Lower Township School District
Cape May, New Jersey

Technology Instructional Units Grades 3 & 4

TECHNOLOGY CURRICULUM INSTRUCTIONAL UNITS TASK FORCE MEMBERS

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Unit 1

Internet / Software



Unit Overview	
Content Area: Technology	
Unit Title: Internet/Software	**Unit: 1**
Target Course/Grade Level: 3-4	**Timeline: Ongoing**
Unit Summary: In this unit students will expand their computer skills by accessing safe Internet sites. Topic research will be gathered for use in the Multimedia unit. Students may work individually or in groups of two.	

Learning Targets	
Standards	
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
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.
9.1	All students will demonstrate the creative, critical thinking, collaboration, and problem-solving skills needed to function successfully as both global citizens and workers in diverse ethnic and organizational cultures.

Content Statements

- The use of technology and digital tools requires knowledge and appropriate us of operations and related applications (8.1.4.A)
- Technological advancements create societal concerns regarding the practice of safe, legal and ethical behaviors (8.1.4.D)
- The design process is a systematic approach to solving problems (8.2.4.B)
- Digital tools facilitate local and global communication and collaboration in designing products and systems (8.2.4.E)
- Technological products and systems are created through the application and appropriate use of technological resources (8.2.4.F)
- 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)
- The ability to recognize a problem and apply critical thinking and problem-solving skills to solve the problem is a lifelong skill that develops over time (9.1.A)
- Brainstorming activities enhance creative and innovative thinking in individual and group goal setting and problem solving (9.1.B)
- Effective communication skills convey intended meaning to others and assist in preventing misunderstanding (9.1.D)
- Digital media are 21st century tools used for local and global communications. There are ethical and unethical uses of communication and media (9.1.E)

CPI #	Cumulative Progress Indicator (CPI) –
8.1.4.A.3	Create and present a multimedia presentation that includes graphics
8.1.4.A.5	Determine the benefits of a wide range of digital tools by using them to solve problems
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 in appropriate use of technology
8.2.4.B.1	Develop a product using an online simulation that explores the design process

8.2.4.B.4	Compare and contrast how technology transfer happens within a technology, among technologies, and among other fields of study
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
8.2.4.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
9.1.4.A.1	Recognize a problem and brainstorm ways to solve the problem individually or collaboratively.
9.1.4.A.3	Determine when the use of technology is appropriate to solve problems.
9.1.4.A.4	Use data accessed on the web to inform solutions to problems and the decision-making process.
9.1.4.A.5	Apply critical thinking and problem-solving skills in classroom and family settings.
9.1.4.B.1	Participate in brainstorming sessions to seek information, ideas, and strategies that foster creative thinking.
9.1.4.D.1	Use effective oral and written communication in face-to-face and online interactions and when presenting to an audience.
9.1.4.E.1	Explain how digital media are used in daily life in a variety of settings.
9.1.4.E.2	Demonstrate effective communication using digital media during classroom activities.
9.1.4.E.3	Distinguish how digital media are used by individuals, groups, and organizations for varying purposes.
9.1.4.E.4	Explain why some uses of media are unethical.

Unit Essential Questions	**Unit Understandings**
• Where is the information for my research? • What is a search engine? • What is internet safety, copyright and etiquette? • What is an Acceptable Use Policy (AUP)? • How can I transfer what I know to new situations? • How can technology be used to help address a local issue? • How are resources processed when developing a technological product? • How can I use the Internet to learn about a specific topic? • How can I use the Internet to improve/practice a skill?	• Technological advancements create societal concerns regarding the practice of safe, legal and ethical behaviors. • Information is spread worldwide within seconds due to technological advancements and has immediate impact. • Selection of technology should be based on personal and/or career needs assessment. • When technological products are developed

Unit Learning Targets (Outcomes) –
Students will ...

- Understand how to gather topic research facts.
- Know how to safely use the Internet.
- Know how to access the safe sites through our school website.
- Know how to access relevant information and take grade appropriate notes.
- Know how to use technology/software to create and/or fix a simple circuit.
- Understand how to collaborate with peers to create an information rich document from a researched topic.
- Know how to troubleshoot a problem using a step by step approach.
- Know how resources are processed in order to produce technological products.
- Know how the technological transfer of information occurs.

Technology Resources: Internet Explorer, ZAP!, Brain PopJr., Cool Math 4 Kids, Scholastic Website, Microsoft Word.

Opportunities for Differentiation: Deliver instruction in a variety of modalities. Flexible timelines.

Teacher Notes:

Primary interdisciplinary connections: Math, Social Studies, Science, Writing	
21st century themes: • Collaboration • Creativity and Innovation • Problem-Solving	
Evidence of Learning	
Summative Assessment	
• Students progress in ZAP! • Students will successfully use Internet sites like Cool Math 4 Kids and Brain Pop Jr. to practice and learn about technological processes. • Project: Students will work collaboratively to create a document about a local issue in our community. • Students will use the Internet to research a specific topic.	
Equipment needed: Computer work station/LCD projector/Headphones	
Teacher Instructional Resources: Direction sheets	
Formative Assessments	
• Teacher led discussion • Discussions • Questioning • Projects	
ACTIVITIES	**MATERIALS**
• Brain Pop Jr. • Cool Math 4 Kids • ZAP! • Research based Word Document	

Unit 2

Multimedia

Unit Overview	
Content Area: Technology	
Unit Title: Multimedia	**Unit: 2**
Target Course/Grade Level: 3-4	**Timeline: Ongoing**
Unit Summary : In this unit, students will be introduced to slideshow creation. Slideshows will be made using some of the research data that was collected during the Internet unit. This unit will conclude with student PowerPoint presentations to the class.	

Learning Targets

Standards	
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
9.1	All students will demonstrate the creative, critical thinking, collaboration, and problem-solving skills needed to function successfully as both global citizens and workers in diverse ethnic and organizational cultures.

Content Statements

- The use of technology and digital tools requires knowledge and appropriate us of operations and related applications (8.1.4.A)
- The use of digital tools and media-rich resources enhances crativity and the construction of knowledge (8.1.4.B)
- The ability to recognize a problem and apply critical thinking and problem-solving skills to solve the problem is a lifelong skill that develops over time (9.1.A)
- Brainstorming activities enhance creative and innovative thinking in individual and group goal setting and problem solving (9.1.B)
- Effective communication skills convey intended meaning to others and assist in preventing misunderstanding (9.1.D)
- Digital media are 21st century tools used for local and global communications. There are ethical and unethical uses of communication and media (9.1.E)

CPI #	**Cumulative Progress Indicator (CPI) –**
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	Discuss the common uses of computer applications and hardware and identify their advantages and disadvantages
8.1.4.B.1	Produce a media-rich digital story about a significant local event or issue based on first-person interviews
9.1.4.A.1	Recognize a problem and brainstorm ways to solve the problem individually or collaboratively.
9.1.4.A.3	Determine when the use of technology is appropriate to solve problems.
9.1.4.A.4	Use data accessed on the web to inform solutions to problems and the decision-making process.
9.1.4.A.5	Apply critical thinking and problem-solving skills in classroom and family settings.
9.1.4.B.1	Participate in brainstorming sessions to seek information, ideas, and strategies that foster creative thinking.
9.1.4.D.1	Use effective oral and written communication in face-to-face and online interactions and when presenting to an audience.
9.1.4.E.1	Explain how digital media are used in daily life in a variety of settings.
9.1.4.E.2	Demonstrate effective communication using digital media during classroom activities.

9.1.4.E.3	Distinguish how digital media are used by individuals, groups, and organizations for varying purposes.
9.1.4.E.4	Explain why some uses of media are unethical.

Unit Essential Questions	**Unit Understandings**
• How can we incorporate sound and images into a multimedia presentation to communicate information about a topic? • How can digital tools be used for creating original ideas and solutions? • How has the use of digital tools improved opportunities for communication? • How can we incorporate various modalities into one slideshow?	• Multimedia presentations are digital tools that include sound and images to communicate information about a topic. • Digital tools provide opportunities for people to have new experiences.

Unit Learning Targets (Outcomes) – *Students will ...*

- Understand how to create and delete slides.
- Understand how add graphics to a slide.
- Understand how to add transitions and animation to a slide.
- Know how to organize a slide for aesthetic appeal.
- Know how to create a text box.
- Know how to copy and paste information from a secondary location onto a slide.
- Understand how to format an object to fit all of its components.
- Understand how to cite sources.
- Know how to create a picture in Paint to use in a Multimedia project.

Technology Resources: Microsoft Power Point, Microsoft Paint, Microsoft Word.

Opportunities for Differentiation: Deliver instruction in a variety of modalities. Flexible timelines.

Teacher Notes:

Primary interdisciplinary connections: Social Studies, Art, Writing.

21st century themes:

- Critical Thinking
- Creativity and Innovation
- Problem Solving
- Life and Career Skills
- Collaboration

Evidence of Learning

Summative Assessment

- Students will successfully complete a multimedia presentation using data imported from the Internet research unit.
- Students will create a Paint picture to copy and paste into the slideshow.
- Students will successfully copy and paste information from a previously created document.

Equipment needed: Computer work station/LCD projector/Headphones

Teacher Instructional Resources: Direction sheets

Formative Assessments

• Questioning • Discussion • Teacher Observation • Projects	
ACTIVITIES	**MATERIALS**
• Power Point Slideshow • Paint	

Unit 3

Word Processing

Unit Overview	
Content Area: Technology	
Unit Title: Word Processing	**Unit: 3**
Target Course/Grade Level: 3-4	**Timeline: Ongoing**
Unit Summary – In this unit, students will expand their knowledge of Microsoft Word and Excel and their basic functions.	

Learning Targets	
Standards	
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
9.1	All students will demonstrate the creative, critical thinking, collaboration, and problem-solving skills needed to function successfully as both global citizens and workers in diverse ethnic and organizational cultures.

Content Statements

- The use of technology and digital tools requires knowledge and appropriate us of operations and related applications (8.1.4.A)
- The ability to recognize a problem and apply critical thinking and problem-solving skills to solve the problem is a lifelong skill that develops over time (9.1.A)
- Brainstorming activities enhance creative and innovative thinking in individual and group goal setting and problem solving (9.1.B)
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- Digital media are 21st century tools used for local and global communications. There are ethical and unethical uses of communication and media (9.1.E)

CPI #	Cumulative Progress Indicator (CPI) –
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 input of text formatting and graphics using a word processing program
8.1.4.A.4	Create a simple spread sheet, enter data, and interpret the information
9.1.4.A.1	Recognize a problem and brainstorm ways to solve the problem individually or collaboratively.
9.1.4.A.3	Determine when the use of technology is appropriate to solve problems.
9.1.4.A.4	Use data accessed on the web to inform solutions to problems and the decision-making process.
9.1.4.A.5	Apply critical thinking and problem-solving skills in classroom and family settings.
9.1.4.B.1	Participate in brainstorming sessions to seek information, ideas, and strategies that foster creative thinking.
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Unit Essential Questions	**Unit Understandings**
• How do I save to a shared folder on a data drive? • How can we use keyboarding software to improve keyboarding skills? • How do I open a previously saved project? • How do I use the Microsoft Word toolbar to edit a word document? • How do I create Word Art, Clip Art and Auto Shapes? • How do I create a bar graph in Excel? • What is the difference between a row, cell and column? • How do I format a chart for color?	• Technology is constantly changing and requires continuous learning of new skills. • Microsoft word documents are used for personal as well as professional needs. • Keyboarding skills are essential to producing Microsoft Word documents. • Spreadsheets are used to store, organize, calculate, graph and present data.

Unit Learning Targets (Outcomes) – *Students will ...*

- Understand the process of saving and opening a Word Document.
- Understand how to use the toolbar to format the font for size, color and size.
- Understand how to use the right click feature to format an object and use spell check.
- Understand how to Bold, Underline, center the cursor, undo, use bullets and numbers.
- Understand how to insert and format clip art.
- Understand the importance of using the home row keys and two handed typing.
- Understand how to use the tab over, and insert border tab.
- Understand how to input data in a spreadsheet.
- Understand how to use the Chart Wizard to create a bar graph
- Understand how to differentiate between cells, rows and columns.

Technology Resources: Microsoft word, Type to Learn, Excel

Opportunities for Differentiation: Deliver instruction in a variety of modalities. Flexible timelines.

Teacher Notes:

Primary interdisciplinary connections: Math, Social Studies

21st century themes:

- Critical Thinking
- Creativity and Innovation
- Problem Solving
- Life and Career Skills
- Collaboration

Evidence of Learning

Summative Assessment

- Type to Learn progress.
- Students will create document with multiple font choices, colors and sizes.
- Students will follow a direction page to create a specific document to practice using the ribbon tab.
- Students create a bar graph in Excel which will then be formatted in Microsoft Word.

Equipment needed: Computer work station/LCD projector/Headphones

Teacher Instructional Resources: Direction sheets, Chart paper

Formative Assessments

• Teacher Observation • Class Participation/Discussions • Type to Learn	• Following directions • Independent Practice • Questioning

ACTIVITIES	MATERIALS
• Type To Learn • Microsoft Word Project • Keyboarding Practice Quizzes • Excel Graphs	