, students will use a spreadsheet to record weather data (temperature, precipitation, wind speed, barometric pressure) and examine patterns and trends within the data. Other Examples: -Track the growth of a plant using a spreadsheet and have students produce testable questions from the data. -Use digital resources to analyze Tree rings and fish fossils and have students create questions, inferences, and draw conclusions.

Strand 1: Creativity and Innovation

Concept 4: Original Works

Use technology to create original works in innovative ways.

Performance Objectives	Curriculum Connections	Explanations and Examples
PO 1. Analyze information using digital creativity tools to create original works and express ideas.	Writing 04-S1C5-02 Share the writing with the intended audience Writing 04-S3C3-02 Write communications, including: <i>a.</i> thank-you notes	Explanation: Digital Creativity Tools include but are not limited to: <ul style="list-style-type: none"> • Drawing programs • digital photography

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Performance Objectives	Curriculum Connections	Explanations and Examples
	<p><i>b.</i> friendly letters <i>c.</i> formal letters <i>d.</i> messages <i>e.</i> invitations</p> <p>Writing 04-S3C4-01</p>	<ul style="list-style-type: none"> • podcasts • audio clips • brochures • postcards • digital storytelling
<p>PO 2. Use digital collaborative tools to analyze information to produce original works and express ideas.</p>	<p>Reading 04-S3C2-01 Reading 04-S3C2-02 Identify, analyze, and apply knowledge of the purpose, structures, clarity, and relevancy of functional text.</p> <p>SC 04-S1C4-01 SC 04-S1C4-02 SC 04-S1C4-03 Communicate results of investigations.</p>	<p>Explanation: Students will work together and share ideas in a digital environment Digital Collaborative Tools include but are not limited to::</p> <ul style="list-style-type: none"> • Wallwisher • Voice Thread • Wikis • Blogs • Email • Google Apps

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Strand 2: Communication and Collaboration

This strand requires students to use digital media and environments to communicate and collaborate with others.

Concept 1: Effective Communications and Digital Interactions

Communicate and collaborate with others employing a variety of digital environments and media.

Performance Objectives	Curriculum Connections	Explanations and Examples
<p>PO 1. Communicate digitally with others by selecting and using a variety of appropriate communication tools.</p>	<p>Reading 04-S3C2-01 Reading 04-S3C2-02 Identify, analyze, and apply knowledge of the purpose, structures, clarity, and relevancy of functional text.</p> <p>SC 04-S1C4-01 SC 04-S1C4-02 SC 04-S1C4-03 Communicate results of investigations.</p>	<p>Explanation: Digital Interactions include but are not limited:</p> <ul style="list-style-type: none"> • blogs • wikis • video conferencing • email • webpage <p>-Epals from a different state or country. -Collaborate with another 4th grade class using any of the above tools on a project.</p>
<p>PO 2. Explain safety and etiquette guidelines of digital environments and demonstrate that knowledge while communicating with intended audiences.</p>	<p>SS 04-S3C4-02 Identify traits of character (e.g., responsibility, respect, perseverance, loyalty, integrity, involvement, justice and tolerance) that are important to the preservation and improvement of democracy.</p>	<p>Explanation: Students will</p> <ul style="list-style-type: none"> • comply with district Acceptable Use Policy • Demonstrate respect for the digital work of others • Demonstrate respect for opinions of others posted online. <p>Resources:</p> <ul style="list-style-type: none"> • Netiquette Guidelines • Safekids.com • Discovery Ed Streaming • Teachervision.com - Internet Guide for Teachers & Students

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Strand 2: Communication and Collaboration

Concept 2: Digital Solutions

Contribute to project teams to produce original works or solve problems.

Performance Objectives	Curriculum Connections	Explanations and Examples
<p>PO 1. Contribute to a cooperative learning project and demonstrate effective group behaviors while using digital collaborative resources.</p>	<p>SC 04-S1C4-01 Communicate verbally or in writing the results of an inquiry.</p> <p>Writing 04-S3C6-03 Write an informational report that includes main idea(s) and relevant details.</p>	<p>Explanation: Guidelines and roles may need to be established to accomplish tasks to ensure active participation. Guidelines may include valuing differences of opinion, personal/group responsibility, reflection and positive interdependence through team roles.</p> <p>Examples of team roles include but are not limited to the following:</p> <ul style="list-style-type: none"> · Leader · Recorder · Reporter · Timekeeper · Proofreader <p>Example: Working collaboratively, student groups will produce and publish a report using digital creativity tools.</p>

Strand 2: Communication and Collaboration

Concept 3: Global Connections

Create cultural understanding and global awareness by interacting with learners of other cultures.

Performance Objectives	Curriculum Connections	Explanations and Examples
<p>PO 1. Identify challenges and digital strategies as a class to effectively communicate with other cultures.</p>	<p>Reading 04-S2C2-01 Describe the historical and cultural aspects found in cross-cultural works of literature.</p> <p>Writing 04-S3C3-02 Write communications, including:</p> <ol style="list-style-type: none"> a. thank-you notes b. friendly letters 	<p>Explanation: Prior to digital interaction, students will brainstorm ways to overcome obstacles such as:</p> <ul style="list-style-type: none"> • language • culture • norms • traditions

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Performance Objectives	Curriculum Connections	Explanations and Examples
	<p><i>c.</i> formal letters <i>d.</i> messages <i>e.</i> invitations</p>	<ul style="list-style-type: none"> • availability of technical resources • digital citizenship (See Strand 5) <p>Examples: Students can use email, blogs, and discussion boards to discuss ways to overcome the challenges of communicating with other cultures to create ways to overcome those challenges.</p> <p>Students could conduct research to learn what other students have found are challenges and strategies in communications with other cultures.</p>

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Strand 3: Research and Information Literacy

This strand requires that students apply digital tools to gather, evaluate, and use information.

Concept 1: Planning

Plan strategies to guide inquiry using technology.

Performance Objectives	Curriculum Connections	Explanations and Examples
<p>PO 1. Determine key words for use in information searches.</p>	<p>Reading 04-S1C4-05 Determine the meanings, pronunciations, syllabication, synonyms, antonyms, and parts of speech of words by using a variety of reference aids, including dictionaries, thesauri, glossaries, and CD-ROM and Internet when available.</p> <p>Writing 04-S3C6-03</p>	<p>Explanation: Use simple search techniques for primary grades and advanced search strategies for intermediate grades, i.e., Boolean language</p> <ul style="list-style-type: none"> -Use precise words when researching a topic -Research reports -Use the “find” function within a document or webpage.
<p>PO 2. Predict which information sources will provide the desired data.</p>	<p>Reading 04-S3C2-01 Reading 04-S3C1-04 Reading 04-S3C1-05 Reading 04-S3C1-06 Reading 04-S3C1-08 Identify, analyze, and apply knowledge of the purpose, structures, and elements of expository text.</p>	<p>Explanation: Students need to learn about the different types of information and sources available online. Students will develop a strategy before searching on the internet</p> <p>Some Online Sources include:</p> <ul style="list-style-type: none"> • Encyclopedia • Dictionaries • Databases • Government sites • Atlases <p>-Students need to be taught that not all hits from a search will provide usable information.</p> <p>-Read the descriptions from the search results to try and locate the desired data or information.</p>

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Strand 3: Research and Information Literacy

Concept 2: Processing

Locate, organize, analyze, evaluate, synthesize and ethically use information from a variety of sources and media.

Performance Objectives	Curriculum Connections	Explanations and Examples
<p>PO 1. Use multiple search strategies to locate information.</p>	<p>Reading 04-S3C2-01 Reading 04-S3C2-04 Reading 04-S3C1-04 Reading 04-S3C1-05 Reading 04-S3C1-08 Identify, analyze, and apply knowledge of the purpose, structures, and elements of expository text.</p>	<p>Explanation: Use advanced search techniques. Refer to the following websites for information on key word searching techniques: http://www.media-awareness.ca/english/resources/special_initiatives/wa_resources/wa_teachers/tipsheets/search_internet_effectively.cfm http://www.google.com/help/features.html#keyword Examples:</p> <ul style="list-style-type: none"> • Use Google’s Wonderwheel to determine keywords
<p>PO 2. Select and use primary and/or secondary sources.</p>	<p>Reading 04-S3C1-05 Identify appropriate print and electronic reference sources (e.g., encyclopedia, atlas, almanac, dictionary, thesaurus, periodical, textbooks, CD-ROM, website) needed for a specific purpose.</p>	<p>Explanation: Students should understand the difference between primary sources and secondary sources and where to locate them.</p> <p>Explanation: Primary and secondary sources can be used to study people and events from the past as well as serve as a tool.</p> <p>Examples of Primary Sources: U.S. Constitution, Declaration of Independence, Diary of Anne Frank, photographs, maps, and interviews Examples of Secondary Sources: textbooks, magazine articles, encyclopedias, and biographies</p>
<p>PO 3. Differentiate between fact and opinion, bias, and</p>	<p>Writing 04-S3C4 Writing 04-S3C5 Persuasive writing is used for the purpose of influencing the</p>	<p>Explanation: Students will be able to read/listen to information and decide if it is fact or opinion Example: Use primary source documents from Thinkfinity, Library of</p>

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Performance Objectives	Curriculum Connections	Explanations and Examples
inaccurate information.	reader. The author presents an issue and expresses an opinion in order to convince an audience to agree with the opinion or to take a particular action. Reading 04-S3C3 Explain basic elements of argument in text and their relationship to the author’s purpose and use of persuasive strategies.	Congress, or newspaper websites to decide if the information presented is factual, opinions, and/or biased.
PO 4. Use appropriate digital tools to synthesize research information and to develop new ideas.	Reading 04-S3C1-05 Identify appropriate print and electronic reference sources (e.g., encyclopedia, atlas, almanac, dictionary, thesaurus, periodical, textbooks, CD-ROM, website) needed for a specific purpose.	Explanation: Students should be introduced to a variety of research tools. -Use digital Thinking Maps to organize information
PO 5. Follow copyright laws when using text, images, videos and/or other sources and obtain permission to use the work of others, and cite resources appropriately.		Explanation: Teach students to observe copyright laws. The following sites provide guidance as to fair use and copyright laws: <ul style="list-style-type: none"> • Copyright Quiz: http://www.csus.edu/indiv/p/peachj/edte230/copyright/quiz.htm • Fair Use in the K-12 Classroom: http://teams.lacoe.edu/documentation/classrooms/gayle/fairuse/fairuse.html • Copyright Bay: http://www.stfrancis.edu/content/cid/copyrightbay/index.htm • Creative Commons http://creativecommons.org/ Examples: <ul style="list-style-type: none"> • When using video clips, pictures, and/or clip art from an internet site students should cite the source. • Cite sources when using text obtained from online resources. The following site provides guidance as to fair use and copyright laws in the form of a pdf: http://www.copyright.gov/legislation/dmca.pdf -material with copyright needs to be cited

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Strand 4: Critical Thinking, Problem Solving, Decision Making

This strand requires students to use critical thinking, problem solving, and decision making to manage projects using digital tools and resources.

Concept 1: Investigation

Identify and define authentic problems and significant questions for investigation.

Performance Objectives	Curriculum Connections	Explanations and Examples
<p>PO 1. Identify an authentic issue and collaborate as a class to define an essential question* using digital tools and resources.</p>	<p>SS 04-S1C10-01 Describe current events using information from class discussions and various resources (e.g., newspapers, magazines, television, Internet, books, maps). SC 04-S1C1-04 Locate information (e.g., book, article, website) related to an investigation. SC 04-S1C2-01 SC 04-S1C2-02 SC 04-S1C2-03 SC 04-S1C2-04 SC 04-S1C2-05 Participate in planning and conducting investigations, and recording data. SC 04-S4C3-01 SC 04-S4C3-02 SC 04-S4C3-03 SC 04-S4C3-04</p>	<p>Explanation: Students should research the issue and the pros and cons to define an essential question. Current Events, Science and Social Studies would be a great sources for issues to research.</p> <p>Example: Using collaborative tools, students will work to produce a plan that describes ways that the school and community can conserve resources (e.g., reduce, reuse, recycle).</p>

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Strand 4: Critical Thinking, Problem Solving, Decision Making

Concept 2: Exploring Solutions

Plan and manage activities to develop solutions to answer a question or complete a project.

Performance Objectives	Curriculum Connections	Explanations and Examples
<p>PO 1. Manage a learning project using digital planning tools to develop solutions.</p>	<p>SC 04-S4C3-02 SC 04-S4C3-03 SC 04-S4C3-04 Understand the relationships among various organisms and their environment.</p> <p>Writing 04-S3C2-01 Write a narrative based on imagined or real events, observations, or memories</p>	<p>Explanation: Use a digital planning tool (example: Kidspiration) to brainstorm and organize ideas</p> <p>Example: During a science lesson on renewable resources, the teacher posts a picture of trash in the street and students use a multimedia site such as VoiceThread, SlideShare, Animoto, Glogster, ScrapBlog, Delicious to share ideas and develop solutions.</p>
<p>PO 2. Generate alternative solutions using collected resources and data.</p>	<p>SC 04-S4C3-02 SC 04-S4C3-03 SC 04-S4C3-04 Understand the relationships among various organisms and their environment.</p> <p>Writing 04-S3C2-01 Write a narrative based on imagined or real events, observations, or memories</p>	<p>Explanation: The student uses appropriate computer-based productivity tools to create and modify solutions to problems.</p> <p>Example: Investigate a problem or issue found in the United States and/or another country from multiple perspectives, evaluate findings, and present possible solutions, using digital tools and online resources for all steps.</p>

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Strand 5: Digital Citizenship

This strand requires students to understand human, cultural, and societal issues related to technology practice and ethical behavior.

Concept 1: Safety and Ethics

Advocate and practice safe, legal, and responsible use of information and technology.

Performance Objectives	Curriculum Connections	Explanations and Examples
PO 1. Explain when and why it is appropriate to use a personal digital device.	SS 04-S3C4-02 Identify traits of character (e.g., responsibility, respect, perseverance, loyalty, integrity, involvement, justice and tolerance) that are important to the preservation and improvement of democracy.	Explanation: Discuss with students the appropriateness of using personal digital devices such as cell phones, cameras, and video cameras.
PO 2. Describe cyber-bullying and describe strategies to deal with such a situation.	SS 04-S3C4-02 Identify traits of character (e.g., responsibility, respect, perseverance, loyalty, integrity, involvement, justice and tolerance) that are important to the preservation and improvement of democracy	Explanation: Within the IDEAL Portal, choose Discovery Streaming and search for the following online resources: Examples: <ul style="list-style-type: none"> · The Internet: A Guide for Students · Internet Netiquette and Safety · Digital Citizenship resources
PO 3. Identify and articulate rules for the use of digital tools as defined by school board policy and procedures.	SS 04-S3C4-02 Identify traits of character (e.g., responsibility, respect, perseverance, loyalty, integrity, involvement, justice and tolerance) that are important to the preservation and improvement of democracy	Explanation: Students should comply with the school district’s Acceptable Use Policy (AUP) as well as be able to understand and explain their classroom rules of safe technology use. In addition, occasions may arise where potential dangers in digital environments occur and students should know how to report potentially unsafe situations to their teacher.
PO 4. Recognize and describe the potential risks and dangers associated with various forms of online communications.	SS 04-S3C4-02 Identify traits of character (e.g., responsibility, respect, perseverance, loyalty, integrity, involvement, justice and tolerance) that are important to the preservation and improvement of democracy	Explanation: Within the IDEAL Portal, choose Discovery Streaming and search for the following online resources: <ul style="list-style-type: none"> · The Internet: A Guide for Students · Internet Netiquette and Safety · Digital Citizenship resources
PO 5. Recognize and describe the advantages and risks of making a personal spending choice online.	SS 04-S3C4-02 Identify traits of character (e.g., responsibility, respect, perseverance, loyalty, integrity, involvement, justice and tolerance) that are important to the preservation and improvement of democracy	Explanation: Within the IDEAL Portal, choose Discovery Streaming and search for the following online resources: <ul style="list-style-type: none"> · The Internet: A Guide for Students · Internet Netiquette and Safety · Digital Citizenship resources

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Performance Objectives	Curriculum Connections	Explanations and Examples
PO 6. Articulate how to respect the privacy of others' information and digital workspace.	SS 04-S3C4-02 Identify traits of character (e.g., responsibility, respect, perseverance, loyalty, integrity, involvement, justice and tolerance) that are important to the preservation and improvement of democracy	Explanation: Within the IDEAL Portal, choose Discovery Streaming and search for the following online resources: <ul style="list-style-type: none"> · The Internet: A Guide for Students · Internet Netiquette and Safety · Digital Citizenship resources

Strand 5: Digital Citizenship

Concept 2: Leadership for Digital Citizenship

Demonstrate leadership for digital citizenship.

Performance Objectives	Curriculum Connections	Explanations and Examples
PO 1:	No POs for this Concept in Grade 4	

Strand 5: Digital Citizenship

Concept 3: Impact of Technology

Develop an understanding of the cultural, historical, economic and political impact of technology on individuals and society.

Performance Objectives	Curriculum Connections	Explanations and Examples
PO 1. Provide examples of technologies that might be used to solve a specific economic, environmental, health, political, scientific, or social problem.	SC 04-S6C3-06 Compare weather conditions in various locations (e.g., regions of Arizona, various U.S. cities, coastal vs. interior geographical regions). SC 04-S1C2-01 SC 04-S1C2-02 SC 04-S1C2-03 SC 04-S1C2-04 SC 04-S1C2-05 Participate in planning and conducting investigations, and recording	Explanation: Student should see how technology has played a significant role in our society. Technology is used in almost all areas of our daily lives. Examples: -Environment, to detect global warming trends -Health, researching new medications, diseases, and viruses -Science, implementing research and investigations

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Performance Objectives	Curriculum Connections	Explanations and Examples
	data. SS 04-S4C5-02 Describe the impact of extreme natural events (e.g., fires, volcanoes, floods, droughts) on human and physical environments.	

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Strand 6: Technology Operations and Concepts

This strand requires students to demonstrate a sound understanding of technology concepts, systems, and operations.

Concept 1: Understanding

Recognize, define and use technology term, processes, systems and applications.

Performance Objectives	Curriculum Connections	Explanations and Examples				
<p>PO 1. Describe the various technical system terms.</p>	<p>Reading 04-S1C4-05 Determine the meanings, pronunciations, syllabication, synonyms, antonyms, and parts of speech of words by using a variety of reference aids, including dictionaries, thesauri, glossaries, and CD-ROM and Internet when available.</p>	<p>Hardware</p> <p>CD Computer CPU Digital Camera DVD Ethernet Hard Drive Keyboard Laptop Modem Monitor Mouse PC Printer Scroll Wheel Speakers USB</p>	<p>Software</p> <p>Application Clip Art Database Desktop Excel File Finder Folder Mac OS Maximize Minimize Operating System Program Recycle Bin/Trash Scroll Bar Spreadsheet Virus Window Windows Word Processor</p>	<p>Internet</p> <p>Bookmar k Browser Downloa d E-mail Favorites Google Home Page Search Engine Upload Web Page Website WWW Yahoo YouTube</p>	<p>Technical</p> <p>Caps Lock Character Cursor Default Font GIF Graphics Icon JPEG Keystroke Login Multimedia MP3 Password Shift Key Troublesho oting Username Wireless</p>	<p>Commands</p> <p>Delete Copy Cut Double Click Drag Paste Right Click Undo</p>
<p>PO 2. Define and apply knowledge of various technical</p>	<p>Reading 04-S1C4-05 Determine the meanings, pronunciations, syllabication, synonyms,</p>	<p>Explanation: Students need to have an understanding of basic technical terms when working with a computer.</p>				

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Performance Objectives	Curriculum Connections	Explanations and Examples
process terms.	<p>antonyms, and parts of speech of words by using a variety of reference aids, including dictionaries, thesauri, glossaries, and CD-ROM and Internet when available.</p> <p>Reading 04-S3C3-02 Identify persuasive vocabulary (e.g., loaded/emotional words, exaggeration) used to influence readers' opinions.</p> <p>Writing 04-S3C2-02 Write an expository paragraph that contains:</p> <ol style="list-style-type: none"> a. a topic sentence b. supporting details c. relevant information 	<p>Examples:</p> <ul style="list-style-type: none"> -short cut keys for various commands -right click(PC) or control + mouse click (mac) functions -minimizing windows -closing windows -locating folders and documents
PO 3. Choose technology applications for a given activity/project.	<p>Reading 04-S1C6-04 Use graphic organizers in order to clarify the meaning of the text.</p>	<p>Explanation: In order to enhance learning, increase productivity and creativity, students should choose the appropriate program that best matches the given activity.</p> <p>Examples:</p> <ul style="list-style-type: none"> -Word processing: poetry, personal narratives, letters, manuals, recipes, rubrics, reflections, book reports -Presentation software: public speaking activities, multimedia presentations, slide shows, etc. -Publishing software: invitations, advertisements, book reviews -Photo software: uploading, editing, resizing, cropping, rotating, enhancing photos -Video software: uploading video and clips, adding titles, transitions, sound effects, publishing video -Spreadsheet software: data collection, comparisons, charts, graphs -Web browsers: web searches, interactive games, simulations, etc.
PO 4. Demonstrate knowledge of ergonomics and electrical safety when using computers.		<p>Explanation: Correct posture, position of hands and feet, proper height of keyboard, proper lifting and moving of equipment</p> <p>Examples: Properly powering on/off a computer, printer, and projector.</p>
PO 5. Identify physical risks of		<p>Explanation: Sitting in the same position with improper posture may</p>

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Performance Objectives	Curriculum Connections	Explanations and Examples
using digital technology.		<p>lead to soreness in neck and back, fingers and wrists. Example:</p> <ul style="list-style-type: none"> ● Carpal tunnel in the wrists can be a hazard of prolonged, improper keyboard use. <p>Applications & Web Resources:</p> <ul style="list-style-type: none"> ● The Ultimate Guide to Ergonomics: 50 Tips & Tricks for Serious Students http://oedb.org/library/beginning-online-learning/ultimate_guide_to_ergonomics <p>Computer Ergonomics for Teachers and Students http://ergo.human.cornell.edu/IEA2000/iea2000imw.pdf</p>

Strand 6: Technology Operations and Concepts

Concept 2: Application

Select and use applications effectively and productively.

Performance Objectives	Curriculum Connections	Explanations and Examples
PO 1. Demonstrate speed and accuracy in use of keyboard and data entry tools with at least 10 wpm and 80% accuracy.	Writing 04-S2C2-01 Writing 04-S2C2-02 Writing 04-S2C2-03 Writing 04-S2C2-04 Writing 04-S2C2-05 Writing 04-S2C2-06 Organization addresses the structure of the writing and integrates the central meaning and patterns that hold the piece together.	<p>Explanation:</p> <p>There are free websites that teach students proper typing skills. Students should be able to have some time every week to practice their skills.</p>
PO 2. Compose a document that applies intermediate formatting.	Writing 04-S2C2-01 Writing 04-S2C2-02 Writing 04-S2C2-03 Writing 04-S2C2-04 Writing 04-S2C2-05	<p>Explanation:</p> <p>Intermediate formatting may include but is not limited to:</p> <ul style="list-style-type: none"> ● Paragraph settings ● Borders

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Performance Objectives	Curriculum Connections	Explanations and Examples
	<p>Writing 04-S2C2-06 Organization addresses the structure of the writing and integrates the central meaning and patterns that hold the piece together.</p>	<ul style="list-style-type: none"> • Paragraph shading • Tab stops • Forced page break • Paragraph alignment
<p>PO 3. Use a spreadsheet to record, organize, and graph information.</p>	<p>SC 04-S6C3-01 SC 04-S6C3-02 SC 04-S6C3-03 SC 04-S6C3-04 SC 04-S6C3-05 SC 04-S6C3-06 Understand characteristics of weather conditions and climate.</p> <p>M 04-S1C1-01 Express whole numbers, fractions, decimals, and percents using and connecting multiple representations.</p>	<p>Explanation: Students will design a spreadsheet to organize and graph information.</p> <p>Example: Students will examine the nutritional facts of several foods including the percent daily values (DV). Students will record the DV percentage of Total Fat, Protein, Total Carbohydrates of each food and as well as convert each percentage into a decimal, and fraction. Other Examples: -Keep track of the weather for several weeks -Have students record classmates birthdays -Students can record the height of the class</p>
<p>PO 4. Perform simple searches of existing databases.</p>	<p>Reading 04-S3C1-04 Locate specific information by using organizational features (e.g., table of contents, headings, captions, bold print, glossaries, indices, italics, key words, topic sentences, concluding sentences) of expository text.</p> <p>Reading 04-S3C1-05 Identify appropriate print and electronic reference sources (e.g., encyclopedia, atlas, almanac, dictionary, thesaurus, periodical, textbooks, CD-ROM, website) needed for a specific purpose</p> <p>Reading 04-S3C1-06</p> <p>Writing: 04-S3C2-01 Record information (e.g., observations, notes, lists, charts, map labels and legends) related to the topic.</p>	<p>Explanation: Students will demonstrate simple searches using databases provided by the teacher.</p> <p>Examples: -Net Trekker -Discovery Education -Thinkfinity</p>
<p>PO 5. Create multimedia</p>	<p>Writing 04-S3C1-01</p>	<p>Explanation: Students will create and present a multimedia</p>

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Performance Objectives	Curriculum Connections	Explanations and Examples
presentations with multiple pages, audio, and transitions for individual assignments.	Expressive writing includes personal narratives , stories, poetry, songs, and dramatic pieces. Writing may be based on real or imagined events.	presentation using existing software (Example: PowerPoint) Example: -Personal narrative -Autobiography of students -Research reports
PO 6. Download, store, and accurately cite web resources.		Explanation: Students will use correct formatting of citations for web resources There are plenty of sites that offer assistance on citing web related resources. Search “how to cite web resources”
PO 7. Explain the uses of and the means by which computers are networked.	Writing 04-S3C2-02 Writing 04-S3C2-03 Write an expository paragraph that contains: <i>a.</i> a topic sentence <i>b.</i> supporting details <i>c.</i> relevant information	Explanation: Computers are generally connected through a wireless router or a local area network (LAN). A wireless router or LAN allows computers to talk to each other. There are several uses of networked computers: <ul style="list-style-type: none"> • Share files (documents, music, video, etc.) • Printers • Internet connections • Scanners

Strand 6: Technology Operations and Concepts

Concept 3: Troubleshoot Systems and Processes

Define problems and investigates solutions in systems and processes.

Performance Objectives	Curriculum Connections	Explanations and Examples
PO 1. Use the help function within software and hardware to troubleshoot issues and problems.	SC 04-S1C1-02 Formulate a relevant question through observations that can be tested by an investigation SC 04-S1C2-01	Explanation: Within a software program, locate the “help” function and use the tool to solve a problem that has occurred.

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	SC 04-S1C2-02 SC 04-S1C2-03 Participate in planning and conducting investigations, and recording data. SC 04-S1C4-01	
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Strand 6: Technology Operations and Concepts

Concept 4: Transfer of Knowledge

Transfer current knowledge to learning of new technologies.

Performance Objectives	Curriculum Connections	Explanations and Examples
PO 1. Transfer understanding of current input/output devices and symbols and icons to learning new technologies.		Explanation: Input/output devices are commonly referred to as I/O devices. Usually pertaining to things such as a keyboard or a mouse.