

Arizona Educational Technology Standard Articulated by Grade Level

Grade K

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 technology to generate knowledge and new ideas.

Performance Objectives	Curriculum Connections	Explanations and Examples
	No PO's for Kindergarten	

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: Explore and identify models and simulations.	M K-S1C1-01 M K-S1C1-02 M K-S1C1-03 M K-S1C1-04 M K-S1C1-05 Understand and apply numbers, ways of representing numbers, and the relationships among numbers and different number systems. SC K-S1C1-01 Observe common objects using multiple senses. SC K-S4C1-01 Distinguish between living things and nonliving things. SC K-S4C3-01 SC K-S4C3-02	Explanation: : Students will use online games/simulations and virtual field trips Math Example: Students will use online games/simulations from web sites such as PBS Kids to practice counting skills. Search: PBS Kids counting games. Science Example: Take a virtual field trip to the San Diego Zoo utilizing the “Animal Bytes” section to see animal profiles, videos, as well as camera feeds to panda bears, polar bears, apes and elephants. via the Panda Cam to study Science of Pandas.

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	SC K-S4C3-03 Understand the relationships among various organisms and their environment.	
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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: Observe and extend patterns.	SC K-S3C2-01 Describe how simple tools (e.g., scissors, pencils, paper clips, hammers) can make tasks easier.	Explanation: Use technology to make predictions and draw conclusions Example: Math: Kid Pix/Kidspiration-Using both programs students can use the stamp feature to create and extend an ABABAB pattern.

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: Use digital creativity tools to develop ideas and create a project.	Writing K- S2C1-01 Use pictures that convey meaning.	Explanation: Organize ideas and design and produce multimedia projects. Example: Students can use, for example, Pixie, Kidpix or Kidspiration to stamp a picture of a Dinosaur and then write sentences to match. i.e., This is a Stegosaurus.

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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
PO 1: Communicate with others as a whole class using digital tools.	Writing K-S2C1-01 Use pictures that convey meaning.	Explanation: communicate with other students and other classes digitally. Example: Publish poetry on a wiki to share with others.

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
PO 1: Participate in a classroom learning project using digital collaborative resources.	Writing K-S2C1-01 Use pictures that convey meaning. SC K-S4C1-02 Name the following human body parts: head shoulders arms elbows wrists hands fingers SC K-S4C1-03 Identify the five senses and their related body parts: sight – eyes hearing – ears	Explanation: Use a software program or online resource to collaborate on classroom project. Writing Example: Draw a picture story with a partner using an age appropriate drawing software program such as MS Paint, Kidpix, and/or Kidspiration. Science Example: Utilizing online curriculum activities offered by sites such as Thinkfinity.org, Starfall.com (All About My Body!), Sesame Street.org, students will use a digital collaborative tool to name/match human body parts as well as identify the five senses.

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	smell – nose taste – tongue touch – skin hips knees ankles feet heels toes legs	
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Strand 2: Communication and Collaboration

Concept 3: Global Connections

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

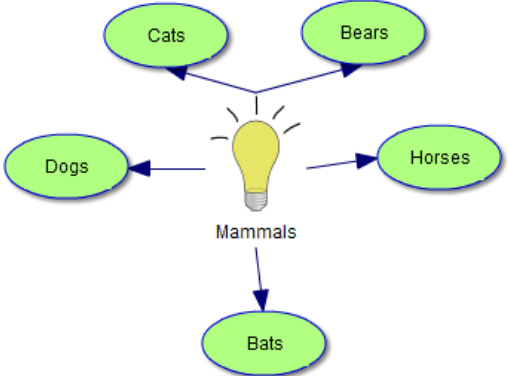
Performance Objectives	Curriculum Connections	Explanations and Examples
PO 1: Explore other cultures through digital resources.	Reading K-S2C1-02 Identify elements of a story, including characters, setting, and key events. Reading K-S2C1-03 Retell or re-enact a story, placing the events in the correct sequence Reading K-S2C1-04 SC K- S2C1-02 Identify how diverse people and/or cultures, past and present, have made important contributions to scientific innovations (e.g., Jane Goodall [scientist])	Explanation: Use online resources and website to enrich learning about other cultures. Example: Participate in online activities from resources such as, Discovery Streaming, Enchanted Learning, and Starfall to explore other cultures. This includes listening to music, reading fables, myths, and folk tales.

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.

Performance Objectives	Curriculum Connections	Explanations and Examples
PO 1: Generate key words for a search from a teacher-posed question or topic.	<p>Reading K-S3C1-01 Identify the purpose for reading expository text</p> <p>Writing K-S3C2-01 Participate in creating expository texts (e.g., labels, lists, observations, journals, summaries) through drawing or writing.</p>	<p>Explanation: In a group discussion, brainstorm key words that can be used to search a database or website for specific information.</p> <p>Example: Create a digital word web to generate key words for search using a concept mapping tool such as Webspiration or interactive whiteboard activities.</p> 

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Performance Objectives	Curriculum Connections	Explanations and Examples
PO 2: Explore a variety of information sources.	SS K-S2C1-01 Retell personal events to show an understanding of how history is the story of events, people, and places in the past. SS K-S2C1-02 Listen to recounts of historical events and people and discuss how they relate to present day. SS K-S2C1-03 Sequence recounts of historical events and people using the concepts of before and after. SS K-S2C1-04 Use primary source materials (e.g., photos, artifacts) to study people and events from the past.	Explanation: Identify which technology tools can be used to gather information about a subject. Example: Participate in a class lesson to identify sources of information, including technology resources such as the Internet, to answer questions.

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
PO 1: Conduct a search using multiple keywords.	Reading K-S3C1-02 Restate facts from listening to expository text.	Explanation: Brainstorm keywords to guide a search for information about a specific topic. Example: Use preselected search engines (NetTrekker, and Renzulli Learning) teacher selected keywords when searching for bats.
PO 2: Use preselected sources	SC K S4C3-01 SC K S4C3-02 SC K S4C3-03 Understand the relationships among various organisms and their environment. SS K-S1C1-04 Use primary source materials (e.g., photos, artifacts) to study people and events from the past.	Explanation: Select relevant information from teacher selected, technology resources. Example: Use teacher created web quests or web resources to search for facts about a particular organism or event in history.
PO 3: Demonstrate knowledge of real versus make-believe	SS K-S2C1-04 Reading K-S2C1-04	Explanation: Students will participate in online activities. Examples: Use Tina's World to hear real and make-believe stories.

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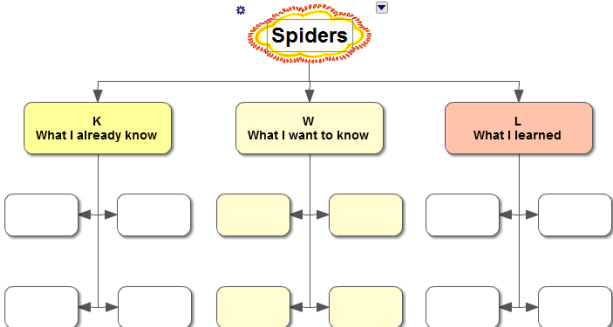
Performance Objectives	Curriculum Connections	Explanations and Examples
	<p>Determine whether a literary selection, that is heard, is realistic or fantasy Writing K-S3C1 Expressive writing includes personal narratives, stories, poetry, songs, and dramatic pieces. Writing may be based on real or imagined events.</p>	<p>Afterwards, students will use a painting program to create their own “real” or “make-believe” story. Online Resources: www.earobics (Houghton Mifflin) and Scholastic.com,</p>
PO 4: Sort information into major topics.	<p>SC K-S1C4-01 Communicate observations with pictographs, pictures, models, and/or words. SC K-S1C4-02 Communicate with other groups to describe the results of an investigation. SC K-S4C1-01</p>	<p>Explanation: Students will organize information gathered for research. Example: Use an online graphic organizer from readwritethink.org, students will organize living and nonliving things.</p>
PO 5: Identify and follow rules regarding the use of information resources.	<p>SS K-S3C4-01 Identify examples of responsible citizenship in the school setting and in stories about the past and present. SS K-S3C4-02 Recognize the rights and responsibilities of citizenship: a. elements of fair play, good sportsmanship, and the idea of treating others the way you want to be treated b. importance of participation and cooperation in a classroom and community c. why there are rules and the consequences for violating them d. responsibility of voting (every vote counts)</p>	<p>Explanation: The students will understand that there are rules when using the internet for information. Example: The teacher will lead the class in a discussion referencing how to use classroom technologies and resources carefully and correctly. Students will then work collaboratively to create a classroom poster for reference.</p>

Strand 4: Critical Thinking, Problem Solving, and 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 investigations.

Performance Objectives	Curriculum Connections	Explanations and Examples
PO 1: Collaborate as a class to select an essential question to research using digital resources.	SC K-S1C1-01 Observe common objects using multiple senses SC K-S4C1-01 Distinguish between living things and nonliving things. SC K-S4C3-01 SC K-S4C3-02 SC K-S4C3-03 Understand the relationships among various organisms and their environment.	<p>Explanation: Building background knowledge and generating questions by using digital content is an important teaching tool. Example: With the guidance of the teacher, record questions for a digital KWL chart using a concept mapping tool such as Webspiration or interactive whiteboard activities.</p> 

Strand 4: Critical Thinking, Problem Solving, and 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
PO 1: Participate in a group learning project using digital tools to answer a question.	SS K-S3C4-04 Identify people who help keep communities and citizens safe (e.g., police, firefighters, nurses, doctors). M K-S2C1-01	<p>Explanation: Organize information using digital tools in a group learning project.</p> <p>Social Studies example: Students will use online resources to identify community members and citizens that keep the</p>

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	<p>Construct simple displays of data using objects or pictures. M K-S2C1-02</p> <p>Ask and answer questions by counting, comparing quantities, and interpreting simple displays of data.</p>	<p>community safe. After finding community members such as fire-fighters, police officers, doctors and nurses, students will use a digital creative tool to share their understanding.</p> <p>Mathematics example: Students will use a digital creative tool to depict, explore, create and extend patterns as a class.</p>
PO 2: Explore solutions or results as a class by discussing data collected.	<p>M K-S2C1-01</p> <p>Construct simple displays of data using objects or pictures. M K-S2C1-02</p> <p>Ask and answer questions by counting, comparing quantities, and interpreting simple displays of data.</p>	<p>Explanation: After collecting data from a variety of sources, discuss which data is relevant to solve a specific problem.</p> <p>Example: As a class, students will create object graph and pictographs using a digital creative tool. Students will reinforce other mathematical skills such as counting, adding, subtracting and communicating solutions.</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: Identify use of personal devices and when it is appropriate to use them	SS K-S3C4-02 Recognize the rights and responsibilities of citizenship: <ol style="list-style-type: none"> elements of fair play, good sportsmanship, and the idea of treating others the way you want to be treated importance of participation and cooperation in a classroom and community why there are rules and the consequences for violating them responsibility of voting (every vote counts) 	Explanation: Participate in class or small group lessons on when it is appropriate to use technology tools to meet personal needs.
PO 2: Identify and articulate rules for the use of digital tools as defined by school board policy and procedures	SS K-S3C4-01 Identify examples of responsible citizenship in the school setting and in stories about the past and present.	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. Example: Work cooperatively and collaboratively with others when using technology in the classroom. This information will then be made into a classroom poster for reference. Explanation: Understand current online safety guidelines. Example: Discuss safety issues related to use of the Internet.

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Performance Objectives	Curriculum Connections	Explanations and Examples
PO 3: Discuss why it may be dangerous to visit certain Internet sites	<p>SS K-S3C4-02</p> <p>Recognize the rights and responsibilities of citizenship:</p> <ul style="list-style-type: none"> a. elements of fair play, good sportsmanship, and the idea of treating others the way you want to be treated b. importance of participation and cooperation in a classroom and community c. why there are rules and the consequences for violating them d. responsibility of voting (every vote counts) <p>SS K-S3C4-02</p> <p>Recognize the rights and responsibilities of citizenship:</p> <ul style="list-style-type: none"> a. elements of fair play, good sportsmanship, and the idea of treating others the way you want to be treated b. importance of participation and cooperation in a classroom and community c. why there are rules and the consequences for violating them d. responsibility of voting (every vote counts) 	

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Performance Objectives	Curriculum Connections	Explanations and Examples
PO 4: Recognize and discuss why there are rules for using technology at home and at school.	SS K-S3C4-02 Recognize the rights and responsibilities of citizenship: <ol style="list-style-type: none"> elements of fair play, good sportsmanship, and the idea of treating others the way you want to be treated importance of participation and cooperation in a classroom and community why there are rules and the consequences for violating them responsibility of voting (every vote counts) 	Explanation: Discuss why it may be dangerous to visit certain websites. Recognize safe practices when working online.

Strand 5: Digital Citizenship

Concept 2: Leadership for Digital Citizenship

Demonstrate leadership for digital citizenship.

Performance Objectives	Curriculum Connections	Explanations and Examples
	No PO's for Kindergarten	

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Strand 5: Digital Citizenship

Concept 3: Impact of Technology

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

Performance Objectives	Curriculum Connections	Explanations and Examples
PO 1: Recognize and discuss examples of technology used in daily life.	SC K-S3C2-01 Describe how simple tools (e.g., scissors, pencils, paper clips, hammers) can make tasks easier.	Explanation: Using a digital collaborative tool such as VoiceThread, students will identify examples of technology that is used on a daily basis that has improved our quality of life. Examples include but are not limited to: telephone, microwave, television, cameras, and the computer. Simple tools (old technology) such as scissors, pencils, hammers also could be examples.

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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 processes, systems, and applications.

Performance Objectives	Curriculum Connections	Explanations and Examples				
PO 1: Identify basic technology terms.	Reading K-S3C2-01 Sequentially follow a two or three-step set of directions (e.g., recipes, center directions, classroom procedures, science experiments) using picture clues. Reading K-S3C2-02 Identify signs, symbols, labels, and captions in the environment.	Explanation: Identify and use correct technology terms. For example: mouse, file, icon, keyboard. Example: When using the computer, students will utilize teacher-created directions with picture cues to complete simple two or three step activities. The teacher and students will use/state the correct vocabulary to describe digital technologies.				
		Hardware	Software	Internet	Technical	Commands
		CD Computer Digital Camera DVD Keyboard Laptop Mouse PC Printer Scroll Speakers	Clip Art Desktop Folder Window	Bookmark Download Favorites Google Home Page Search Web Page Website WWW	Cursor Icon Login MP3 Password	Delete Double-Click Drag Click
PO 2: Apply technology process terminology.	Writing K-S3C1-01 Create narratives by drawing, dictating, and/or emergent writing. Writing K-S3C2-01 Participate in creating expository texts (e.g., labels, lists, observations, journals, summaries) through drawing or writing. Writing K-S3C3-01 Participate in writing a variety of functional text (e.g., classroom	Explanation: Students will demonstrate proper use of mouse, keyboard. Example: Use keyboard to type letters or numbers. Use mouse to click, double-click and drag objects.				

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Performance Objectives	Curriculum Connections	Explanations and Examples
	rules, letters, experiments, recipes, notes/messages, labels, directions, posters, graphs/tables).	
PO 3: Identify technology applications for a given activity/project.	<p>Writing K-S3C1-01 Create narratives by drawing, dictating, and/or emergent writing.</p> <p>Writing K-S3C2-01 Participate in creating expository texts (e.g., labels, lists, observations, journals, summaries) through drawing or writing.</p> <p>Writing K-S3C3-01 Participate in writing a variety of functional text (e.g., classroom rules, letters, experiments, recipes, notes/messages, labels, directions, posters, graphs/tables).</p>	<p>Explanation: In order to enhance learning, increase productivity and creativity, students should choose participate in a variety of activities utilizing various technology applications.</p> <p>Examples: Word Processing Program: personal narratives, poetry, rhymes, songs, chants, labels, lists, letters, notes Publishing Program: posters, greeting cards, certificate Spreadsheet Program: data collection, comparisons, charts, graphs Presentation Program: multimedia presentation, public speaking, slide shows Painting Program: produce creative works, illustrating and drawing</p>
PO 4: Demonstrate knowledge of electrical safety when using computers and other technology.	<p>SC K-S1C2-01 Demonstrate safe behavior and appropriate procedures (e.g., use of instruments, materials, organisms) in all science inquiry.</p>	<p>Explanation: Students should that electrical cords and outlets should not be touched.</p> <p>Example: Discuss with class that electrical cords and outlets should only be handled by an adult.</p>

Strand 6: Technology Operations and Concepts

Concept 2: Applications

Select and use applications effectively and productively.

Performance Objectives	Curriculum Connections	Explanations and Examples
PO 1: Use the mouse/track pad to perform computer functions such as accessing an application, indicating a choice or activating a link. Use the keyboard to type letters and numbers and know how to use special key functions.	<p>Writing K-S2C5-01 Attempt simple sentences (some may be fragments).</p>	<p>Explanation: Students will demonstrate proper use of mouse, keyboard.</p> <p>Example: Use single click and double click functions of the mouse.</p> <p>Example: Locate, identify and use letter/number keys.</p> <p>Students will place their left hand fingers on letters a, s, d, f, and their right hand fingers on letters j, k, l, ;. Both thumbs will use the space bar when needed. The left hand stays on the left side of the keyboard while the right hand stays on the right side of the keyboard.</p>
PO 2: Use technology to identify letters and numbers and differentiate between them.	<p>Writing K-S2C5-01 Attempt simple sentences (some may be fragments).</p>	<p>Explanation: Use interactive letter sorting literacy games, such as those found on Waterford, ReadWriteThink.org, Starfall, Nick Jr. and PBS Kids.org</p>

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Performance Objectives	Curriculum Connections	Explanations and Examples
PO 3: Use an interactive presentation system as part of classroom work		<p>Explanation: Use an interactive white board or data collection system with the class.</p> <p>Example: Use SmartBoard tools, such as the interactive dice to develop addition strategies.</p>
PO 4: Identify and use common navigational elements of a web page.	<p>Reading K-S3C2-01 Sequentially follow a two or three-step set of directions (e.g., recipes, center directions, classroom procedures, science experiments) using picture clues.</p> <p>Reading K-S3C2-02 Identify signs, symbols, labels, and captions in the environment.</p>	<p>Explanation: Identify and use functions such as links and icons.</p> <p>Example: Although typically, pre-k and kindergarten cannot read, many websites, such as Starfall.com, uses kid-friendly picture icons to help identify the feature requested and navigate within site. In addition, teacher-created directions with picture cues could be utilized to assist with multi-step directions.</p> <p>Example: Use vocabulary such as, web site, web page and home page when navigating thru a site on the World Wide Web.</p>
PO 5: Demonstrate appropriate use of log-in procedures.	<p>Reading K-S3C2-01 Sequentially follow a two or three-step set of directions (e.g., recipes, center directions, classroom procedures, science experiments) using picture clues.</p>	<p>Explanation: The students will know how to properly log in</p>

Strand 6: Technology Operations and Concepts

Concept 3: Troubleshoot Systems and Processes

Define problems and investigate solutions in systems and processes.

Performance Objectives	Curriculum Connections	Explanations and Examples
PO 1: Devise a class plan on how to solve different types of technology problems.	<p>Reading K-S3C2-01 Sequentially follow a two or three-step set of directions (e.g., recipes, center directions, classroom procedures, science experiments) using picture clues.</p>	<p>Explanation: With teacher assistance, verify that cables are connected and power is on.</p>

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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 knowledge of technology used at home to technology that will be used at school	SC K-S3C2-01 Describe how simple tools (e.g., scissors, pencils, paper clips, hammers) can make tasks easier.	Explanation: Identify examples of technology used in their daily lives such as, telephone, microwave, television, cameras, and computer.