

**LONG HILL TOWNSHIP PUBLIC SCHOOLS**

**TECHNOLOGY INTEGRATION CURRICULUM GUIDE**  
**CURRICULUM GUIDE**

**Updated Curriculum Board Adopted: September 10, 2012**

**LONG HILL TOWNSHIP PUBLIC SCHOOLS**

**TECHNOLOGY INTEGRATION CURRICULUM GUIDE**

**ACKNOWLEDGEMENTS**

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### **AFFIRMATIVE ACTION STATEMENT**

It is the policy of the Board of Education to provide equal employment and educational opportunities regardless of race, color, creed, religion, sex, ancestry, national origin, place of residence, social or economic condition or non-applicable handicap.

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### **ADAPTIONS FOR SPECIAL EDUCATION STATEMENT**

Although this curriculum guide has been developed for general education delivery, the knowledge, skills, attitudes and behaviors identified are appropriate for the special education pupils in Long Hill Township. Modifications necessary to accommodate the education needs of individual pupil's handicaps will be described in the Individualized Educational Program (IEP). They are on file at:

Office of Special Services  
c/o Millington School  
91 Northfield Road  
Millington, NJ, 07946  
(908) 647-1202

## TECHNOLOGY INTEGRATION CURRICULUM GUIDE STATEMENT OF PHILSOPHY

Long Hill Township's philosophy of education is to provide an academic climate that stresses high academic achievement and encourages students to become useful, self-supporting citizens within the limits of their individual abilities and interests. Our goal is to prepare our students to function in a rapidly changing world with an awareness of the past, understanding of the present, and a preparation for the future. Technology has become critical to this philosophy. Long Hill Township recognizes the impact computers have on society today. It is critical that our students are comfortable with and knowledgeable about the use of technology in their lives. Our students must understand how to use technology to control information in all subject areas and life situations. In addition, the New Jersey Core Curriculum Content Standards require that technology be used in critical thinking, higher level learning and research. They require that technology be integrated into subject matter to enrich the learning process. It is the goal of the Long Hill Township Schools that the curricula drive the technology. We believe that technology should be used to facilitate the learning of Language Arts, Basic Skills, Math, Science, Social Studies, Art and Music. We believe that our students should be able to produce multimedia presentations, reports, spreadsheets, databases, charts, and graphs in support of classroom content. In order to comply with the Core Standards, computers should be used for classroom content. IN order to comply with the Core Standards, computers and other equipment should be used for classroom presentations, simulations, communications, collaborative projects, problem solving, and data collection and analysis.

Long Hill Township's *Technology Education Integration Guide* contains suggested lessons that encourage creativity, higher level thinking skills and student-centered learning. As the district succeeds in implementing its Technology and Distance Learning Plan, the lessons contained in this guide can be used by our teachers to help our students become more responsible for their own learning. As our computer labs are upgrades and additional form of technology are made available for student and teacher use and Internet access provided, this *Technology Education Curriculum Guide* will be revised as needed to reflect new accommodations.

## 2009 New Jersey Core Curriculum Content Standards - Technology

Content Area		Technology	
Standard		<b>8.1 Educational Technology:</b> 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.	
Strand		<b>A. Technology Operations and Concepts</b>	
By the end of grade	Content Statement	CPI#	Cumulative Progress Indicator (CPI)
P	The use of technology and <a href="#">digital tools</a> requires knowledge and appropriate use of <a href="#">operations and related applications</a> .	8.1.P.A.1	Use the mouse to negotiate a simple menu on the screen (e.g., to print a picture).
		8.1.P.A.2	Use electronic devices (e.g., computer) to type name and to create stories with pictures and letters/words.
		8.1.P.A.3	Identify the "power keys" (e.g., ENTER, spacebar) on a keyboard.
		8.1.P.A.4	Recognize that the number keys are in a row on the top of the keyboard.
		8.1.P.A.5	Use <a href="#">basic technology terms</a> in conversations (e.g., digital camera, battery, screen, computer, Internet, mouse, keyboards, and printer).
		8.1.P.A.6	Turn smart toys on and off.
2	The use of technology and <a href="#">digital tools</a> requires knowledge and appropriate use of <a href="#">operations and related applications</a> .	8.1.2.A.1	Identify the basic features of a computer and explain how to use them effectively.
		8.1.2.A.2	Use technology terms in daily practice.
		8.1.2.A.3	Discuss the common uses of computer applications and hardware and identify their advantages and disadvantages.
		8.1.2.A.4	Create a document with text using a word processing program.
		8.1.2.A.5	Demonstrate the ability to navigate in <a href="#">virtual environments</a> that are <a href="#">developmentally appropriate</a> .
4	The use of technology and <a href="#">digital tools</a> requires knowledge and appropriate use of <a href="#">operations and related applications</a> .	8.1.4.A.1	Demonstrate effective input of text and data using an input device.
		8.1.4.A.2	Create a document with text formatting and graphics using a word processing program.
		8.1.4.A.3	Create and present a <a href="#">multimedia presentation</a> that includes graphics.
		8.1.4.A.4	Create a simple spreadsheet, enter data, and interpret the information.
		8.1.4.A.5	Determine the benefits of a wide range of digital tools by using them to solve problems.
8	The use of technology and <a href="#">digital tools</a> requires knowledge and appropriate use of <a href="#">operations and related applications</a> .	8.1.8.A.1	Create professional documents (e.g., newsletter, personalized learning plan, business letter or flyer) using advanced features of a word processing program.
		8.1.8.A.2	Plan and create a simple database, define fields, input data, and produce a report using sort and query.
		8.1.8.A.3	Create a <a href="#">multimedia presentation</a> including sound and images.

		8.1.8.A.4	Generate a spreadsheet to calculate, graph, and present information.
		8.1.8.A.5	Select and use appropriate tools and digital resources to accomplish a variety of tasks and to solve problems.

<b>Content Area</b>		<b>Technology</b>	
<b>Standard</b>		<b>8.1 Educational Technology:</b> 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.	
<b>Strand</b>		<b>B. Creativity and Innovation</b>	
<b>By the end of grade</b>	<b>Content Statement</b>	<b>CPI#</b>	<b>Cumulative Progress Indicator (CPI)</b>
P	The use of <a href="#">digital tools</a> and <a href="#">media-rich resources</a> enhances creativity and the construction of knowledge.	8.1.P.B.1	Use a digital camera to take a picture.
2	The use of <a href="#">digital tools</a> and <a href="#">media-rich resources</a> enhances creativity and the construction of knowledge.	8.1.2.B.1	Illustrate and communicate original ideas and stories using digital tools and <a href="#">media-rich resources</a> .
4	The use of <a href="#">digital tools</a> and <a href="#">media-rich resources</a> enhances creativity and the construction of knowledge.	8.1.4.B.1	Produce a <a href="#">media-rich</a> digital story about a significant local event or issue based on first-person interviews.
8	The use of <a href="#">digital tools</a> and <a href="#">media-rich resources</a> enhances creativity and the construction of knowledge.	8.1.8.B.1	Synthesize and publish information about a local or global issue or event on a collaborative, web-based service (also known as a <a href="#">shared hosted service</a> ).

<b>Content Area</b>		<b>Technology</b>	
<b>Standard</b>		<b>8.1 Educational Technology:</b> 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.	
<b>Strand</b>		<b>C. Communication and Collaboration</b>	
<b>By the end of grade</b>	<b>Content Statement</b>	<b>CPI#</b>	<b>Cumulative Progress Indicator (CPI)</b>
P	<a href="#">Digital tools</a> and environments support the learning process and foster collaboration in solving local or global issues and problems.	8.1.P.C.1	Operate frequently used, high-quality, interactive games or activities in either screen or toy-based formats.
		8.1.P.C.2	Access materials on a disk, cassette tape, or DVD. Insert a disk, cassette tape, CD-ROM, DVD, or other storage device and press “play” and “stop.”
2	<a href="#">Digital tools</a> and environments support the learning process and foster collaboration in solving	8.1.2.C.1	Engage in a variety of <a href="#">developmentally appropriate</a> learning activities with students in other classes, schools, or countries using electronic tools.

	local or global issues and problems.		
4	<a href="#">Digital tools</a> and environments support the learning process and foster collaboration in solving local or global issues and problems.	8.1.4.C.1	Engage in <a href="#">online discussions</a> with learners in the United States or from other countries to understand their perspectives on a global problem or issue.
8	<a href="#">Digital tools</a> and environments support the learning process and foster collaboration in solving local or global issues and problems.	8.1.8.C.1	Participate in an <a href="#">online learning community</a> with learners from other countries to understand their perspectives on a global problem or issue, and propose possible solutions.

<b>Content Area</b>		<b>Technology</b>	
<b>Standard</b>		<b>8.1 Educational Technology:</b> 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.	
<b>Strand</b>		<b>D. Digital Citizenship</b>	
<b>By the end of grade</b>	<b>Content Statement</b>	<b>CPI#</b>	<b>Cumulative Progress Indicator (CPI)</b>
2	Technological advancements create societal concerns regarding the practice of safe, legal, and ethical behaviors.	8.1.2.D.1	Model legal and ethical behaviors when using both print and non-print information by citing resources.
4	Technological advancements create societal concerns regarding the practice of safe, legal, and ethical behaviors.	8.1.4.D.1	Explain the need for each individual, as a member of the global community, to practice cyber safety, cyber security, and cyber ethics when using existing and emerging technologies.
		8.1.4.D.2	Analyze the need for and use of copyrights.
		8.1.4.D.3	Explain the purpose of an acceptable use policy and the consequences of inappropriate use of technology.
8	Technological advancements create societal concerns regarding the practice of safe, legal, and ethical behaviors.	8.1.8.D.1	Model appropriate online behaviors related to cyber safety, cyber bullying, cyber security, and cyber ethics.
		8.1.8.D.2	Summarize the application of fair use and Creative Commons guidelines.
		8.1.8.D.3	Demonstrate how information on a <a href="#">controversial issue</a> may be biased.

<b>Content Area</b>		<b>Technology</b>	
<b>Standard</b>		<b>8.1 Educational Technology:</b> 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.	
<b>Strand</b>		<b>E. Research and Information Literacy</b>	
<b>By the end of grade</b>	<b>Content Statement</b>	<b>CPI#</b>	<b>Cumulative Progress Indicator (CPI)</b>
P	Effective use of <a href="#">digital tools</a> assists in gathering and	8.1.P.E.1	Use the Internet to explore and investigate questions with a teacher's support.

	managing information.		
2	Effective use of <a href="#">digital tools</a> assists in gathering and managing information.	8.1.2.E.1	Use digital tools and online resources to explore a problem or issue affecting children, and discuss possible solutions.
4	Effective use of <a href="#">digital tools</a> assists in gathering and managing information.	8.1.4.E.1	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.
		8.1.4.E.2	Evaluate the accuracy of, relevance to, and appropriateness of using print and non-print electronic information sources to complete a variety of tasks.
8	Effective use of <a href="#">digital tools</a> assists in gathering and managing information.	8.1.8.E.1	Gather and analyze findings using <a href="#">data collection technology</a> to produce a possible solution for a content-related or real-world problem.

<b>Content Area</b>		<b>Technology</b>	
<b>Standard</b>		<b>8.1 Educational Technology:</b> 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.	
<b>Strand</b>		<b>F. Critical Thinking, Problem Solving, and Decision-Making</b>	
<b>By the end of grade</b>	<b>Content Statement</b>	<b>CPI#</b>	<b>Cumulative Progress Indicator (CPI)</b>
P	Information accessed through the use of <a href="#">digital tools</a> assists in generating solutions and making decisions.	8.1.P.F.1	Navigate the basic functions of a browser, including how to open or close windows and use the “back” key.
2	Information accessed through the use of <a href="#">digital tools</a> assists in generating solutions and making decisions.	8.1.2.F.1	Use <a href="#">mapping tools</a> to plan and choose alternate routes to and from various locations.
4	Information accessed through the use of <a href="#">digital tools</a> assists in generating solutions and making decisions.	8.1.4.F.1	Select and apply digital tools to collect, organize, and analyze data that support a scientific finding.
8	Information accessed through the use of <a href="#">digital tools</a> assists in generating solutions and making decisions.	8.1.8.F.1	Use an <a href="#">electronic authoring tool</a> in collaboration with learners from other countries to evaluate and summarize the perspectives of other cultures about a current event or contemporary figure.



<b>Content Area</b>	<b>Technology</b>		
<b>Standard</b>	<b>8.2 Technology Education, Engineering, and Design:</b> 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.		
<b>Strand</b>	<b>A. Nature of Technology: Creativity and Innovation</b>		
<b>By the end of grade</b>	<b>Content Statement</b>	<b>CPI#</b>	<b>Cumulative Progress Indicator (CPI)</b>
2	Technology products and systems impact every aspect of the world in which we live.	8.2.2.A.1	Describe how technology products, systems, and resources are useful at school, home, and work.
4	Technology products and systems impact every aspect of the world in which we live.	8.2.4.A.1	Investigate factors that influence the development and function of technology products and systems.
		8.2.4.A.2	Using a digital format, compare and contrast how a technology product has changed over time due to economic, political, and/or cultural influences.
8	Technology products and systems impact every aspect of the world in which we live.	8.2.8.A.1	Explain the impact of globalization on the development of a technological system over time.

<b>Content Area</b>	<b>Technology</b>		
<b>Standard</b>	<b>8.2 Technology Education, Engineering, and Design:</b> 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.		
<b>Strand</b>	<b>B. Design: Critical Thinking, Problem Solving, and Decision-Making</b>		
<b>By the end of grade</b>	<b>Content Statement</b>	<b>CPI#</b>	<b>Cumulative Progress Indicator (CPI)</b>
2	The design process is a systematic approach to solving problems.	8.2.2.B.1	Brainstorm and devise a plan to repair a broken toy or tool using the design process.
		8.2.2.B.2	Investigate the influence of a specific technology on the individual, family, community, and environment.
4	The design process is a systematic approach to solving problems.	8.2.4.B.1	Develop a product using an online simulation that explores the design process.
		8.2.4.B.2	Design an alternative use for an existing product.
		8.2.4.B.3	Explain the positive and negative effect of products and systems on humans, other species, and the environment.
		8.2.4.B.4	Compare and contrast how technology transfer happens within a technology, among technologies, and among other fields of study.
8	The design process is a systematic approach to solving problems.	8.2.8.B.1	Design and create a product that addresses a real-world problem using the design process and working with specific criteria and constraints.
		8.2.8.B.2	Identify the design constraints and trade-offs involved in designing a prototype (e.g., how the prototype might

			fail and how it might be improved) by completing a design problem and reporting results in a multimedia presentation.
		8.2.8.B.3	Solve a science-based design challenge and build a prototype using science and math principles throughout the design process.

<b>Content Area</b>		<b>Technology</b>	
<b>Standard</b>		<b>8.2 Technology Education, Engineering, and Design:</b> 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.	
<b>Strand</b>		<b>C. Technological Citizenship, Ethics, and Society</b>	
<b>By the end of grade</b>	<b>Content Statement</b>	<b>CPI#</b>	<b>Cumulative Progress Indicator (CPI)</b>
2	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	Demonstrate how reusing a product affects the local and global environment.
4	Knowledge and understanding of human, cultural, and societal values are fundamental when designing technology systems and products in the global society.	8.2.4.C.1	Explain the impact of disposing of materials in a responsible way.
		8.2.4.C.2	Explain the purpose of trademarks and the impact of trademark infringement on businesses.
		8.2.4.C.3	Examine ethical considerations in the development and production of a product from its inception through production, marketing, use, maintenance, and eventual disposal by consumers.
8	Knowledge and understanding of human, cultural, and societal values are fundamental when designing technology systems and products in the global society.	8.2.8.C.1	Explain the need for patents and the process of registering one.
		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.

<b>Content Area</b>		<b>Technology</b>	
<b>Standard</b>		<b>8.2 Technology Education, Engineering, and Design:</b> 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.	
<b>Strand</b>		<b>D. Research and Information Fluency</b>	
<b>By the end of grade</b>	<b>Content Statement</b>	<b>CPI#</b>	<b>Cumulative Progress Indicator (CPI)</b>
2	Information-literacy skills, research, data analysis, and prediction provide the basis for the effective design of technology systems.	8.2.2.D.1	Collect and post the results of a digital classroom survey about a problem or issue and use data to suggest solutions.

4	Information-literacy skills, research, data analysis, and prediction provide the basis for the effective design of technology systems.	8.2.4.D.1	Analyze responses collected from owners/users of a particular product and suggest modifications in the design of the product based on their responses.
8	Information-literacy skills, research, data analysis, and prediction provide the basis for the effective design of technology systems.	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.

<b>Content Area</b>		<b>Technology</b>	
<b>Standard</b>		<b>8.2 Technology Education, Engineering, and Design:</b> 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.	
<b>Strand</b>		<b>E. Communication and Collaboration</b>	
<b>By the end of grade</b>	<b>Content Statement</b>	<b>CPI#</b>	<b>Cumulative Progress Indicator (CPI)</b>
2	<a href="#">Digital tools</a> facilitate local and global communication and collaboration in designing products and systems.	8.2.2.E.1	Communicate with students in the United States or other countries using digital tools to gather information about a specific topic and share results.
4	<a href="#">Digital tools</a> facilitate local and global communication and collaboration in designing products and systems.	8.2.4.E.1	Work in collaboration with peers to produce and publish a report that explains how technology is or was successfully or unsuccessfully used to address a local or global problem.
8	<a href="#">Digital tools</a> facilitate local and global communication and collaboration in designing products and systems.	8.2.8.E.1	Work in collaboration with peers and experts in the field to develop a product using the design process, data analysis, and trends, and maintain a digital log with annotated sketches to record the development cycle.

<b>Content Area</b>		<b>Technology</b>	
<b>Standard</b>		<b>8.2 Technology Education, Engineering, and Design:</b> 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.	
<b>Strand</b>		<b>F. Resources for a Technological World</b>	
<b>By the end of grade</b>	<b>Content Statement</b>	<b>CPI#</b>	<b>Cumulative Progress Indicator (CPI)</b>
2	Technological products and systems are created through the application and appropriate use of technological resources.	8.2.2.F.1	Identify the resources needed to create technological products and systems.
4	Technological products and systems are created through the application and appropriate use of technological resources.	8.2.4.F.1	Describe how resources are used in a technological product or system.
		8.2.4.F.2	Explain how resources are processed in order to produce technological products and systems.
8	Technological products and	8.2.8.F.1	Explain the impact of resource selection and processing

	systems are created through the application and appropriate use of technological resources.		in the development of a common technological product or system.
		8.2.8.F.2	Explain how the resources and processes used in the production of a current technological product can be modified to have a more positive impact on the environment (e.g., by using recycled metals, alternate energy sources) and the economy.

<b>Content Area</b>		<b>Technology</b>	
<b>Standard</b>		<b>8.2 Technology Education, Engineering, and Design:</b> 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.	
<b>Strand</b>		<b>G. The Designed World</b>	
<b>By the end of grade</b>	<b>Content Statement</b>	<b>CPI#</b>	<b>Cumulative Progress Indicator (CPI)</b>
2	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	Describe how the parts of a common toy or tool interact and work as part of a system.
		8.2.2.G.2	Explain the importance of safety in the use and selection of appropriate tools and resources for a specific purpose.
4	The designed world is the product of a design process that provides the means to convert resources into products and systems.	8.2.4.G.1	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	Explain the functions of a system and subsystems.
		8.2.4.G.3	Evaluate the function, value, and aesthetics of a technological product, system, or environment from the perspective of the user and the producer.
8	The designed world is the product of a design process that provides the means to convert resources into products and systems.	8.2.8.G.1	Explain why human-designed systems, products, and environments need to be constantly monitored, maintained, and improved.
		8.2.8.G.2	Explain the interdependence of a subsystem that operates as part of a system.

<b><u>BASIC TECHNOLOGY TERMS</u></b>
<b>Basic technology terms for preschool:</b> Examples digital camera, battery, screen, computer, Internet, mouse, keyboard, and printer.
<b><u>CONTROVERSIAL ISSUE</u></b>
<b>Controversial issue:</b> For example, global warming, scarcity of water, alternative energy sources, election campaigns.
<b><u>CURRENT AND EMERGING TECHNOLOGY RESOURCES</u></b>
<b>Current and emerging technology resources:</b> For example, cell phones, GPS, online communities using wikis, blogs, and/or Nings.
<b><u>DATA COLLECTION TECHNOLOGY</u></b>
<b>Data-collection technology:</b> For example, probes, handheld devices, and geographic mapping systems.
<b><u>DEVELOPMENTALLY APPROPRIATE</u></b>

**Developmentally appropriate:** Students' developmental levels prescribe the learning environment and activities that are used.

**DIGITAL LEARNING GAME**

**Digital learning game:** For example, Alice, Lively.

**DIGITAL TOOLS1**

**Digital tools for grade 2:** For example, computers, digital cameras, software.

**DIGITAL TOOLS2**

**Digital tools for grades 4, 8, and 12:** For example, computers, digital cameras, probing devices, software, cell phones, GPS, online communities, VOIP, and virtual conferences.

**ELECTRONIC AUTHORIZING TOOL**

**Electronic authoring tools:** Software that facilitates online book development (e.g., multimedia electronic book).

**MAPPING TOOLS**

**Mapping tools:** For example, Google earth, Yahoo maps, and Google maps.

**MEDIA-RICH RESOURCES**

**Media-rich:** Multiple forms of digital applications in one product (e.g., graphic design, word processing, and spreadsheet).

**MULTIMEDIA PRESENTATION**

**Multimedia presentation:** For example, movie, podcast, Blog.

**ONLINE DISCUSSIONS**

**Online discussion:** UNICEF, Oracle, i-Earn, blogs, wikis.

**ONLINE LEARNING COMMUNITY**

**Online learning community:** For example, i-Earn, Ning, blogs, wikis, Second Life.

**OPERATIONS AND RELATED APPLICATIONS**

**Operations and related applications:** For example, saving a word processing file to a network drive, printing a spreadsheet.

**REVERSE-ENGINEER**

**Reverse engineer:** To isolate the components of a completed system.

**SHARED HOSTED SERVICE**

**Shared hosted services:** For example, podcasts, videos, or Blogs.

**TECHNOLOGIES**

**Technologies:** Medical, agricultural, and related biotechnologies, energy and power technologies, information and communications technologies, transportation technologies, manufacturing technologies, and construction technologies.

**VIRTUAL ENVIRONMENTS**

**Virtual environments:** For example, games, simulations, websites, blogs.

**WEB-BASED PUBLICATION**

**Web-based publication:** For example, web pages, wikis, blogs.

LONG HILL TOWNSHIP SCHOOL DISTRICT  
Technology Integration Curriculum Guide

<b>8.1 Educational Technology:</b> 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.	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>
<b>A. Technology Operations and Concepts</b>  8.1.P.A.1-6 8.1.2.A.1-5 8.1.4.A.1-5 8.1.8.A.1-5	X	X	X	X	X	X	X	X	X
<b>B. Creativity and Innovation</b>  8.1.P.B.1 8.1.2.B.1 8.1.4.B.1 8.1.8.B.1	X	X	X	X	X	X	X	X	X
<b>C. Communication and Collaboration</b>  8.1.P.C.1-2 8.1.2.C.1 8.1.4.C.1 8.1.8.C.1	X	X	X	X	X	X	X	X	X
<b>D. Digital Citizenship</b>  8.1.2.D.1 8.1.4.D.1-3 8.1.8.D.1-3			X	X	X	X	X	X	X
<b>E. Research and Information Literacy</b>  8.1.P.E.1 8.1.2.E.1 8.1.4.E.1-2 8.1.8.E.1	X	X	X	X	X	X	X	X	X

<b>F. Critical Thinking, Problem Solving, and Decision-Making</b>  8.1.P.F.1 8.1.2.F.1 8.1.4.F.1 8.1.8.F.1	X	X	X	X	X	X	X	X	X	
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<b>8.2 Technology Education, Engineering, and Design:</b> 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.	K	1	2	3	4	5	6	7	8
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<b>A. Nature of Technology: Creativity and Innovation</b>  8.2.2.A.1 8.2.4.A.1-2 8.2.8.A.1			X	X	X	X	X	X	X
<b>B. Design: Critical Thinking, Problem Solving, and Decision- Making</b>  8.2.2.B.1-2 8.2.4.B.1-4 8.2.8.B.1-3			X	X	X	X	X	X	X
<b>C. Technological Citizenship, Ethics, and Society</b>  8.2.2.C.1 8.2.4.C.1-3 8.2.8.C.1-2			X	X	X	X	X	X	X
<b>D. Research and Information Fluency</b>  8.2.2.D.1 8.2.4.D.1 8.2.8.D.1			X	X	X	X	X	X	X
<b>E. Communication and Collaboration</b>  8.2.2.E.1 8.2.4.E.1 8.2.8.E.1			X	X	X	X	X	X	X
<b>F. Resources for a Technological World</b>  8.2.2.F.1 8.2.4.F.1-2 8.2.8.F.1-2			X	X	X	X	X	X	X

<b>G. The Designed World</b>  8.2.2.G.1-2 8.2.4.G.1-3 8.2.8.G.1-2			X	X	X	X	X	X	X
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## 1. Plagiarism

The following is a list of suggestions on ways to prevent plagiarism compiled from a variety of Internet resources. The sources are cited at the end. Read through the following list of suggestions to see what pointers you may wish to use in your classroom.

### *Preventing Plagiarism*

- Don't assume students know what plagiarism is. Outline your expectations clearly. To begin discussion with students consider this questionnaire by Joyce Valenza: **Is it plagiarism?** (<http://www.sdst.org/shs/library/isitplag.html>)
- Visit paper mill sites to search for essays in your subject or topic area before giving assignments. Know what's "out there." Assigning the same types of essays (like a "typical" Hamlet essay), year after year, will increase the likelihood of students submitting plagiarized assignments.
- Show your students what is available to them on the Internet. Let them see that you know about these sites. Students might think twice before submitting a plagiarized paper if they think you may have already seen it.
- Have students include Web source documents in their research on a regular basis. Teach them how to site sources correctly. For a good online resource tool, try the **Citation Machine**.
- Include specific instructions about bibliographies when assigning research topics. For example, require students to include materials from required readings and other types of resources.
- Approach plagiarism as a copyright issue and as a way to emphasize good writing and source management skills. This approach is more meaningful than simply stating, "Don't plagiarize."
- For younger students... You may want to begin with **Cyberbee** (<http://www.cyberbee.com/copyrt.html>) to introduce some of the concepts. (Click "View Interactive Copyright Questions and Answers" on this site.)
- Create assignments that make plagiarism difficult. Look for creative ways to design papers that capture student attention. This might include solving real problems in your community, conducting interviews with subject experts as resource materials, putting fresh twists on old topics. (We discuss this in more detail in the next section.)
- Structure assignments so students bring materials and write papers during class time. Ask to see drafts, hold interviews or have peer-editing conferences. Require drafts to be submitted with final papers.

If you suspect a paper was downloaded from the Web, use a search engine to search for the source. Enter keywords or a string of words in quotation marks in the search box of a search engine. This will lead you to any sites with those words. Since not all search engines index the same sites, it's best to try the search with two or three different engines.

There is also the option of Turnitin. Turnitin, for a fee, will color code a student paper to tell you if any parts have been plagiarized.

Sources: Leland, Bruce. "Plagiarism and the Web." 01 May 2004 <http://www.wiu.edu/users.mfbhl/wiu/plagiarism.htm>

"Thinking and talking about plagiarism.: Technology and Teaching. 01 May 2004  
<http://bedfordmartins.com/technotes.techtiparchive/ttip102401.htm>

## **2. Web Browser**

To access the WWW, you need a Web browser. A browser is a computer program that allows you to access and browse the Internet for information. It retrieves data from remote servers and displays a Web page. Some popular browsers are Internet Explorer, Netscape, Safari and Firefox.

## **3. How do Search Engines Work?**

Search Engines for the general web do not really search the World Wide Web directly. Each one searches a database of the full text of web pages selected from the billions of web pages out there residing on servers. When you search the web using a search engine, you are always searching a somewhat stale copy of the real web page. When you click on links provided in a search engine's search results, you retrieve from the server the current version of the page.

Search engine databases are selected and built by computer robot programs called spiders. Although it is said they "crawl" the web in their hunt for pages to include, in truth they stay in one place. They find the pages for potential inclusion by following the links in the pages they already have in their database. (i.e., already "know about"). They cannot think or type a URL or use judgment to "decide: to go look something up and see what's on the web about it. (computers are getting more sophisticated all the time, but they are still brainless.)

If a web page is never linked to in any other page, search engine spiders cannot find it. The only way a brand new page – one that no other page has Never linked to – can get into a search engine is for its URL to be sent by some human to the search engine companies as a request that the new page be included. All search engine companies offer ways to do this.

After spiders find pages, they pass them on to another computer program for "indexing." This program identifies the text, links, and other content in the page and stores it in the search engine database's files so that the database can be searched by keyword and whatever more advanced approaches are offered, and the page will be found if our search matches its content.

## **4. Directory**

Directories are searchable indexes in which people, instead of Web robots, compile collections of resources. When entering a keyword, a directory will return as many related links as it can locate.

## **5. Recognize Accuracy and/or Bias Information**

### Guiding Questions

To provide students with step-by-step guidelines when examining a URL, have them answer these guiding questions:

***Question #1 – Do you recognize the domain name?***

The domain name can sometimes provide clues about the quality of information or tell you what a site is about.

***Question #2 – What is the extension in the domain name?***

These tiny bits of information are an important part of domain names because they show the type of establishment that owns the domain.

***Question #3 – Are you on a personal page?***

If you do not recognize the domain name or extension of a URL, keep reading past the first forward slash (/) to see if you are on a personal page. A personal page is a Web site created by an individual. The site may contain useful information, links to important resources and helpful facts, but sometimes personal pages offer highly biased opinions.

**What to look for....**

The presence of a name in the URL (such as abutz) and a “~” of “%” or the word “users” or “people” or “members” frequently means you are on a personal website.

**6. On-Line Resources/Evaluate Search Engines/Evaluate Information**

The purpose of this exercise is for students to see how different search engines rank sites given the same keyword search. Are the top results in one search engine “better” than another?

Divide the class into groups and assign each group four different search engines. If your students are younger, be sure to select child-oriented search engines. Provide each group with a list of research keywords specific to your subject area or a current news event. Make sure your words do not have any double meanings that might solicit inappropriate results. A quick way for students to find each site is to list each as a link on your community page.

Tekmom: [www.tekmom.com](http://www.tekmom.com)

Ivy’s resource center for kids: [www.ivyjoy.com/rayne/kidssearch.html](http://www.ivyjoy.com/rayne/kidssearch.html)

Google: [www.google.com](http://www.google.com)

Lycos: [www.lycos.com](http://www.lycos.com)

Alta Vista: [www.altavista.com](http://www.altavista.com)

Yahooligans: [www.yahooligans.com](http://www.yahooligans.com)

Dogpile: [www.dogpile.com](http://www.dogpile.com)

Web Crawler: [www.webcrawler.com](http://www.webcrawler.com)

All the Web: [www.alltheweb.com](http://www.alltheweb.com)

Ask students to try a search with the same keyword in their four search engines. Have them record the top five results for each plus count the number of paid listings per each search and answer these questions:

1. Compare and contrast the results from the various engines. Can you make any generalizations?
2. Did some search engines seem to have more paid listings than others? If so, which ones?

3. Which search engines might you be more likely to use and why?
4. How might using more than one search engine when researching information help you find better information?
5. What conclusions can you draw about researching information on the Internet?

Students should realize they need to use more than one search engine when they do research. They should also look past the top results.

Have students present their Web sites and findings.

## 7. Understand Terms

**URL:** Another useful bit of Internet jargon is URL, which means Web address. URL stands for Uniform Resource Locator and is pronounced *URAL*.

**World Wide Web:** Most URLs begin with www. The World Wide Web is a collection of billions of web pages stored on computers called servers. These pages can contain text, graphics, video and sound. As with a catalogue or a book, Web pages usually related to a common theme or subject. Most are written in a computer language call HTML (Hyper Text Markup Language). The good news is you don't need to know HTML in order to read the Web. HTML works in the background organizing the presentation of pages.

**Web Browser:** To access the WWW, you need a Web browser. A browser is a computer program that allows you to access and browse the Internet for information. It retrieves data from remote servers and displays a Web page. Some popular browsers are Internet Explorer, Netscape, Safari and Firefox.

**Home Page:** Every Web site has a home[age]. The homepage can act like an index or front cover of a book or magazine that links to further information. It may contain links to other pages on the same site or to other sites.

**Link:** Instantly connects you to another page on the Internet.

## 8. Identify a Domain Name

Have students make a judgment about Web information based on these domain names.

1. Which domain name might publish better information and facts about space travel?  
Nasa.gov or flytothemoon.com
2. Which domain name might publish better news about England?  
News.bbc.co.uk or whatsup.org
3. From which site might you purchase shoes on the Internet?  
Joesbargainweb.net or niketown.com

Reading a domain name can sometimes help you make a judgment about the quality of information. The purpose is getting students to think critically about URIs each time they visit a site.

## 9. Identify Extension of a URL

Common Extensions:

.k12	Schools in the US (not all schools use this)
.edu	Educational organizations (most US colleges)
.ac	Academic institution (excludes US)
.com	Company
.org	Any organization
.gov	Government agency
.net	Network
.mil	Military institute

New extensions to look for are .biz, .name, .pro, .info. All are used for commercial purposes.

Some extensions may provide more reliable information than others, but there are no guarantees. Ones that might be more reliable are “.edu,” “.gov,” “.sch,” “.k12.” Ones to check carefully are “.com,” “.org,” “.net.” These domains can be purchased by anybody.

## 10. Truncating a URL

Go to: [http://www.sandiegozoo.org/teachers/classroom\\_activities.html](http://www.sandiegozoo.org/teachers/classroom_activities.html)

Removing one level in the Web site takes you to <http://www.sandiegozoo.org/teachers>

One more and you're at the homepage: <http://www.sandiegozoo.org>

## 11. Meta-search engine

Meta-search engines search several major search engines at once. Examples are Dogpile and Web Crawler.

## 12. Use Search Engine to Assist with Research

<http://www.tekmom.com>

<http://www.noodletools.com/debbie/literacies/information/5locate/advicengine/html>

<http://www.noodletools.com/noodlequest>

## 13. A three step search plan

When guiding children through the process of researching information on the Internet, one of the best things they can learn to do is make a 3-step research plan.

*Step 1-* Define the research problem,

Have students think critically about the research problem and break it down. Questions to consider:

- Is it a relatively simple question?
- Is it a fact-finding mission?
- Is the research question complex with a series of questions or relationships I need to explore?

*Step 2-* Know what sort of information you are looking for.

Once students have a thorough understanding of what they need to find, they might want to consider the best source of information. Questions to consider:

- Am I looking for text, video or pictures?
- Do I need biographical information?
- Is the information I need historic or current in content?
- Should I be asking an expert in the field?

*Step 3* – Select the right search tools

Make key decisions about the best place to find information. Will the information most likely be found from:

- A subject-specific database, such as the SeaWorld Animal Information Database?
- A newly published site, or a historic site not recently posted?
- A regular search engine? (but which one!)

Here are two great sites that can help with all these questions. NoodleTools can help with the selecting of the right tools. The questions provided on these sites prompt students to consider what types of information they are looking for and then suggest search tools best suited to their needs.

NoodleTools – Choose the best search engine for your information needs

NoodleQuest Search Strategies Wizard – interactive version – <http://www.noodletools.com/noodlequest>

#### **14. Key Words**

**Keywords** – the more specific instructions and keywords provided when searching for information, the better the results will be.

Create a list of keywords – use three categories:

1. words that **MUST** be included in the search
2. words that **MIGHT** be included
3. words that should **NOT** be included in the search

#### **15. Using + and – Signs and Quotation Marks** (Put keywords in quotes to ensure the words are grouped together)

When adding a + sign in between keywords, you are asking a search engine to find results where both words appear in the search.

When adding – sign in between words, you are asking a search engine not to include that word.

#### **Activity**



To help students see how the + sign can help narrow a search, try this. In Google type the keyword *birds* into the search box and click Search. Have students keep a record of the number of results.

Next have them try a search for the phrase “*north America*” and record results. Remind them that keyword phrases should always be in “quotation marks: to ensure the words are grouped together.



The last step is to put in the keywords together with a + sign. When the + sign is added, make sure you leave a space after the first word. Try birds + “north america.”

Students should see how adding keywords with the plus sign narrows results. It does this because all the keywords that are entered must appear in the search results. The more words added to the query, the smaller the number of results. The search is becoming more targeted.

Have students add a particular type of bird, such as eagles, to see the number of results become even smaller. Try birds + “north America” + eagles.

You can add as many keywords as you like in a search like this. Just remind students that the + sign works the opposite as it does in math class. The more you add, the less you get!

### ***Tips***

- Use quotation marks around the words that should appear together
- Only use keywords that are important
- Avoid words such as “the,” “in,” or “a” in your search

### ***Activity***

Have students use the + sign to help with the following searches. What is the best keyword search for each research question?

1. I would like information about penguins in South Africa.
2. I would like to know about walking tours in San Francisco.
3. I need a map of the subway in Boston.
4. I would like to know Cleopatra’s birth date.

## **17. Boolean Operators**

Used when searching with keywords. They include AND, OR, NOT and must be used in ALL CAPITAL LETTERS to work properly.

**AND** – works the same as the + sign, the more ANDs, the smaller the search results.

**OR** – means you are searching for both words at the same time. The search will yield more results. OR makes sure either word appears in the results. Use OR when you are not sure exactly how a keyword will appear, such as *child OR student, car OR automobile*.

### ***Activity***

Here’s an activity to use with students. Help them create a Boolean search using AND for the following search queries:

1. I would like information about monsoons in India.
2. I would like information about what panda bears like to eat.

3. I would like information about the impact of global warming on Antarctica.

## 18. Create a Virtual Index

Go to [Alta Vista](#). In the search box type: host.nasa.gov

Narrow your search by adding phrases or keywords. For example, add the word “mars”

Now your search results should include all the Web pages from this site that include the word “mars.”

If you are interested in any student activities that deal with Mars, try the search:

Host:nasa.gov + mars + “Student Activities”

Try searching for a particular grade, for example, host:nasa.gov + mars + “sixth grade”

Even if you will never use the NASA site in your classroom, the important thing to note is that navigating through a large site is much more manageable and time effective when using the host: command. Just remember when adding words and phrases, follow these tips:

Go to Alta Vista

Type host:

Leave no spaces after the colon

Add keywords with +

Put phrases in “quotation marks:

Use lower case

## 19. Validating Information

REAL

**R** = Read the URL

**E** = Examine the Content

**A** = Ask about the author and published

**L** = Look at the links

Guiding Questions for **Reading the URL**

1. Do you know the domain name?
2. What is the extension of the domain name?
  - a. common extensions:
    - .k12 – schools in the US
    - .edu – most US colleges
    - .ac – academic institution
    - .com – company
    - .org – any organization
    - .gov – government agency
    - .net – network
3. Are you on a personal page?
  - a. Clues are:
    - The presence of a name
    - A ~ or % or the word “users” of “people” or “members”

Examine the content – don't judge a book by its cover!

Guiding Questions:

1. Is the information on the Web site useful for your topic?
2. Are additional resources and links provided? Do the links work?
3. Is the site current? Do you know when it was last updated?
4. Do you think the information is accurate?
5. Does the information contradict information that you have found elsewhere?

### **Ask About the Author and Owner**

Guiding Questions:

1. Is the author's name provided?
2. Is there a contact person or an email address provided?
3. Is there biographical information provided about the author?
4. Does the author seem knowledgeable? Is he or she an expert in the field?

### **Easy Whois ([www.easywhois.com](http://www.easywhois.com))**

You may not always be able to find out who wrote a Web site, but sometimes you can find out who owns it. Knowing who owns a Web site is somewhat similar to knowing who published a book. Sometimes the owner is the author of a Web site, but not always.

Knowing who owns a Web site is a useful validating tool. Since anyone can be a publisher on the Internet, you want to ensure the author or owner of the site is a qualified and reliable source of information. Unfortunately, you cannot rely on the site author to be entirely honest!

In this example, you will search for who owns the Martin Luther King site. (Although this site currently provides the name of the owner on its home page, this has not always been the case. We will use this site for illustrative purposes.

### **Activity**

Go to [Easy Whois?](http://www.easywhois.com) This site is a directory service that collects information from the Internet to track who owns and is responsible for a domain name. When visiting the site, there are two steps:

Step 1. Enter the domain name of the site you are researching, example: martinlutherking.org

Step 2. Enter the provided random number. Click next.

Once you scroll through the information, you will find dates the site was created, specific contact names and addresses at which the organization is based. You will also learn the name of the server. In this case it's STORMFRONT.ORG. (Look to registrant information.)

The Martin Luther King Web site is published by an organization called Stormfront. You may have noticed the ".org". This suggests that "Stormfront.org" may be a web address on its own. In fact, if you type it into a search engine, you will come to the owner's homepage. Which is a White Supremacist site – a site from which you do not want students reading and researching information about Civil Rights.

Easy Whois can help you find owner information for almost all Web sites. However, it is possible to bury information about ownership if an owner hires another company to publish a site under the hired name – then it cannot be traced.

Researching Web site owner information may not be something you will want your students to do all the time, but it may be revealing if they are at all concerned about the quality of information on a site and want to know more about it. It is a skill of which they should be aware.

### **Activity**

Try this activity with students. Have them go to [Easy Whois?](#) And find the owner of this site:

[www.harrypotter.com](http://www.harrypotter.com). Tips for finding the owner:

- Type the domain name of the address you are validating in the search box. (remove the “http” and/or “www”)
- If you use another address longer than the ones provided, truncate from right to left up to the first forward slash /



4. Does the page give details of its author?

	Yes, e-mail and postal address	Yes, e-mail	Yes, just the name
Excellent	5	3	1
	Yes 2	No 0	

**Section #2: The rest of the Web site**

6. Does the Web site provide a bibliography?

Yes	No
5	0

7. Do you see any obvious error in the Web page or in the information it is providing?

Yes	No
3	0

**Total Number of Points** \_\_\_\_\_

Excellent	23-27
Good	18-22
Average	13-17
Below Average	8-12
Poor	0-7

## How to Evaluate Web Resources

The quality of information available on the Internet can vary significantly and the ability to critically evaluate web resources is an important skill. The Internet is a system of networks and a communications tool, not a source. It is essential to analyze any web resource for content, validity, and appropriateness for, unlike journals or books, web pages have neither editors or publishers to firewall misinformation. Below is a list of topics and related questions to assist you in selecting resources for your research.

### AUTHORITY

- Who is responsible for the contents of the page?
- If the site is sponsored by an organization, is the information prominently and clearly displayed?
- Is there a way of verifying the legitimacy of the page's sponsor? Is there a phone number of postal address to contact for more information? (Simply an email address is not enough.)
- Is it clear who wrote the materials and are the author's qualifications for writing on this topic clearly stated?

### ACCURACY

- Are the sources for any factual information clearly listed so they can be verified in another source?
- If data are included, is the source of the data indicated?
- Is the information free of grammatical, spelling, and typographical errors? (These kinds of errors not only indicate a lack of quality control, but also can actually produce inaccuracies in the information.)
- Is it clear who has ultimate responsibility for the accuracy of the content of the material?
- Does the data/information make sense?

### AUDIENCE

- What is the purpose of the site?
- Is the information intended for consumers, employees, investors, students, researchers, specialists, or experiments?

### OBJECTIVITY

- Does the page appear to be marketing services or products?
- Are any biases or assumptions noted?
- Is the author or sponsor of the page advocating particular viewpoints or causes?
- Is the information free of advertising? If not, are the advertisements clearly differentiated from the informational content?

### CURRENCY

- Are there dates on the page to indicate when the page was last revised?
- Is the page updated on a regular basis?
- Are the links updated on a regular basis?
- If materials are presented in graphs and/or charts, is it clearly stated when the data was gathered?

## COVERAGE

- Is there an indication that the page has been completed, and is not still under construction?
- Is there a print equivalent to the web page, is there a clear indication of whether the entire work is available on the web or only parts of it?
- If the material is from a work which is out of copyright (as is often the case with a dictionary or thesaurus) has there been an effort to update the material to make it more current?

## QUALITY OF THE WEB PAGE

- Do the links work?
- Is the page well organized and easy to navigate?



## Troubleshooting Checklist

Check off these items before you consult computer manuals or call a technician. Remember to always look for the obvious first. If you do call a technician, ensure the computer is accessible for the phone conversation and have a list of the troubleshooting steps you have already taken nearby.

<b>Troubleshooting the Computer – General Tips:</b>	
	Turn the computer off. Count to 30. Turn the computer back on. Did this solve the problem?
	Did you install new software? Uninstall it to see if that clears up the problem?
	Did you change any settings? Change the settings back to what they were.
	Did you attach any new hardware? If so, disconnect the hardware and uninstall any software drivers that were installed for the hardware.
	Is the surge protector light on? If not, check to see that it's turned on and plugged in/
<b>Troubleshooting Sound</b>	
	Check the headphone cable connections. Check the volume control on the headphone cord.
	Is there a speaker icon next to the clock on the taskbar? If so, right click the <b>speaker</b> icon and select <b>Open Volume Controls</b> . Uncheck any <b>Mute</b> boxes that are selected.
	Log on with an administrative account. Click <b>Start, Settings</b> , and select <b>Control Panel</b> . Double click the <b>Multimedia</b> icon.
	Adjust the volume settings on the <b>Audio</b> tab.
<b>Troubleshooting Peripherals</b>	
Note: The keyboard is used as an example in the following examples, but a peripheral could be anything attached to the computer.	
Are all of the cables connected?	
	Power
	Monitor
	Mouse
	Keyboard
	Headphones
	Network cable
	Is the keyboard or mouse acting erratically? It might need to be cleaned. To clean a keyboard, turn it upside down and shake any debris out of it. You can also spray compressed air between the keys. To clean a mouse, removed the cover on the bottom of the mouse. Clean the mouse ball with rubbing alcohol. Use a cotton swab to clean any debris off the glides inside the mouse.
	Is the keyboard not working? If so, plug it into another computer. If it doesn't work on the other computer, there is likely something wrong with the keyboard. If it does work on the other computer, there is likely something wrong with the computer.
<b>Troubleshooting the Printer</b>	
	Is the printer turned on?
	Does the printer display say it's offline? If so, press the green button to put it online.
	Are all of the cables connected to the printer?
	Is there paper in the printer? If not, replace the paper.
	IS the toner cartridge empty? If so, replace the cartridge.
	Is there a paper jam? If so, remove the stuck paper.
	Does the printer print from some programs and not from others? If so, it is most likely a software issue.

	Does the printer not print from any program? If so, use the print troubleshooter in help to diagnose the problem. Click <b>Start</b> and select <b>Help</b> . Search for <b>troubleshooting</b> and select <b>printers</b> . Follow the on-screen instructions.
<b>Troubleshooting the Network:</b>	
	Are all of the network cables plugged into the computers, printers, and switch?
	Is there a light on the switch that corresponds to every cord that is plugged into it? If not, try plugging the cable that doesn't have a light into another outlet on the switch.
	Is the switch getting power? If there are no lights, check to see that the surge protector is plugged in and turned on.

## **SUGGESTED LESSONS**

# **KINDERGARTEN LESSONS**

**LESSON TITLE:** Introduction to Computers

**GRADE LEVEL:** Kindergarten

**TIME ALLOCATION:** Lesson will be introduced in the beginning of the year and reinforced throughout the school year.

**PROJECT DESCRIPTION:**

The teacher will identify the components of a computer using the correct terminology. (Monitor, Keyboard, Mouse, Printer, CD Drive) Teacher and students will discuss and list proper ways to care for and handle hardware and software. Students will observe the teacher turning on and shutting down the computer. Following this lesson, students will demonstrate their knowledge of the parts of the computer and the proper procedure for turning the computer on and off.

**OBJECTIVES:**

1. Identify components of the computer
2. Turn on and shut down the computer.
3. Identify CD-ROM Disk and drive.
4. Properly handle a CD.

**MATERIALS AND RESOURCES:**

Computer and CD-ROM disk.

**LESSON TITLE:** Interacting with Computer Programs

**GRADE LEVEL:** Kindergarten

**TIME ALLOCATION:** Lesson will be introduced in the beginning of the year and reinforced throughout the school year.

**PROJECT DESCRIPTION:**

The classroom teacher will turn on the computer and choose a program by identifying its icon on the desktop. The teacher will demonstrate how to double click to open a program. Students will observe as the teacher clicks once to select the icon and twice to open the program. The teacher will identify the program exit symbol and quit the program. Following this lesson, the students will practice single clicking to open a program as well as the proper exit procedure using the software.

**OBJECTIVES:**

1. Turn on and shut down the computer.
2. Use the mouse to click and double click.
3. Use the mouse to select an item.
4. Identify and use an icon.
5. Quit a program.

**MATERIALS AND RESOURCES:**

Computer

## **FIRST GRADE LESSONS**

**LESSON TITLE:** Using a CD-ROM

**GRADE LEVEL:** First

**TIME ALLOCATION:** Lesson will be introduced in the beginning of the year and reinforced throughout the school year.

**PROJECT DESCRIPTION:**

The teacher will discuss proper ways of handling a CD and then show which button to push to open and close the CD Drive. The teacher will demonstrate how to insert the CD into the drive. Students watch as the program is opened and the cursor is used to select and manipulate objects. The teacher will show the proper technique of turning on the printer and using the menu bar to print the selected document. Then, the class will locate the program exit symbol to quit and exit the program. Upon completion of this lesson, students will practice these skills using software (i.e. Millie's Math House) throughout the school year.

**OBJECTIVES:**

1. Identify and use an icon.
2. Identify CD-ROM Disk and drive
3. Properly handle a CD.
4. Load and put away a CD.

**SUGGESTED COMPUTER INTEGRATION:**

Can be used for additional information for Social Studies (i.e. articles and/or pictures of famous people, holidays, etc.)



**LESSON TITLE:** Using a Computer Software

**GRADE LEVEL:** First

**TIME ALLOCATION:** Lesson will be introduced in the beginning of the year and reinforced throughout the school year.

**PROJECT DESCRIPTION:**

The teacher will turn on the computer and explain the desktop while students observe. The teacher will select an icon and double click to launch the program. Once the program is opened, the teacher will show the students how to move the cursor using the mouse. Students will observe the monitor as the teacher uses the mouse to select items and manipulate certain items by clicking and dragging respectively. The teacher will model how to quit the program by searching for the program exit symbol. Upon completion of this lesson, students will practice these skills using software such as Millie's Math House, Sammy's Science House, Bailey's Book House, throughout the year.

**OBJECTIVES:**

1. Turn on and shut down the computer.
2. Identify the desktop.
3. Use a mouse to move the cursor.
4. Launch a program from its icon.
5. Use a mouse to click, drag, and select an item.
6. Quit a program.

**SUGGESTED COMPUTER INTEGRATION:**

Students can use programs to integrate a science unit on weather and seasons, math (number recognition), or Language Arts.

## **SECOND GRADE LESSONS**

**LESSON TITLE:** Development of Keyboarding Skills

**GRADE LEVEL:** Second through Fifth

**OVERVIEW:** Students will use software to develop keyboarding skills

**TIME ALLOCATION:** Lesson will be introduced in the beginning of the year and reinforced throughout the school year.

**SUGGESTED ACTIVITIES:**

Students will use computer assisted instructional software to learn, develop, and practice proper keyboarding.

**OBJECTIVES:**

Students will demonstrate proper computer keyboarding techniques.

**SUGGESTED COMPUTER INTEGRATION:**

Students can use programs to integrate a science unit on weather and seasons, math (number recognition), or Language Arts.

**MATERIALS AND RESOURCES:**

Keyboarding software

**STUDENT EVALUATION PROCEDURES**

Assessment benchmarks built into software and/or teacher checklist.

**LESSON TITLE:** Big Book

**GRADE LEVEL:** Second

**TIME ALLOCATION:** 6-8 Lab Sessions

**PROJECT DESCRIPTION:**

Each student will create a word processing document consisting of original writing and illustrations which will be published as a bog book.

**OBJECTIVES:**

1. Create a word processing document.
2. Learn how to save a document.
3. Learn how to format text.
4. Use the draw command.
5. Print a document.

**SUGGESTED COMPUTER INTEGRATION:**

This project will be used to publish a short story the student has written, along with original computer drawings. The story may be related to any curriculum area.

**MATERIALS AND RESOURCES:**

*Microsoft Word or Ultimate Writing Studio*

**LESSON TITLE:** Slide Show  
**GRADE LEVEL:** Second  
**TIME ALLOCATION:** 8-10 Lab Sessions

**PROJECT DESCRIPTION:**

Each student will create a slide show containing text, graphics, sound and transitions. The student will present their slide shows to other class members and parents.

**OBJECTIVES:**

1. Create a slide show
  - Create individual slides using Kid Pix or Hyper studio
  - Include graphics in each slide
  - Include text in each slide
  - Include sound to accompany each slide
  - Include transitions to move from slide to slide
2. Save document
3. Present slide shows to classmates and/or parents.

**SUGGESTED COMPUTER INTEGRATION:**

This project can be used to present multi-faceted concepts the students have learned. This slide show may be integrated into any curriculum area. Ideas for Social Studies integration include: Land Forms, Flow Charts, Famous Americans, A Tour of the Capital, Important Events in Our Country's History, and Special Places in America. Science ideas might include: Animal Reports, Dinosaurs, or Plant Life.

**MATERIALS AND RESOURCES:**

*Kid Pix Studio or Hyper studio.*

**LESSON TITLE:** Slide Show of Special Memories

**GRADE LEVEL:** Second

**TIME ALLOCATION:** 4 weeks

**PROJECT DESCRIPTION:**

Students will develop a slide show to share their special memories.

**OBJECTIVES:**

1. Students will be able to perform basic tasks using computer operating systems.
2. Students will be able to demonstrate basic understanding of the parts and operations of a computer.
3. Students will develop keyboarding, data input, and retrieval skills.
4. Students will create and design a slide show depicting their favorite memories with pictures and a description of each.
5. Students will choose to use the computer rather than other methods in situations that warrant their use.

**SUGGESTED ACTIVITIES:**

Students will brainstorm about special memories. They will write a first draft of their own special memories. Using *Kid Pix*, they will type their text and draw pictures to complement their text. Students will then present their slide shows to the class using an LCD projector.

**MATERIALS AND RESOURCES:**

Computer, printer, *Kid Pix Studio* or *Hyper studio*.

**STUDENT EVALUATION PROCEDURES:**

Teacher evaluation of the students' understanding of the operation of the computer and of the final slide shows.

**INTERDISCIPLINARY CONNECTIONS:**

Language Arts:	Writing process
Computer:	Understanding page breaks, fonts and slide show
Communications:	Public speaking

## **THIRD GRADE LESSONS**

**LESSON TITLE:** Development of Keyboarding Skills

**GRADE LEVEL:** Grades Two through Five

**TIME ALLOCATION:** Ongoing

**PROJECT DESCRIPTION:**

Students will demonstrate proper computer keyboarding techniques.

**SUGGESTED ACTIVITIES:**

Students will use computer assisted instructional software to learn, develop, and practice proper keyboarding.

**MATERIALS AND RESOURCES:**

Keyboarding software

**STUDENT EVALUATION PROCEDURES:**

Assessment benchmarks built into software and/or teacher checklist.



**LESSON TITLE:** Class Anthology

**GRADE LEVEL:** Third

**TIME ALLOCATION:** 6-8 Lab Sessions

**PROJECT DESCRIPTION:**

Each student will create a word processing document consisting of original writing and graphics which will be published as a classroom anthology.

**OBJECTIVES:**

1. Create a word processing document.
2. Save document.
3. Format text.
4. Use draw commands and/or insert graphics.
5. Print a document.

**SUGGESTED CURRICULUM INTEGRATION:**

This project will be used to create an anthology of student writing from the existing Language Arts curriculum. Examples of anthology theme are how-to paragraphs, personal narratives, persuasive paragraphs, short stories, etc.

**MATERIALS AND RESOURCES:**

Choose any:

- *Microsoft Word*
- *Ultimate Writing Workshop*

**LESSON TITLE:** Hypermedia Presentation

**GRADE LEVEL:** Third

**TIME ALLOCATION:** 8-12 Lab Sessions

**PROJECT DESCRIPTION:**

The students will be divided into groups to create a multimedia presentation, integrated into the existing Social Studies or Science curriculum. These projects will be presented to the other class members.

**OBJECTIVES:**

1. Create a hypermedia document.
  - Add text
  - Add sound
  - Add graphics
  - Add buttons
  - Use transitions
2. Format text
3. Use draw commands and/or insert graphics.

**SUGGESTED CURRICULUM INTEGRATION:**

This project will be used to create a Social Studies or Science hypermedia presentation which correlates with the existing third grade Social Studies or Science curriculum. Examples of **integrated Science hypermedia projects** are animal adaption's and defenses, and food webs, forms of energy, and states of matter and their changes. Examples of **integrated Social Studies hypermedia projects** are New Jersey geography, regions of New Jersey, Spanish Missions, U.S. History, the Anasazi, transportation past and present, and communication past and present.

**MATERIALS AND RESOURCES:**

*Kid Pix, PowerPoint or Photo Story 3*

**FOR TEACHER CONSIDERATION:**

This project must be preceded by class instruction and practice with the *Hyper studio* program. Since this assignment is the first introduction to hypermedia which the students will experience at Millington School, it is suggested that format guidelines are set in advance by the teacher. For example, the students must first add the text to their cards. Then they may add the graphics. Next, they can create buttons which move through the stack. Finally, they can add sound. Because this project takes a considerable amount of time to develop, student projects/reports should be planned completely before entering the computer lab.

## **FOURTH GRADE LESSONS**

**LESSON TITLE:** Development of Keyboarding Skills

**GRADE LEVEL:** Grades Two through Five

**TIME ALLOCATION:** Ongoing

**PROJECT DESCRIPTION:**

Students will demonstrate proper computer keyboarding techniques.

**SUGGESTED ACTIVITIES:**

Students will use computer assisted instructional software to learn, develop, and practice proper keyboarding.

**MATERIALS AND RESOURCES:**

Keyboarding software..

**STUDENT EVALUATION PROCEDURES:**

Assessment benchmarks built into the software and/or teacher checklist.

**LESSON TITLE:** Author Anthology

**GRADE LEVEL:** Fourth

**TIME ALLOCATION:** 6-8 Lab Sessions

**PROJECT DESCRIPTION:**

Each student will create a word processing document consisting of original writing which may include graphics. The collection of student work will be published as a Fourth Grade Anthology.

**OBJECTIVES:**

1. Create a word processing document.
2. Save a file,
3. Check spelling,
4. Format text.
5. Copy, paste and delete text.
6. Print a document.

**SUGGESTED CUURICULUM INTEGRATION:**

By integrating thinking and analyzing selections from an author's perspective, the students will be able to model their own writing upon the presentation of the "Author in Residence."

**MATERIALS AND RESOURCES:**

*Microsoft Word*

**LESSON TITLE:** Classroom Newspaper

**GRADE LEVEL:** Fourth

**TIME ALLOCATION:** 10-12 Lab Sessions

**PROJECT DESCRIPTION:**

The students will create a word processing document consisting of original writing and graphics which will be published in a classroom newspaper.

**OBJECTIVES:**

1. Create a word processing document with specific formats.
2. Save a file.
3. Format text.
4. Use draw commands and/or insert graphics.
5. Copy and paste text.
6. Copy and paste graphics.
7. Check spelling.
8. Print a document.
9. Retrieve graphics from the Internet, scanner, or digital camera.

**SUGGESTED CURRICULUM INTEGRATION:**

This project will be used to create a newspaper of student writing from the Language Arts curriculum. Examples of themes are personal narratives, short stories, fairy tales, etc.

**MATERIALS AND RESOURCES:**

*Microsoft Word*

**LESSON TITLE:** Multimedia Presentation

**GRADE LEVEL:** Fourth

**TIME ALLOCATION:** 8-12 Lab Sessions

**PROJECT DESCRIPTION:**

The students will be divided into small groups or work individually to create a multimedia presentation which shall be integrated into the existing Social Studies or Science curriculum. These projects will be presented to the other class members.

**OBJECTIVES:**

1. Create a multimedia presentation.
  - Add text
  - Add sound
  - Add graphics
  - Add buttons
  - Use transitions

**SUGGESTED CURRICULUM INTEGRATION:**

This project will be used to create a Social Studies or Science hypermedia presentation which correlates with the exiting fourth grade Social Studies or Science curriculum. Examples of hypermedia projects are:

Social Studies: Explorers of the New World, Regions of the United States, etc.  
Science: Electrical circuits, Weather Phenomena, Animal Classification, etc.

**MATERIALS AND RESOURCES:**

*PowerPoint, Photo Story 3, Windows Movie Maker*

**FOR TEACHER CONSIDERATION:**

This project must be preceded by class instruction and practice with the *Hyper Studio* or *PowerPoint* program. It is most practical to teach skills one by one, adding text, drawing, adding buttons and sound, etc. Because this project takes a considerable amount of time to develop, you should choose either a topic of extended study or use this as a late in the year review of major areas of content. Student projects/reports should be planned completely before entering the computer lab.

## **FIFTH GRADE LESSONS**



**LESSON TITLE:** Development of Keyboarding Skills

**GRADE LEVEL:** Grades Two through Five

**TIME ALLOCATION:** Ongoing

**PROJECT DESCRIPTION:**

Students will demonstrate proper computer keyboarding techniques.

**SUGGESTED ACTIVITIES:**

Students will use computer assisted instructional software to learn, develop, and practice proper keyboarding.

**MATERIALS AND RESOURCES:**

Keyboarding software..

**STUDENT EVALUATION PROCEDURES:**

Assessment benchmarks built into the software and/or teacher checklist.

**LESSON TITLE:** Desktop Publishing  
**GRADE LEVEL:** Fifth  
**SUBJECT(S):** Language/Reading  
**TIME ALLOCATION:** 5-7 Lab Sessions

**PROJECT DESCRIPTION:**

Students will create a word processing document or original writing, selected clip art, and graphics from various sources.

**OBJECTIVES:**

1. Create a word processing document with specific formats.
2. Format text.
3. Copy and paste text.
4. Copy and paste graphics.
5. Use scanner (if available).
6. Check document spelling.

**SUGGESTED CURRICULUM INTEGRATION:**

This project may be used for a variety of assignments such as original short stories, personal narratives, research papers, and/or book reports.

**MATERIALS AND RESOURCES:**

*Microsoft Word*

**FOR TEACHER CONSIDERATION:**

It is strongly suggested that students enter the computer lab with at least a rough draft of original writing and sketches of desired graphics.

**LESSON TITLE:** Hypermedia Presentation  
**GRADE LEVEL:** Fifth  
**SUBJECT(S):** Science, Social Studies or Health  
**TIME ALLOCATION:** 8-12 Lab Sessions

**PROJECT DESCRIPTION:**

Students will create a hypermedia document.

**OBJECTIVES:**

1. Create a hypermedia document.
2. Create several cards.
3. Add text.
4. Add sound.
5. Use buttons.
6. Use transitions
7. Use draw commands and/or insert graphics.

**SUGGESTED CURRICULUM INTEGRATION:**

This project may serve as a valuable extension of the existing Science or Social Studies curriculum. Suggestions include highlighting the Science unit on plants. Assign different plant-related topics to each student. Present multimedia reports as a culminating activity for the unit or have the class create a “Year in Review” presentation of Social Studies topics, assigning one topic per student to be presented in chronological order.

**MATERIALS AND RESOURCES:**

*PowerPoint, Windows Movie Maker*

**FOR TEACHER CONSIDERATION:**

This project must be preceded by class instruction and practice with the program. It is most practical to teach skills one by one, adding text, drawing, adding buttons and sound, etc. Because this project takes a considerable amount of time to develop, you should choose either a topic of extended study or use this as a late in the year review of major areas of content. Student projects/reports should be planned completely before entering the computer lab.

**LESSON TITLE:** Presentations/Using the Internet  
**GRADE LEVEL:** Fifth  
**SUBJECT(S):** Science, Social Studies, Health or Language Arts  
**TIME ALLOCATION:** 4-5 Lab Sessions

**PROJECT DESCRIPTION:**

Students will be introduced to uses and functions of presentation software and Internet searches. Students will use presentation software to organize information and create curriculum content information.

**OBJECTIVES:**

Create a multimedia presentation integrating information from a variety of sources.

**SUGGESTED CURRICULUM INTEGRATION:**

This project would be especially useful to organize and present Social Studies, Science, Health or Language Arts themes.

**MATERIALS AND RESOURCES:**

*Microsoft Word, Microsoft Excel, Microsoft PowerPoint, Internet*

**FOR TEACHER CONSIDERATION:**

1. Following a full class period spent discussing uses and functions of presentation software, the students follow a scripted lesson to use and apply new PowerPoint skills.
2. Students create new PowerPoint presentation about content are research projects.

**LESSON TITLE:** Organizing Information  
**GRADE LEVEL:** Fifth  
**SUBJECT(S):** Science, Social Studies, or Health  
**TIME ALLOCATION:** 3-4 Lab Sessions

**PROJECT DESCRIPTION:**

Students will be introduced to uses and functions of spreadsheets and/or databases/ Students will use a spreadsheet to organize and present curriculum content information.

**OBJECTIVES:**

1. Create a spreadsheet

**SUGGESTED CURRICULUM INTEGRATION:**

This project would be especially useful to organize Science lab results, Social Studies facts, or Health data collection.

**MATERIALS AND RESOURCES:**

*Microsoft Word or Microsoft Excel*

**FOR TEACHER CONSIDERATION:**

Following a full class period spent discussing uses and functions of these applications, the students may create a spreadsheet to organize mineral names, colors, streaks, luster's, and hardness categories. Another Science integration might be to create a spreadsheet to calculate  $WORK=FORCE \times DISTANCE$ . Relevant Social Studies themes are "Notable People in Revolutionary America" and "Explorers."

## **SIXTH GRADE LESSONS**

**LESSON TITLE:** Using Spreadsheets

**GRADE LEVEL:** Sixth

**OBJECTIVES:**

1. The student will learn basic terminology of the spreadsheet (cell, cell pointer, spreadsheet frame, row, column, range)
2. The student will learn basic operations related to spreadsheet construction, data entry, and management.
  - a. sizing columns and rows
  - b. font selection, formatting of text and numbers
  - c. selection of cell, entering, correcting, and deleting data
  - d. moving and copying data
  - e. adding, deleting rows, columns
  - f. cleaning cells
  - g. copying and moving data from cell to cell
  - h. use of borders

**DESIGNED ACTIVITIES:**

1. Open new spreadsheet frame in *Excel*.
2. Explanation of spreadsheet frame, cell, cell pointer, row, column, and range.
3. Students follow guided explanation, imitating what is seen on the monitor, practicing the following spreadsheet operations:
  - a. entering, moving, and deleting data in a cell.
  - b. sizing columns and rows
  - c. changing an formatting font
  - d. copying cell data
  - e. adding and deleting rows and columns
  - f. adding borders
4. Students create a copy of their school schedule, using the spreadsheet frame. Data is to be centered in cells. Row and column headings are to be emphasized by use of different font, style size or attribute.

**METHOD OF ASSESSMENT:**

Students will complete the project and print it on paper, submitting it for evaluation. The evaluation will consider the following criteria:

- Proper sizing of rows and columns
- Correct entry of cell data, properly aligned
- Use of varied font, size, style, etc. to emphasize headings
- Completeness and accuracy
- Effective use of borders
- Placement of title and student name

**MATERIALS AND RESOURCES:**

Computer with spreadsheet software, classroom monitor, printer.

**INTERDISCIPLINARY CONNECTIONS:**

This lesson connects with subject matter such as science, math, or social studies, in which data are displayed in table or chart form. More advanced spreadsheet applications have further implications in math, as the spreadsheet can be used to generate statistical data and charts and graphs.



**LESSON TITLE:** Research Topic Database

**GRADE LEVEL:** Sixth

**TIME ALLOCATION:** 6 week introduction; ongoing

**OVERVIEW:** Students will create, organize, and use a classroom database to organize the topics of research projects completed by students from year to year.

**OBJECTIVES:**

1. Students will create, organize, and use a data base to stimulate critical thinking, higher level thinking skills and organizational skills.
2. Students will keep a record of research projects by providing a summary and description for others to access using a database.
3. Students will demonstrate the effectiveness of technology to organize and sort information.

**SUGGESTED ACTIVITIES:**

After completing their first research assignment (in language arts, social studies, or science), students will learn to determine data base criteria and to input data so they can be easily analyzed and sorted. They will input the titles, research topics, resources, discipline, number of pages and description. They will input information into the Classroom Research Topic Data base to be used by students from year-to-year to stimulate ideas for research topics.

**MATERIALS AND RESOURCES:**

Computer, printer, *Microsoft Access*

**STUDENT EVALUATION PROCEDURES:**

Teacher and peer review of database according to stated criteria.

**INTERDISCIPLINARY CONNECTIONS:**

Language Arts:	Research skills
Thinking Skills:	Information processing, critical and inventive thinking, employing communication strategies
Computer:	Creating and using a database to sort and organize information

## **SEVENTH GRADE LESSONS**

**LESSON TITLE:** Study of Renaissance Authors and Artists

**GRADE LEVEL:** Seventh

**TIME ALLOCATION:** 4 weeks

**OVERVIEW:** Students will research individuals who have made great contributions during the Renaissance.

**OBJECTIVES:**

1. Students will develop keyboarding, data input and retrieval skills.
2. Students will choose to use the computer rather than other methods in situations that warrant its use.
3. Students will demonstrate and awareness of Renaissance authors and artists and their contributions to art and literature.

**SUGGESTED ACTIVITIES:**

Students will research individuals who have made great contributions to the world of art and literature during the Renaissance. They will use traditional research tools, CD-ROM encyclopedia, books and the Internet. Students will write a short summary about the author or artist they select and his/her contributions to art and literature. The class will create a multimedia presentation using *PowerPoint*. They will present their slide show to the class. A classroom bulletin board display may also be considered. The project will include a picture of the author or artist, summary of his or her life. His or her contributions to art and literature, and an explanation of the works of art or books written.

**METHOD OF ASSESSMENT:**

Teacher evaluation of students' work using predetermined rubrics or criteria.

**MATERIALS AND RESOURCES:**

Computer, *Encarta*, *Grolier Multimedia Encyclopedia*, LCD scanner, Internet

**INTERDISCIPLINARY CONNECTIONS:**

Art: Art history  
Language Arts: Research, literature

**LESSON TITLE:** USE OF POWERPOINT

**GRADE LEVEL:** Seventh

**TIME ALLOCATION:** 4 weeks

**OBJECTIVES:**

1. The student will understand the basic concepts and techniques of *PowerPoint*.
2. The student will understand the various uses of *Power Point*.

**SUGGESTED ACTIVITIES:**

1. Show a teacher-prepared *PowerPoint* presentation.
2. Have class open *PowerPoint* and begin to create a new slide.
3. Have students select a template and Presentation Design.
4. Have students use Auto Layout to help design slide.
5. Show the various special effects available with *PowerPoint*.

**METHOD OF ASSESSMENT:**

1. Presentations
  - a. Students will prepare a 4-slide presentation which will convey an idea or concept relate to a selected topic.
  - b. Once completed, the student will display the presentation on the large screen monitor for review by all class members.
  - c. This presentation must include the following activities:
    - 1) Use of special effects
    - 2) Use of different fonts and colors
    - 3) Use of different graphics (clip art)
    - 4) Use of various transitions (moving from one slide to another)
    - 5) Timed presentation
    - 6) Include a single theme

**MATERIALS AND RESOURCES:**

Computer, *PowerPoint*, large TV monitor

**INTERDISCIPLINARY CONNECTIONS:**

Multimedia presentations for all subjects.

**LESSON TITLE:** Anne Frank

**GRADE LEVEL:** Seventh

**TIME ALLOCATION:** 2 weeks

**OVERVIEW:** Before reading the Diary of Anne Frank, students will increase their understanding of the Holocaust by exploring dialogue and scripting techniques.

**OBJECTIVES:**

1. Students will demonstrate the ability to promote independent, creative, and informed thinking.
2. Students will increase their writing skills.
3. Students will work collaboratively.
4. Students will enhance their knowledge of the Holocaust.
5. Students will use electronic research.

**SUGGESTED ACTIVITIES:**

Students will obtain background material from traditional research tools, the Internet Holocaust Web page or *Our Times CD* in order to write a character study of a real or fictitious person living during the Holocaust. IN pairs or small groups they will write short skills detailing events that might occur if their characters meet before, during, or after the Holocaust. Each student's character will have roles in the skit. The skits will include only those words, expressions and items that existed during the time period that the action takes place. Students will make live presentations as a culminating activity.

**METHOD OF ASSESSMENT:**

Teacher and peer evaluation of the written work and presentations according to a predetermined rubric that will be reviewed at the start of this project.

**MATERIALS AND RESOURCES:**

Computer, printer, *Our Times CD*, Internet

**INTERDISCIPLINARY CONNECTIONS:**

Social Studies: World War II, social history  
Thinking Skills: Cause and effect, creative thinking

## **EIGHTH GRADE LESSONS**

**LESSON TITLE:** History of Long Hill Township

**GRADE LEVEL:** Eighth

**TIME ALLOCATION:** 4 weeks

**OVERVIEW:** Students will research individuals who have made great contributions during the Renaissance.

**OBJECTIVES:**

1. Students will understand the history of their community.
2. Students will use technology to gather data.
3. Students will organize and analyze information to stimulate critical thinking, higher level thinking skills and organizational skills.
4. Students will develop a number sense through experiences that enable them to investigate the characteristics and relationships of numbers (statistics).
5. Students will demonstrate the effective use of technology to enhance oral and written communications.

**SUGGESTED ACTIVITIES:**

Students will be divided into groups to study the history of Long Hill Township. Subject matter will be reviewed in class: local government, history, agriculture, industry, timelines, immigration, and landforms. Each group will create a presentation on the study of Long Hill Township:

- Map of the area
- Location of the community within the county, state, country, continent and world
- Facts about the community
- Statistics on industry, agriculture and demographics
- Landforms
- Reasons for development
- Environmental concerns and issues
- Interview results

Students will gather information and graphics from the Internet, traditional research tools, and CDs. They will photograph point of interest and interview key government officials (in person or via email). Students will present their projects to the class using computer generated materials of the computer as a presentation tool.

**MATERIALS AND RESOURCES:**

Computer with CD-ROM drive, Internet, e-mail, printer, *Encarta*, *Grolier Multimedia Encyclopedia*, *PowerPoint*

**INTERDISCIPLINARY CONNECTIONS:**

Language Arts: Outlining, note taking, writing process, oral communications, interviewing techniques, research

Social Studies: Study of Long Hill Township  
Thinking Skills: Information processing, organizational skills  
**LESSON TITLE:** Civil War Project

**GRADE LEVEL:** Eighth

**TIME ALLOCATION:** 2 weeks

**OBJECTIVES:**

1. Students will learn about the causes of the Civil War.
2. Students will understand the historical period.
3. Students will understand the basic conflicts and how they were resolved.
4. Students will use technology to gather information.
5. Students will demonstrate the effective use of technology to enhance oral and written communications.

**SUGGESTED ACTIVITIES:**

Using the overhead projector or LCD, the students will share actual letters written by soldiers during the Civil War (Example: <http://ils.unc.edu/civilwar/haskellpg.html>). Each student will write an imaginary letter as if he or she was a Civil War soldier. Students will view images of battles and maps of where the battles took place. (<http://ils.unc.edu/civilwar/civilwar.html>). Following this preliminary introduction of the Civil War, students will write a one-page report on a famous person or event. Students will gather information and graphics from encyclopedia CDs and the Internet. They will copy photographs of uniforms, battles and individuals to enhance their reports. (<Http://www.cwc.lsu.edu/civlink.htm>). Students will create a *PowerPoint* presentation by enlarging the font to 36 and viewing the report as a slide show. Students will present their project to the class using large screen projection.

**MATERIALS AND RESOURCES:**

Computer with CD-ROM drive, Internet, e-mail, printer, *Encarta*, *Grolier Multimedia Encyclopedia*, *PowerPoint*, projection device

**INTERDISCIPLINARY CONNECTIONS:**

Language Arts: Outlining, note taking, writing process, oral communications  
Social Studies: Civil War  
Thinking Skills: Thinking skills organizational skills.