

Content Area		Technology									
Standard		8.1 Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaboratively and to create and communicate knowledge									
										I - Introduce	
										R - Reinforce	
Strand A: Technology Operations and Concepts										M - Master	
Content Statement	CPI#	Tools	Cumulative Progress Indicator (CPI)	K	1	2	3	4	5	6	
The use of technology and digital tools requires knowledge and appropriate use of operations and related applications.	8.1.2.A.1	Teacher created worksheets, posters, discussions	Identify the basic features of a computer and explain how to use them effectively.	I	R	M					
	8.1.2.A.2		Use technology terms in daily practice.	I	R	M					
	8.1.2.A.3	Teacher guided discussions	Discuss the common uses of computer applications and hardware and identify their advantages and disadvantages.	I	R	M					
	8.1.2.A.4		Create a document with text using a word processing program.	I	R	M					
	8.1.2.A.5	Interactive Internet web sites	Demonstrate the ability to navigate in developmentally appropriate virtual environments.	I	R	M					
	8.1.4.A.1	Keyboard and mouse	Demonstrate effective input of text and data using an input device.			I	R	M			
	8.1.4.A.2	Creativity programs, word processing programs	Create a document with text formatting and graphics using word processing.			I	R	M			
	8.1.4.A.3	Presentation software	Create and present a multimedia presentation that includes graphics.			I	R	M			
Creativity programs, word processing programs	8.1.4.A.4	Spreadsheet software	Create a simple spreadsheet, enter data, and interpret the information.			I	R	M			
	8.1.4.A.5		Determine the benefits of a wide range of digital tools by using to solve problems.			I	R	M			
	8.1.8.A.1	Word processing, Desktop publishing software	Create professional documents (e.g., newsletter, personalized learning plan, business letter or flyer) using advanced features of a word processing program.						I	R	
	8.1.8.A.2	Spreadsheet or database software	Plan and create a simple database, define fields, input data and produce a report using sort and query.							I	
	8.1.8.A.3	Presentation software	Create a multimedia presentation including sound and images.						I	R	
	8.1.8.A.4	Spreadsheet software	Generate a spreadsheet to calculate, graph and present information.						I	R	
	8.1.8.A.5		Select and use appropriate tools and digital resources to accomplish a variety of tasks and to solve problems.							I	

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Strand B: Creativity and Innovation										M - Master
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The use of digital tools enhances creativity and the construction of knowledge.	8.1.2.B.1	Digital cameras, creativity software: eg. Kid Pix; presentation software; movie making software; teacher created podcasts	Illustrate and communicate original ideas and stories using digital tools and media-rich resources.	I	R	M				
	8.1.4.B.1	Digital cameras, creativity software: eg. presentation software; movie making software; podcasts	Produce a media-rich digital story about a significant local event or issue based on first-person interviews.			I	R	M		
	8.1.8.B.1	Use web publishing software to communicate and share ideas and projects.	Synthesize and publish information about a local or global issue or event on a web-based shared hosted service.							I R

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	Strand C: Communication and Collaboration							M - Master		
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Digital tools and environments support the learning process and foster collaboration in solving local or global issues and problems.	8.1.2.C.1	Teacher created multimedia	Engage in a variety of developmentally appropriate learning activities with students in	I	R	M				
	8.1.4.C.1	Web-based collaborative sites: http://www.ks-connection.org http://www.kids-space.org/index.html	Engage in online discussions with learners in the United States or from other countries to understand their perspectives on a global problem/issue.			I	R	M		
	8.1.8.C.1	Web-based collaborative web-sites	Participate in an online learning community with learners from other countries to understand their perspectives on a global problem/issue and propose possible solutions.						I	R

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Strand D: Digital Citizenship								M - Master			
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Technological advancements create societal concerns regarding the ratio of safe, legal and ethical behaviors.	8.1.2.D.1	Discussions	Model legal and ethical behaviors when using information both print and non-print by citing resources.	I	R	M					
	8.1.4.D.1	Discussions, NetSmartz for Kids website, etc.	Discuss the importance of cyber safety, cyber security, and cyber ethics as individuals and members of the global community when using existing and emerging technologies.		I	R	R	M			
	8.1.4.D.2	Website evaluation activities	Evaluate the accuracy, relevance, and appropriateness of print and non-print electronic information sources.			I	R	M			
	8.1.4.D.3	Discussion & review of policy	Explain the purpose of a Acceptable Use Policy (AUP) and the consequences of inappropriate use of technology.	I	R	R	R	M			
	8.1.8.D.1	Presentation software, eg. MS Power Point, Keynote, podcasts.	Demonstrate how information may be biased by creating a multimedia presentation based on research on a controversial issue.						I	R	R

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Strand E: Research and Information Fluency										M - Master
Content Statement	CPI #	Tools	Cumulative Progress Indicator (CPI)	K	1	2	3	4	5	6
Effective use of digital tools assists in gathering and managing information.	8.1.2.E.1	Discussions and problem solving based on real life activities using the computer	Research a problem/issue affecting children using digital tools and resources and discuss possible solutions.	I	R	M				
	8.1.4.E.1	Distance learning; presentation tools; Discussions and problem solving based on real life activities using the computer*	Investigate a problem/issue found in the United States and/or other country from multiple perspectives using digital tools and resources and evaluate findings to present possible solutions.			I	R	M		
	8.1.8.E.1	Web-based research, spreadsheets; Discussions and problem solving based on real life activities using the computer	Gather and analyze findings to produce a possible solution for a content-related or real world problem using data collection technology.						I	R
		* discussing when things don't work, what to check for, how to fix it.								

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Strand F: Critical Thinking, Problem Solving, and Decision making							M - Master				
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Informational accessed through the use of digital tools assists in generating solutions and making decisions.	8.1.2.F.1	Mapping software; Google Earth; Incredible Map Machine	Use mapping tools to plan and choose alternate routes to and from various locations.	I	R	M					
	8.1.4.F.1	Spreadsheets, web based research	Select and apply digital tools to collect, organize, and analyze data that support a scientific finding.			I	R	M			
	8.1.8.F.1	Digital stories, presentation tools, distance learning, podcasts	Use an electronic authoring tool in collaboration with learners from other countries to glean their perspectives about a current event or contemporary figure.							I R	

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Standard	Standard 8.2 Technology Education, Engineering and Design: All students will develop an understanding of the nature and impact of technology, engineering, technological design, and the designed world, as they relate to the individual, global society, and the environment.									
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Strand A: Nature of Technology: Creativity and Innovation										M - Master
Content Statement	CPI #	Tools	Cumulative Progress Indicator (CPI)	K	1	2	3	4	5	6
Technology systems impact every aspect of the world in which we live.	8.2.2.A.1	Calculators/Math; Research using web based databases & encyclopedias	Describe how technology's products, systems and resources are useful tools at school, home and work.	I	R	M				
	8.2.4.A.1	Social Studies/Math	Investigate factors that influence the development and function of products and systems				R	M		
	8.2.4.A.2	Presentation software/Social Studies	Compare and contrast how a product has changed over time due to economic, political and/or cultural influences using a digital format			I	R	M		
	8.2.8.A.1	Social Studies/Science	Explain the impact of globalization on the development of a technological system over time.							I

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Strand B: Design: Critical Thinking, Problem Solving, and Decision Making										M - Master
Content Statement	CPI #	Tools	Cumulative Progress Indicator (CPI)	K	1	2	3	4	5	6
The design process is a systematic approach to solving problems.	8.2.2.B.1	Science-concept mapping software	Brainstorm and devise a plan to repair a broken toy/tool using the design process.	I	R	M				
	8.2.2.B.2	Social Studies- Class discussions; Kidbiz; email	Investigate the influence of a specific technology on the individual, family, community and environment.	I	R	M				
	8.2.4.B.1	Science- Interactive software; web based activities	Develop a product using and online simulation that explores the design process.			I	R	M		
	8.2.4.B.2	Science- presentation software	Design an alternative use for an existing product.			I	R	M		
	8.2.4.B.3	Science	Explain the positive and negative effect of products and systems on humans, other species and the environment.			I	R	M		
	8.2.4.B.4	Science	Compare and contrast how technology transfer happens within a technology, among technologies, and among other fields of study.			I	R	M		
	8.2.8.B.1	Science	Design and create a product using the design process that addresses a real world problem with specific criteria and constraints.							I
	8.2.8.B.2	Science	Identify the design constraints and trade offs involved in designing a prototype (how the prototype might fail, and how it might be improved) by completing a design problem and reporting results in a multimedia presentation.							I
	8.2.8.B.3	Science	Solve a science-based design challenge and build a prototype using science and math principles throughout the design process.							I

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Strand C: Technological Citizenship, Ethics and Society											M - Master
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Knowledge and understanding of human, cultural and societal values are fundamental when designing technology systems and products in the global society.	8.2.2.C.1	Social Studies	Demonstrate how reusing a product affects the local and global environment	I	R	M					
	8.2.4.C.1	Interactive online activities	Explain the impact of disposing of materials in a responsible way.			I	R	M			
	8.2.4.C.2	Online resources; web based encyclopedias	Explain the purpose of trademarks and the impact of trademark infringement on businesses.			I	R	M			
	8.2.4.C.3	Instruction & discussion of ownership using online resources citing references	Examine ethical considerations in the development and production process of a product from its inception through marketing, use, maintenance and disposal by consumers.			I	R	M			
	8.2.8.C.1	Discussion; ethics	Explain the need for a patent and process of registering one.								I
	8.2.8.C.2		Compare and contrast current and past incidences of ethical and unethical use of labor in the United States or another country and present results in a media-rich presentation.								I

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Information literacy skills, research data analysis and prediction are the basics for the effective design of technology systems	8.2.2.D.1	Spreadsheet software	Collect and post the results of a digital classroom survey about a problem or issue and predict consequences based on claims and reasons.	I	R	M				
	8.2.4.D.1	Spreadsheet software; create graphs, diagrams	Analyze responses collected from owners/users of a particular product and suggest modifications in the design of the product based on responses.			I	R	M		
	8.2.8.D.1		Evaluate the role of ethics and bias on trend analysis and prediction in the development of a product that impacts communities in the United States and/or other countries.							I

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Strand E: Communication and Collaboration										M - Master
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Digital tools facilitate local and global communication in designing products and systems.	8.2.2.E.1	Video conferencing; online collaborative websites	Communicate with student in the United States or other countries using digital tools to gather information about a specific topic and share results.	I	R	M				
	8.2.4.E.1	Video conferencing; online collaborative websites	Explain how technology is/was successfully or unsuccessfully used to address local/global problem by producing and publishing a report in collaboration with peers.			I	R	M		
	8.2.8.E.1	Video conferencing; online collaborative websites	Develop a product by collaborating with peers and experts in the field, using the design process, data analysis and trends and maintain a digital log with annotated sketches to record the development cycle.							I

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Strand F: Technology Education, Engineering & Design										M - Master
Content Statement	CPI #	Tools	Cumulative Progress Indicator (CPI)	K	1	2	3	4	5	6
The creation of technology is derived from the application and appropriate use of technological resources.	8.2.2.F.1	Productivity & creativity software	Identify the resources needed to create technological products and systems.	I	R	M				
	8.2.4.F.1	Productivity & creativity software	Describe how resources are used in a technological product or system.			I	R	M		
	8.2.4.F.2	Internet resources; creativity software; productivity software	Explain how resources are processed in order to produce products and systems.			I	R	M		
	8.2.8.F.1		Explain the impact of resource selection and processing in the development of a technological product or system.							I
	8.2.8.F.2		Explain how the resources and processes used in the production of a current product can be modified to have a more positive impact on the economy and the environment (e.g., recycled metals, alternate energy sources)							I

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Strand G: The Designed World										M - Master
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The designed world is the product of a design process that provides the means to convert resources into products and systems.	8.2.2.G.1	Interactive online activities	Describe how the parts of a common toy/tool interact and work as part of a	I	R	M				
	8.2.2.G.2	Class discussion s re class rules in reference to technology	Explain the importance of safety in the use and selection of appropriate tools and resources for a specific purpose.	I	R	M				
	8.2.4.G.1	Internet research	Examine a malfunctioning tool and use a step-by-step process to troubleshoot and present options to repair the product							
	8.2.4.G.2	MS Office productivity tools	Explain the functions of a system and subsystems.				I	R	M	
	8.2.4.G.3	Using productivity tools to store & retrieve artifacts	Evaluate the function, value, and esthetics of a technological product, system or environment from the perspective of the user and the producer.							
							I	R	M	