

Educational Technology Standard Articulated by Grade Level

7th Grade to High School

Educational Technology Standard Articulated by Grade Level

Strand 1: Creativity and Innovation

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Strand 1: Creativity and Innovation

Concept 1: Knowledge and Ideas		
Use technology to generate knowledge and new ideas.		
Grade 7	Grade 8	High School (Grades 9-12)
PO 1. Analyze and evaluate information to generate new ideas, processes or products.	PO 1. Analyze and evaluate information to generate new ideas, processes or products.	PO 1. Analyze, evaluate, and synthesize information to generate new ideas, processes, or products.

Concept 2: Models and Simulations		
Use digital models and simulations to examine real-world connections, explore complex systems and issues, and enhance understanding.		
Grade 7	Grade 8	High School (Grades 9-12)
PO 1. Summarize the relationship amongst interdependent elements of a digital model or simulation.	PO 1. Summarize the relationship amongst interdependent elements of a digital model or simulation.	PO 1. Predict and test the relationships amongst interdependent elements of a digital model, simulation or system.
PO 2. Analyze system processes and outcomes using models or simulations.	PO 2. Analyze system processes and outcomes using models or simulations.	PO 2. Propose or create a model, simulation, or system.
PO 3. Analyze and apply understanding of how one system, digital models, or simulations operates by comparing it to another system of a different type that operates in a similar manner.	PO 3. Analyze and apply understanding of how one system, digital models or simulations operates by comparing it to another system of a different type that operates in a similar manner.	PO 3. Predict how one system operates by comparing it to multiple systems, digital models or simulations.

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Strand 1: Creativity and Innovation

Concept 3: Trends and Possibilities Use technology to forecast trends and possibilities.		
Grade 7	Grade 8	High School (Grades 9-12)
PO 1. Identify patterns and trends to forecast possibilities from different perspectives.	PO 1. Identify patterns and trends to forecast possibilities from different perspectives.	PO 1. Analyze patterns and trends and their logical links to form inferences, and forecast possibilities providing novel insights.
PO 2. Ask questions and investigate a problem from different perspectives and formulate inferences from known facts.	PO 2. Ask questions and investigate a problem from different perspectives and formulate inferences from known facts.	
	PO 3. Draw conclusions that reflect clear and logical links between the trends and patterns and the interpretations made from them.	

Concept 4: Original Works Use technology to create original works in innovative ways.		
Grade 7	Grade 8	High School (Grades 9-12)
PO 1. Create innovative products or projects using digital tools to express original ideas.	PO 1. Create innovative products or projects using digital tools to express original ideas.	PO 1. Create innovative products or projects using digital tools to express original ideas.
PO 2. Use digital collaborative tools to synthesize information, produce original works, and express ideas.	PO 2. Use digital tools to collaborate with a group to communicate original ideas, products, or projects effectively in a creative or innovative style.	PO 2. Use digital collaborative tools to synthesize information, produce original works, and express ideas.

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Strand 2: Communication and Collaboration

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Strand 2: Communication and Collaboration

Concept 1: Effective Communications and Digital Interactions		
Communicate and collaborate with others employing a variety of digital environments and media.		
Grade 7	Grade 8	High School (Grades 9-12)
PO 1. Collaborate and communicate with peers, experts, or others employing a variety of digital tools to share findings and/or publish.	PO 1. Collaborate and communicate with peers, experts, or others employing a variety of digital tools to share findings and/or publish.	PO 1. Collaborate with peers, experts, or others in the global community employing a variety of digital tools to share findings and/or publish in a variety of ways.
PO 2. Explain and demonstrate features, conventions, voice, and etiquette of interactive digital environments to communicate with an appropriate audience.	PO 2. Explain and demonstrate features, conventions, voice, and etiquette of interactive digital environments to communicate with an appropriate audience.	PO 2. Communicate information and ideas respectfully and effectively to multiple audiences using a variety of digital environments.

Concept 2: Digital Solutions		
Contribute to project teams to produce original works or solve problems.		
Grade 7	Grade 8	High School (Grades 9-12)
PO 1. Communicate and collaborate for the purpose of producing original works or solving problems.	PO 1. Communicate and collaborate for the purpose of producing original works or solving problems.	PO 1. Communicate and collaborate for the purpose of producing original works or solving problems.

Concept 3: Global Connections		
Create cultural understanding and global awareness by interacting with learners of other cultures.		
Grade 7	Grade 8	High School (Grades 9-12)
PO 1. Independently locate and interact with teacher approved global communities.	PO 1. Independently locate and interact with teacher approved global communities.	PO 1. Engage in a global community to contribute to a specific global issue.

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Strand 3: Research and Information Literacy

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Concept 1: Planning Plan strategies to guide inquiry.		
Grade 7	Grade 8	High School (Grades 9-12)
PO 1. Predict the most effective keywords and phrases for use in information searches.	PO 1. Predict the most effective keywords and phrases for use in information searches.	PO 1. Identify and defend effective key words, phrases, and strategies for conducting information searches.
PO 2. Determine which information source will provide the desired data.	PO 2. Determine which information source will provide the desired data.	PO 2. Evaluate diverse information sources.

Concept 2: Processing Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media.		
Grade 7	Grade 8	High School (Grades 9-12)
PO 1. Locate and synthesize information utilizing advanced search strategies.	PO 1. Locate and synthesize information utilizing advanced search strategies.	PO 1. Locate and synthesize information utilizing advanced search strategies including a variety of search engines, metadata search engines, deep web searches and databases.
PO 2. Use authoritative primary and/or secondary sources.	PO 2. Evaluate and use authoritative primary and/or secondary sources.	PO 2. Defend the authority of primary and/or secondary sources used in research.
PO 3. Evaluate between fact and opinion, bias, inaccurate and misleading information by consulting multiple sources.	PO 3. Evaluate between fact and opinion, bias, inaccurate and misleading information by consulting multiple sources.	PO 3. Evaluate information identifying facts, opinions, bias, inaccurate and misleading information by analyzing multiple sources.
PO 4. Synthesize research information to create new understanding or develop new ideas.	PO 4. Synthesize research information to create new understanding.	PO 4. Synthesize research information to create new understanding and innovative solutions.
PO 5. Apply ethical use of information and media by respecting copyrights, intellectual property rights, using information and media technology responsibly, and citing resources appropriately.	PO 5. Apply ethical use of information and media by respecting copyrights, intellectual property rights, using information and media responsibly, and citing resources appropriately.	PO 5. Apply ethical use of information and media by respecting the principles of copyrights, intellectual freedom and property rights, using information and media technology responsibly, and citing resources appropriately.

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Strand 4: Critical Thinking, Problem Solving and Decision Making

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Strand 4: Critical Thinking, Problem Solving, Decision Making

Concept 1: Investigation		
Identify and define authentic problems and significant questions for investigations.		
Grade 7	Grade 8	High School (Grades 9-12)
PO 1. Write essential questions to investigate a topic or issue using digital tools and resources.	PO 1. Write essential questions to investigate a topic or issue using digital tools and resources.	PO 1. Write essential questions to investigate a complex (multi-step) issue using digital tools and resources.

Concept 2: Exploring Solutions		
Plan and manage activities to develop solutions to answer a question or complete a project.		
Grade 7	Grade 8	High School (Grades 9-12)
PO 1. Plan, conduct and manage research using appropriate digital resources to develop solutions for a question.	PO 1. Plan, conduct and manage research using appropriate digital resources to develop solutions for a question.	PO 1. Plan and manage an individual learning project that collects multiple data sets from diverse sources, creating planning adjustments and course corrections from the knowledge gained.
PO 2. Present defensible solutions and make decisions from multiple perspectives using collected resources and data.	PO 2. Present defensible solutions and make decisions from multiple perspectives using collected resources and data.	PO 2. Present defensible solutions and make decisions from multiple perspectives using collected resources and data.

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Strand 5: Digital Citizenship

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Strand 5: Digital Citizenship

Concept 1: Safety and Ethics		
Advocate and practice safe, legal, and responsible use of information and technology.		
Grade 7	Grade 8	High School (Grades 9-12)
PO 1. Assess situations in which it is appropriate and safe to use a personal digital device in the home, school, community, and in the work place.	PO 1. Assess situations in which it is appropriate and safe to use a personal digital device in the home, school, community, and in the work place.	PO 1. Determine when it is appropriate and safe to use various personal digital devices.
PO 2. Describe strategies to deal with cyber-bullying situations.	PO 2. Describe strategies to deal with cyber-bullying situations.	PO 2. Describe strategies to deal with cyber-bullying situations.
PO 3. Articulate and practice the school and district rules governing the use of digital tools as defined by school board policy and procedures.	PO 3. Articulate and practice the school and district rules governing the use of digital tools as defined by school board policy and procedures.	PO 3. Advocate and practice safe, legal, and responsible use of digital tools as defined by school board policy and procedures.
PO 4. Demonstrate safe online communication practices regarding personal information.	PO 4. Demonstrate safe online communication practices regarding personal information.	PO 4. Demonstrate safe online communication practices regarding personal information.
PO 5. Analyze and compare various aspects of e-commerce.	PO 5. Analyze and compare various aspects of e-commerce.	PO 5. Analyze and compare how web advertising influences consumer choices.
PO 6. Exhibit legal and ethical behavior when using technology.	PO 6. Exhibit legal and ethical behavior when using technology.	PO 6. Advocate and exhibit legal and ethical behavior when using technology.

Concept 2: Leadership for Digital Citizenship		
Demonstrates leadership for digital citizenship.		
Grade 7	Grade 8	High School (Grades 9-12)
PO 1. Promote digital citizenship by consistently leading by example and advocating social and civic responsibility to others.	PO 1. Promote digital citizenship by consistently leading by example and advocating social and civic responsibility to others.	PO 1. Exhibit digital citizenship by consistently leading by example and advocating social and civic responsibility to others.

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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.		
Grade 7	Grade 8	High School (Grades 9-12)
PO 1. Analyze the potential benefits and hazards of a new technology and the possible short- and long-term consequences of implementing this technology.	PO 1. Analyze current economic, environmental, health, political, scientific, or social problems that have technological solutions and propose potential solutions for the problems.	PO 1. Develop a possible technological solution for a contemporary issue.

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Strand 6: Technology Operations and Concepts

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Concept 1: Understanding Recognize, define and use technology processes, systems, and applications.		
Grade 7	Grade 8	High School (Grades 9-12)
PO 1. Explain and correctly use terms related to networks and connectivity.	PO 1. Explain how systems are integrated detailing input, output, and network devices.	PO 1. Describe how the components of a system are integrated using appropriate terminology.
PO 2. Define and apply knowledge of various technical process terms.	PO 2. Define and apply knowledge of various technical process terms.	PO 2. Define and apply knowledge of various technical process terms.
PO 3. Choose technology applications appropriate for the audience and task.	PO 3. Choose technology applications appropriate for the audience and task.	PO 3. Choose technology applications appropriate for the audience and task.
PO 4. Recognize and demonstrate ergonomically safe and sound use of equipment.	PO 4. Recognize and demonstrate ergonomically safe and sound use of equipment.	PO 4. Recognize and demonstrate ergonomically safe and sound use of equipment.
PO 5. Identify physical risks of using digital technology.	PO 5. Analyze and evaluate physical risks of using digital technology.	PO 5. Investigate and evaluate physical risks of using digital technology.

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Strand 6: Technology Operations and Concepts

Concept 2: Applications Select and use applications effectively and productively.		
Grade 7	Grade 8	High School (Grades 9-12)
PO 1. Demonstrate speed and accuracy with appropriate data entry tools with at least 25 wpm and 80% accuracy.	PO 1. Demonstrate speed and accuracy with appropriate data entry tools with at least 30 wpm and 80% accuracy.	PO 1. Demonstrate speed and accuracy using appropriate data entry tools.
PO 2. Compose a document that applies advanced formatting.	PO 2. Compose a multiple section document using advanced formatting.	PO 2. Compose a multiple section document that applies the most appropriate media and advanced formatting.
PO 3. Enter/edit data using simple formulas while using spreadsheet(s) to perform calculations.	PO 3. Apply formatting features while using spreadsheet programs to customize tables, charts, and graphs.	PO 3. Use spreadsheets to calculate, graph, organize, and present data in a variety of real-world settings.
PO 4. Define terms used in database creation and perform simple operations.	PO 4. Create a simple database for a content area.	PO 4. Use database features to export, organize, compile, and output data.
PO 5. Create and edit visual and audio material to generate a multimedia product.	PO 5. Create and edit visual and audio material to generate a stand-alone multimedia product.	PO 5. Compose media for the web with interactive capabilities.
PO 6. Identify criteria for evaluating technical and design qualities of a web site and then create web-based content from the identified criteria.	PO 6. Identify criteria for evaluating technical and design qualities of a web site and then create web-based content from the identified criteria.	PO 6. Create, evaluate and critique web structure and content.
PO 7. Identify and use network protocols for moving files and secure web access.	PO 7. Identify and use network protocols for moving files and secure web access.	PO 7. Use network protocols for moving files and secure web access.

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Strand 6: Technology Operations and Concepts

Concept 3: Problem Solving		
Define problems and investigate solutions in systems and processes.		
Grade 7	Grade 8	High School (Grades 9-12)
PO 1. Generate and apply solutions to troubleshoot hardware and software issues and problems.	PO 1. Generate and apply solutions to troubleshoot hardware and software issues and problems.	PO 1. Identify and use online help and other support to learn about features of hardware, software, and connectivity as well as to assess and resolve problems.

Concept 4: Transfer of Knowledge		
Transfer current knowledge to learning of new technologies.		
Grade 7	Grade 8	High School (Grades 9-12)
PO 1. Transfer understanding of current technologies, input/output devices, symbols and icons, and applications to learning new technologies.	PO 1. Transfer understanding of current technologies to new and novel learning situations.	PO 1. Transfer understanding of current technologies to new and novel learning situations.