Technology Curriculum
2017

Technology Education Grade: K-6

2014 New Jersey Core Curriculum Content Standards – Technology

Content Area	**Technology**
Standard	**8.1 Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.**
Strand	**A. Technology Operations and Concepts:** *Students demonstrate a sound understanding of technology concepts, systems and operations.*

Grade Level	Content Statement Students will:	Indicator	Indicator
K-2	Understand and use technology systems.	**8.1.2.A.1**	Identify the basic features of a digital device and explain its purpose.
	Select and use applications effectively and productively.	**8.1.2.A.2**	Create a document using a word processing application.
		8.1.2.A.3	Compare the common uses of at least two different digital applications and identify the advantages and disadvantages of using each.
		8.1.2.A.4	Demonstrate developmentally appropriate navigation skills in virtual environments (i.e. games, museums).
		8.1.2.A.5	Enter information into a spreadsheet and sort the information.
		8.1.2.A.6	Identify the structure and components of a database.
		8.1.2.A.7	Enter information into a database or spreadsheet and filter the information.
3-5	Understand and use technology systems.	**8.1.5.A.1**	Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.
	Select and use applications effectively and productively.	**8.1.5.A.2**	Format a document using a word processing application to enhance text and include graphics, symbols and/ or pictures.
		8.1.5.A.3	Use a graphic organizer to organize information about problem or issue.
		8.1.5.A.4	Graph data using a spreadsheet, analyze and produce a report that explains the analysis of the data.
		8.1.5.A.5	Create and use a database to answer basic questions.

		8.1.5.A.6	Export data from a database into a spreadsheet; analyze and produce a report that explains the analysis of the data.

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Strand	**A. Technology Operations and Concepts:** *Students demonstrate a sound understanding of technology concepts, systems and operations.*		
Grade Level	**Content Statement Students will:**	**Indicator**	**Indicator**
6-8	Understand and use technology systems.	8.1.8.A.1	Demonstrate knowledge of a real world problem using digital tools.
	Select and use applications effectively and productively.	8.1.8.A.2	Create a document (e.g. newsletter, reports, personalized learning plan, business letters or flyers) using one or more digital applications to be critiqued by professionals for usability.
		8.1.8.A.3	Use and/or develop a simulation that provides an environment to solve a real world problem or theory.
		8.1.8.A.4	Graph and calculate data within a spreadsheet and present a summary of the results
		8.1.8.A.5	Create a database query, sort and create a report and describe the process, and explain the report results.

Content Area	**Technology**
Standard	**8.1 Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.**

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Strand		**B. Creativity and Innovation:** *Students demonstrate creative thinking, construct knowledge and develop innovative products and process using technology.*	
Grade Level	**Content Statement Students will:**	**Indicator**	**Indicator**
K-2	Apply existing knowledge to generate new ideas, products, or processes. Create original works as a means of personal or group expression.	**8.1.2.B.1**	Illustrate and communicate original ideas and stories using multiple digital tools and resources.
3-5		**8.1.5.B.1**	Collaborative to produce a digital story about a significant local event or issue based on first-person interviews.
6-8		**8.1.8.B.1**	Synthesize and publish information about a local or global issue or event (ex. telecollaborative project, blog, school web).

Content Area	**Technology**		
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Strand	**C. Communication and Collaboration:** *Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.*		
Grade Level	**Content Statement**	**Indicator**	**Indicator**
K-2	Interact, collaborate, and publish with peers, experts, or others by employing a variety of digital environments and media. Communicate information and ideas to multiple	**8.1.2.C.1**	Engage in a variety of developmentally appropriate learning activities with students in other classes, schools, or countries using various media formats such as online collaborative tools, and social media.
3-5		**8.1.5.C.1**	Engage in online discussions with learners of other cultures to investigate a worldwide issue from multiple perspectives and sources, evaluate findings and present possible solutions, using digital tools and online resources for all steps.
6-8		**8.1.8.C.1**	Collaborate to develop and publish work that provides perspectives on a global problem

	audiences using a variety of media and formats. Develop cultural understanding and global awareness by engaging with learners of other cultures. Contribute to project teams to produce original works or solve problems.		for discussions with learners from other countries.

Content Area	**Technology**		
Standard	**8.1 Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.**		
Strand	**D. Digital Citizenship:** *Students understand human, cultural, and societal issues related to technology and practice legal and ethical b ehavior.*		
Grade Level	**Content Statement**	**Indicator**	**Indicator**
K-2	Advocate and practice safe, legal, and responsible use of information and technology.	**8.1.2.D.1**	Develop an understanding of ownership of print and non-print information.
3-5	Advocate and practice safe, legal, and	**8.1.5.D.1**	Understand the need for and use of copyrights.

	responsible use of information and technology.	**8.1.5.D.2**	Analyze the resource citations in online materials for proper use.
	Demonstrate personal responsibility for lifelong learning.	**8.1.5.D.3**	Demonstrate an understanding of the need to practice cyber safety, cyber security, and cyber ethics when using technologies and social media.
	Exhibit leadership for digital citizenship.	**8.1.5.D.4**	Understand digital citizenship and demonstrate an understanding of the personal consequences of inappropriate use of technology and social media.
6-8	Advocate and practice safe, legal, and responsible use of information and technology.	**8.1.8.D.1**	Understand and model appropriate online behaviors related to cyber safety, cyber bullying, cyber security, and cyber ethics including appropriate use of social media.
	Demonstrate personal responsibility for lifelong learning.	**8.1.8.D.2**	Demonstrate the application of appropriate citations to digital content.
		8.1.8.D.3	Demonstrate an understanding of fair use and Creative Commons to intellectual property.
	Exhibit leadership for digital citizenship.	**8.1.8.D.4**	Assess the credibility and accuracy of digital content.
		8.1.8.D.5	Understand appropriate uses for social media and the negative consequences of misuse.

Content Area	**Technology**		
Standard	**8.1 Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.**		
Strand	**E: Research and Information Fluency:** *Students apply digital tools to gather, evaluate, and use information.*		
Grade Level	**Content Statement Students will:**	**Indicator**	**Indicator**
K-2	Plan strategies to guide inquiry Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media.	**8.1.2.E.1**	Use digital tools and online resources to explore a problem or issue.

	Evaluate and select information sources and digital tools based on the appropriateness for specific tasks.		
3-5	Plan strategies to guide inquiry. Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media. Evaluate and select information sources and digital tools based on the appropriateness for specific tasks.	**8.1.5.E.1**	Use digital tools to research and evaluate the accuracy of, relevance to, and appropriateness of using print and non-print electronic information sources to complete a variety of tasks.

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Strand	**E: Research and Information Fluency:** *Students apply digital tools to gather, evaluate, and use information.*		
Grade Level	**Content Statement** **Students will:**	**Indicator**	**Indicator**
6-8	Plan strategies to guide inquiry. Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media. Evaluate and select information sources and digital tools based on the appropriateness for specific tasks.	8.1.8.E.1	Effectively use a variety of search tools and filters in professional public databases to find information to solve a real world problem.

	Process data and report results.		

Content Area	**Technology**		
Standard	**8.1 Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.**		
Strand	**F: Critical thinking, problem solving, and decision making:** *Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.*		
Grade Level	**Content Statement Students will:**	**Indicator**	**Indicator**
K-2	Identify and define authentic problems and significant questions for investigation. Plan and manage activities to develop a solution or complete a project. Collect and analyze data to identify solutions and/or make informed decisions. Use multiple processes and diverse perspectives to explore alternative solutions.	8.1.2.F.1	Use geographic mapping tools to plan and solve problems.
3-5	Identify and define authentic problems and significant questions for investigation. Plan and manage activities to develop a	8.1.5.F.1	Apply digital tools to collect, organize, and analyze data that support a scientific finding.

	solution or complete a project. Collect and analyze data to identify solutions and/or make informed decisions. Use multiple processes and diverse perspectives to explore alternative solutions		

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Strand		**F: Critical thinking, problem solving, and decision making:** *Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.*	
Grade Level	**Content Statement Students will:**	**Indicator**	**Indicator**
6-8	Identify and define authentic problems and significant questions for investigation. Plan and manage activities to develop a solution or complete a project. Collect and analyze data to identify solutions and/or make informed decisions. Use multiple processes and diverse perspectives to explore alternative solutions.	**8.1.8.F.1**	Explore a local issue, by using digital tools to collect and analyze data to identify a solution and make an informed decision.

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Content Area	**Technology**		
Standard	**8.2 Technology Education, Engineering, Design, and Computational Thinking - Programming:** **All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment.**		
Strand	**A. The Nature of Technology: Creativity and Innovation** *Technology systems impact every aspect of the world in which we live.*		
Grade Level	**Content Statement** **Students will be able to understand:**	**Indicator**	**Indicator**
K-2	The characteristics and scope of technology.	**8.2.2.A.1**	Define products produced as a result of technology or of nature.
		8.2.2.A.2	Describe how designed products and systems are useful at school, home and work.
	The core concepts of technology.	**8.2.2.A.3**	Identify a system and the components that work together to accomplish its purpose.
		8.2.2.A.4	Choose a product to make and plan the tools and materials needed.
	The relationships among technologies and the connections between technology and other fields of study.	**8.2.2.A.5**	Collaborate to design a solution to a problem affecting the community.
3-5	The characteristics and scope of technology.	**8.2.5.A.1**	Compare and contrast how products made in nature differ from products that are human made in how they are produced and used.
		8.2.5.A.2	Investigate and present factors that influence the development and function of a product and a system.
	The core concepts of technology.	**8.2.5.A.3**	Investigate and present factors that influence the development and function of products and systems, e.g., resources, criteria and constraints.
	The relationships among technologies and the connections between technology	**8.2.5.A.4**	Compare and contrast how technologies have changed over time due to human needs and economic, political and/or cultural influences.

	and other fields of study.	**8.2.5.A.5**	Identify how improvement in the understanding of materials science impacts technologies.

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Strand		**A. The Nature of Technology: Creativity and Innovation** *Technology systems impact every aspect of the world in which we live.*	
Grade Level	**Content Statement** **Students will be able to understand:**	**Indicator**	**Indicator**
6-8	The characteristics and scope of technology.	**8.2.8.A.1**	Research a product that was designed for a specific demand and identify how the product has changed to meet new demands (i.e. telephone for communication - smart phone for mobility needs).
	The core concepts of technology.	**8.2.8.A.2**	Examine a system, consider how each part relates to other parts, and discuss a part to redesign to improve the system.
		8.2.8.A.3	Investigate a malfunction in any part of a system and identify its impacts.
	The relationships among technologies and the connections between technology and other fields of study.	**8.2.8.A.4**	Redesign an existing product that impacts the environment to lessen its impact(s) on the environment.
		8.2.8.A.5	Describe how resources such as material, energy, information, time, tools, people, and capital contribute to a technological product or system.
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Content Area		**Technology**	
Standard		**8.2 Technology Education, Engineering, Design, and Computational Thinking - Programming: All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment.**	
Strand		**B. Technology and Society:** *Knowledge and understanding of human, cultural and societal values are fundamental when designing technological systems and products in the global society.*	
Grade Level	**Content Statement Students will be able to understand:**	**Indicator**	**Indicator**
K-2	The cultural, social, economic and political effects of technology.	**8.2.2.B.1**	Identify how technology impacts or improves life.
	The effects of technology on the environment.	**8.2.2.B.2**	Demonstrate how reusing a product affects the local and global environment.
	The role of society in the development and use of technology.	**8.2.2.B.3**	Identify products or systems that are designed to meet human needs.
	The influence of technology on history.	**8.2.2.B.4**	Identify how the ways people live and work has changed because of technology.
3-5	The cultural, social,	**8.2.5.B.1**	Examine ethical considerations in the development and production of a product through its

	economic and political effects of technology.		life cycle.
	The effects of technology on the environment.	**8.2.5.B.2**	Examine systems used for recycling and recommend simplification of the systems and share with product developers.
		8.2.5.B.3	Investigate ways that various technologies are being developed and used to reduce improper use of resources.
	The role of society in the development and use of technology.	**8.2.5.B.4**	Research technologies that have changed due to society's changing needs and wants.
		8.2.5.B.5	Explain the purpose of intellectual property law.
	The influence of technology on history.	**8.2.5.B.6**	Compare and discuss how technologies have influenced history in the past century.

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Grade Level	**Content Statement** **Students will be able to understand:**	**Indicator**	**Indicator**
6-8	The cultural, social, economic and political effects of technology.	**8.2.8.B.1**	Evaluate the history and impact of sustainability on the development of a designed product or system over time and present results to peers.
		8.2.8.B.2	Identify the desired and undesired consequences from the use of a product or system.
	The effects of technology on the environment.	**8.2.8.B.3**	Research and analyze the ethical issues of a product or system on the environment and report findings for review by peers and /or experts.

		8.2.8.B.4	Research examples of how humans can devise technologies to reduce the negative consequences of other technologies and present your findings.
	The role of society in the development and use of technology.	**8.2.8.B.5**	Identify new technologies resulting from the demands, values, and interests of individuals, businesses, industries and societies.
		8.2.8.B.6	Compare and contrast the different types of intellectual property including copyrights, patents and trademarks.
	The influence of technology on history.	**8.2.8.B.7**	Analyze the historical impact of waste and demonstrate how a product is upcycled, reused or remanufactured into a new product.

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Standard	**8.2 Technology Education, Engineering, Design, and Computational Thinking - Programming:** **All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment.**		
Strand	**C. Design:** *The design process is a systematic approach to solving problems.*		
Grade Level	**Content Statement** **Students will be able to understand:**	**Indicator**	**Indicator**
K-2	The attributes of design.	**8.2.2.C.1**	Brainstorm ideas on how to solve a problem or build a product.
		8.2.2.C.2	Create a drawing of a product or device that communicates its function to peers and discuss.
		8.2.2.C.3	Explain why we need to make new products.
	The application of engineering design.	**8.2.2.C.4**	Identify designed products and brainstorm how to improve one used in the classroom.
		8.2.2.C.5	Describe how the parts of a common toy or tool interact and work as part of a system.
	The role of troubleshooting, research and development, invention and innovation and experimentation in	**8.2.2.C.6**	Investigate a product that has stopped working and brainstorm ideas to correct the problem.

	problem solving.		
3-5	The attributes of design.	**8.2.5.C.1**	Collaborate with peers to illustrate components of a designed system.
		8.2.5.C.2	Explain how specifications and limitations can be used to direct a product's development.
		8.2.5.C.3	Research how design modifications have lead to new products.
	The application of engineering design.	**8.2.5.C.4**	Collaborate and brainstorm with peers to solve a problem evaluating all solutions to provide the best results with supporting sketches or models.
		8.2.5.C.5	Explain the functions of a system and subsystems.
	The role of troubleshooting, research and development, invention and innovation and experimentation in problem solving.	**8.2.5.C.6**	Examine a malfunctioning tool and identify the process to troubleshoot and present options to repair the tool.
		8.2.5.C.7	Work with peers to redesign an existing product for a different purpose.

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Strand	**C. Design:** *The design process is a systematic approach to solving problems.*		
Grade Level	**Content Statement** **Students will be able to understand:**	**Indicator**	**Indicator**

6-8	The attributes of design.	**8.2.8.C.1**	Explain how different teams/groups can contribute to the overall design of a product.
		8.2.8.C.2	Explain the need for optimization in a design process.
		8.2.8.C.3	Evaluate the function, value, and aesthetics of a technological product or system, from the perspective of the user and the producer.
	The application of engineering design.	**8.2.8.C.4**	Identify the steps in the design process that would be used to solve a designated problem.
		8.2.8.C.5	Explain the interdependence of a subsystem that operates as part of a system.
		8.2.8.C.5.a	Create a technical sketch of a product with materials and measurements labeled.
	The role of troubleshooting, research and development, invention and innovation and experimentation in problem solving.	**8.2.8.C.6**	Collaborate to examine a malfunctioning system and identify the step-by-step process used to troubleshoot, evaluate and test options to repair the product, presenting the better solution.
		8.2.8.C.7	Collaborate with peers and experts in the field to research and develop a product using the design process, data analysis and trends, and maintain a design log with annotated sketches to record the developmental cycle.
		8.2.8.C.8	Develop a proposal for a chosen solution that include models (physical, graphical or mathematical) to communicate the solution to peers.

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K-2

Unit Plan Title	Technology Operations and Concepts
Suggested Time Frame	1-2 weeks

Overview / Rationale

What is this unit about? What will students be able to independently use their learning to do?

Students will demonstrate a sound understanding of technology concepts, systems and operations. Students will be able to understand and use technology systems. Students will be able to select and use applications effectively and productively.

Stage 1 – Desired Results

Established Goals:

Standards to be covered…

- 8.1.2.A.1- Identify the basic features of a digital device and explain its purpose.
- 8.1.2.A.2- Create a document using a word processing application.
- 8.1.2.A.3-Compare the common uses of at least two different digital applications and identify the advantages and disadvantages of using each.
- 8.1.2.A.4-Demonstrate developmentally appropriate navigation skills in virtual environments (i.e. games, museums).
- 8.1.2.A.5-Enter information into a spreadsheet and sort the information.
- 8.1.2.A.6-Identify the structure and components of a database.
- 8.1.2.A.7-Enter information into a database or spreadsheet and filter the information.

Enduring Understandings:	**Essential Questions:**
Students will demonstrate a sound understanding of technology concepts, systems and operations.	How does one create professional documents using digital means? How does one navigate various programs?

<table>
<tr><th colspan="2">Stage 2 – Assessment Evidence</th></tr>
<tr><td>Performance Task(s):
Research Projects
K - Spider & Bat Research Project
1- Dinosaur Pet Project
2- Animal Encyclopedia Project</td><td>Other Evidence:
Pre-Assessments, Formative Assessments, Summative Assessments

Worksheets, Handouts</td></tr>
<tr><th colspan="2">Stage 3 – Learning Plan</th></tr>
<tr><td>Instructional Strategies</td><td>Descriptions</td></tr>
<tr><td>Suggested Learning Activities</td><td>Grade Projects:
K & 1- Identify the basic features of a digital device and explain its purpose. (Mr. Computer Worksheet)
(Keyboard worksheet- only grade 1)
1-2- Create a document using a word processing application.
K-2- Demonstrate developmentally appropriate navigation skills in virtual environments (i.e. games, museums).
2- Identify the structure and components of a database.
Possible Activities:
Computer Parts Labeling Worksheet- Identify the basic features of a digital device and explain its purpose.
Type a Writing / ELA poem, essay or story- Create a document using a word processing application.
Compare Microsoft Word to Google Docs- (Venn Diagram) - Compare the common uses of at least two different digital applications and identify the advantages and disadvantages of using each. Use World Book - Demonstrate developmentally appropriate navigation skills in virtual environments (i.e. games, museums).</td></tr>
</table>

	• Take a survey of the class's favorite ice cream flavor - Enter information into a spreadsheet and sort the information. *Teacher is not limited to these activities. **Interactive mini lecture/notes –** Students take notes, answer questions, turn and talk, participate in class discussions, look up information in text/online. **Do Nows –** At start of class, students answer questions, reflect on learning, work on typing.com **Video Clips-** Shown to aid learning by providing a visual, engage the class **Demonstrations-** To enhance student learning, ignite curiosity, spur discussion, provide a visual, engage the class **Research questions-** Students are given a broad question to research. Students answer the question and provide evidence for their responses. (Independent or collaborative) **Journaling-** Responses to various ideas, thoughts, class activities, and content. **Reflecting on Learning-** Students self reflect on their learning and "rate" themselves on a learning scale.
Modifications	Special Education Students: Adhere to IEP/504s and provide extra time, guided practice/notes

Unit Plan Title	Creativity and Innovation
Suggested Time Frame	1-2 weeks
Overview / Rationale	

What is this unit about? What will students be able to independently use their learning to do?

Students demonstrate creative thinking, construct knowledge and develop innovative products and process using technology. Students will create original works as a mean of personal or group expression.

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Stage 1 – Desired Results

Established Goals: Standards to be covered…

- *8.1.2.B.1-Illustrate and communicate original ideas and stories using multiple digital tools and resources.*

Enduring Understandings:	**Essential Questions:**
● Students demonstrate creative thinking, construct knowledge and develop innovative products and process using technology.	● How does one create digital stories?
Knowledge: Students will know…	**Skills:**
● How to apply existing knowledge to generate new ideas, products, or processes. ● How to create original works as a means of personal or group expression.	● Students will be able to… ● Illustrate and communicate original ideas and stories using multiple digital tools and resources.

Stage 2 – Assessment Evidence

Performance Task(s):	**Other Evidence:**
Research Projects *K - Spider & Bat Research Project* *1- Dinosaur Pet Project* *2- Animal Encyclopedia Project*	*Pre-Assessments, Formative Assessments, Summative Assessments* Worksheets, Handouts

Stage 3 – Learning Plan	
Instructional Strategies	**Descriptions**
Suggested Learning Activities	**Grade Projects:** ● Illustrate and communicate original ideas and stories using multiple digital tools and resources. **Possible Activities:** ● Use Microsoft Paint or https://storybird.com/ to create a digital story about one's favorite book. Use this unit in conjunction to unit 1 to expand on the research project assignment. *Teacher is not limited to these activities ● **Interactive mini lecture/notes –** Students take notes, answer questions, turn and talk, participate in class discussions, look up information in text/online. ● **Do Now –** At start of class, students answer questions, reflect on learning, work on typing.com ● **Video Clips-** Shown to aid learning by providing a visual, engage the class ● **Demonstrations-** To enhance student learning, ignite curiosity, spur discussion, provide a visual, engage the class. ● **Research questions-** Students are given a broad question to research. Students answer the question and provide evidence for their responses. (Independent or collaborative) ● **Journaling-** Responses to various ideas, thoughts, class activities, and content.

	• **Reflecting on Learning-** Students self reflect on their learning and "rate" themselves on a learning scale.
Modifications	Special Education Students: Adhere to IEP/504s and provide extra time, guided practice/notes.
Unit Plan Title	Communication and Collaboration
Suggested Time Frame	1-2 weeks
Overview / Rationale	

What is this unit about? What will students be able to independently use their learning to do?

Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others. Students will be able to interact, collaborate, and publish with peers, experts, or others by employing a variety of digital environments and media. Students will be able to communicate information and ideas to multiple audiences using a variety of media and formats. Students will be able to develop cultural understanding and global awareness by engaging with learners of other cultures. Students will be able to contribute to project teams to produce original works or solve problems.

Stage 1 – Desired Results

Established Goals: Standards to be covered…

- *8.1.2.C.1- Engage in a variety of developmentally appropriate learning activities with students in other classes, schools, or countries using various media formats such as online collaborative tools, and social media.*

Enduring Understandings:	**Essential Questions:**
Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.	How does digital media impact society on a local, state, national or global level?
Knowledge: *Students will know…* ● How to interact, collaborate, and publish with peers, experts, or others by employing a variety of digital environments and media. ● How to communicate information and ideas to multiple audiences using a variety of media and formats. ● How to develop cultural understanding and global awareness by engaging with learners of other cultures. ● How to contribute to project teams to produce original works or solve problems.	**Skills:** *Students will be able to…* Engage in a variety of developmentally appropriate learning activities with students in other classes, schools, or countries using various media formats such as online collaborative tools, and social media.

<table>
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Research Projects
K - Spider & Bat Research Project
1- Dinosaur Pet Project
2- Animal Encyclopedia Project</td><td>Other Evidence:
Pre-Assessments, Formative Assessments, Summative Assessments

Worksheets, Handouts</td></tr>
<tr><th colspan="3">Stage 3 – Learning Plan</th></tr>
<tr><td>Instructional Strategies</td><td colspan="2">Descriptions</td></tr>
<tr><td>Suggested Learning Activities</td><td colspan="2">Possible Activities
● Use Skype or Google Hangouts to communicate with another class about a writing project.
● Engage in a variety of developmentally appropriate learning activities with students in other classes, schools, or countries using various media formats such as online collaborative tools, and social media.

*Teacher is not limited to these activities
● Interactive mini lecture/notes – Students take notes, answer questions, turn and talk, participate in class discussions, look up information in text/online.
● Do Now – At start of class, students answer questions, reflect on learning, work on typing.com
● Video Clips- Shown to aid learning by providing a visual, engage the class
● Demonstrations- To enhance student learning, ignite curiosity, spur discussion, provide a visual, engage the class
● Research questions- Students are given a broad question to research. Students answer the question and provide evidence for their responses. (Independent or collaborative)</td></tr>
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	• **Journaling-** Responses to various ideas, thoughts, class activities, and content. • **Reflecting on Learning-** Students self reflect on their learning and "rate" themselves on a learning scale.
Modifications	**Special Education Students:** Adhere to IEP/504s and provide extra time, guided practice/notes

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<table>
<tr><td>Unit Plan Title</td><td>Digital Citizenship</td></tr>
<tr><td>Suggested Time Frame</td><td>1-2 Weeks</td></tr>
<tr><td colspan="2">Overview / Rationale</td></tr>
<tr><td colspan="2">What is this unit about? What will students be able to independently use their learning to do?
Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior. Students will be able to advocate and practice safe, legal, and responsible use of information and technology. Students will be able to demonstrate personal responsibility for lifelong learning. Students will be able to exhibit leadership for digital citizenship.</td></tr>
<tr><td colspan="2">Stage 1 – Desired Results</td></tr>
<tr><td colspan="2">Established Goals: Standards to be covered…

● 8.1.2.D.1-Develop an understanding of ownership of print and non-print information.</td></tr>
<tr><td>Enduring Understandings:
Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.</td><td>Essential Questions:
How are print and non-print products used?</td></tr>
<tr><td>Knowledge:
Students will know…
● How to advocate and practice safe, legal, and responsible use of information and technology.</td><td>Skills:
Students will be able to…
● Develop an understanding of ownership of print and non- print information.</td></tr>
<tr><td colspan="2">Stage 2 – Assessment Evidence</td></tr>
</table>

Performance Task(s):	**Other Evidence:**
Research Projects *K - Spider & Bat Research Project* *1- Dinosaur Pet Project* *2- Animal Encyclopedia Project*	*Pre-Assessments, Formative Assessments, Summative Assessments* Worksheets, Handouts

Stage 3 – Learning Plan	
Instructional Strategies	**Descriptions**
Suggested Learning Activities	**Possible Activities:** Use the https://www.commonsensemedia.org/educators/scope-and-sequence#grades-k-2 lessons to teach digital citizenship and safety. • **Going Places Safely-** Students learn that they can go to exciting places online, but they need to follow certain rules to remain safe. • **A-B-C Searching-** Students search for pictures online by clicking on letters of the alphabet. They learn that directory sites with alphabetical listings offer one way to find things on the Internet • **Keep It Private-** Students learn that many websites ask for information that is private and discuss how to responsibly handle such requests. • **My Creative Work-** Students are introduced to the concept of having ownership over creative work. They practice putting their name and date on something they produce. • **Sending Email-** Students explore how they can use email to communicate with real people within their schools, families, and communities • **Unit Test 1** • **Staying Safe Online-** Students understand that they should stay safe online by choosing websites that are good for them to visit, and avoid sites that are not appropriate for them • **Following the Digital Trail-** Students learn that the information they put online leaves a digital footprint or "trail." This trail can be big or small, helpful or hurtful, depending on how they manage it • **Screen Out the Mean-**Students learn that children sometimes can act like bullies when they are online. They explore what cyberbullying means and what they can do when they encounter it. • **Using Keywords-** Students understand that keyword searching is an effective way to locate information on the Internet. They learn how to select keywords to produce the best search results.

	• **Sites I Like-** Students discuss criteria for rating informational websites and apply them to an assigned site. Students learn that all websites are not equally good sources of information • **Unit Test 2** • **Powerful Passwords-**Students explore reasons why people use passwords, learn the benefits of using passwords, and discover strategies for creating and keeping strong, secure passwords • **My Online Community-**Students explore the concept that people can connect with one another through the Internet. They understand how the ability for people to communicate online can unite a community. • **Things for Sale-** Students examine product websites and understand that the purpose of the site is to encourage buying the product. Students learn methods used to promote products on these sites. • **Show Respect Online-** Students explore the similarities and differences between in-person and online communications, and then learn how to write clear and respectful messages. • **Writing Good Emails-** Students learn how to communicate effectively by email, taking into account the purpose and audience of their message, and the tone they want to convey. *Teacher is not limited to these activities ● **Interactive mini lecture/notes –** Students take notes, answer questions, turn and talk, participate in class discussions, look up information in text/online. ● **Do Now –** At start of class, students answer questions, reflect on learning, work on typing.com ● **Video Clips-** Shown to aid learning by providing a visual, engage the class ● **Demonstrations-** To enhance student learning, ignite curiosity, spur discussion, provide a visual, engage the class ● **Research questions-** Students are given a broad question to research. Students answer the question and provide evidence for their responses. (Independent or collaborative) ● **Journaling-** Responses to various ideas, thoughts, class activities, and content. ● **Reflecting on Learning-** Students self reflect on their learning and "rate" themselves on a learning scale.

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Unit Plan Title	Research and Information Fluency
Suggested Time Frame	1-2 Weeks

Overview / Rationale

What is this unit about? What will students be able to independently use their learning to do?

All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge. Students will be able to plan strategies to guide inquiry. Students will be able to locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media. Students will be able to evaluate and select information sources and digital tools based on the appropriateness for specific tasks.

Stage 1 – Desired Results

Established Goals: Standards to be covered…

- *8.1.2.E.1-Use digital tools and online resource to explore a problem or issue.*

Enduring Understandings:	**Essential Questions:**
Students apply digital tools to gather, evaluate and use information.	How can you use digital tools to research information about a specific topic?

Knowledge:	**Skills:**
Students will know… ● How to plan strategies to guide inquiry. ● How to locate, organize, analyze, evaluate, synthesize and ethically use information from a variety of sources and media. ● How to evaluate and select information sources and digital tools based on the appropriateness for specific tasks.	Students will be able to… ● Use digital tools and online resource to explore a problem or issue.

Stage 2 – Assessment Evidence	
Performance Task(s): *Research Projects* *K - Spider & Bat Research Project* *1- Dinosaur Pet Project* *2- Animal Encyclopedia Project*	**Other Evidence:** *Pre-Assessments, Formative Assessments, Summative Assessments* Worksheets, Handouts

Stage 3 – Learning Plan	
Instructional Strategies	**Descriptions**

Suggested Learning Activities	**Possible Activities:** ● Research a topic using an Internet search engine and record one's findings. **Teacher is not limited to these activities* ● **Interactive mini lecture/notes –** Students take notes, answer questions, turn and talk, participate in class discussions, look up information in text/online. ● **Do Now –** At start of class, students answer questions, reflect on learning, work on typing.com ● **Video Clips-** Shown to aid learning by providing a visual, engage the class ● **Demonstrations-** To enhance student learning, ignite curiosity, spur discussion, provide a visual, engage the class ● **Research questions-** Students are given a broad question to research. Students answer the question and provide evidence for their responses. (Independent or collaborative) ● **Journaling-** Responses to various ideas, thoughts, class activities, and content. ● **Reflecting on Learning-** Students self reflect on their learning and "rate" themselves on a learning scale.
Modifications	**Special Education Students:** Adhere to IEP/504s and provide extra time, guided practice/notes

Unit Plan Title	Critical Thinking, Problem Solving, and Decision Making
Suggested Time Frame	1-2 Weeks
Overview / Rationale	

What is this unit about? What will students be able to independently use their learning to do?

Technology systems impact every aspect of the world in which we live. The students will use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources. Students will use geographic mapping tools to plan and solve problems.

Stage 1 – Desired Results

Established Goals:

Standards to be covered…

- *8.1.2.F.1- Use geographic mapping tools to plan and solve problems.*

Enduring Understandings:	**Essential Questions:**
• Students use critical thinking skills to plan and conduct research, mange projects, solve problems, and make informed decisions using appropriate digital tools and resources.	• How have geographic mapping tools helped us understand more about our planet Earth?
Knowledge: Students will know… • How to identify and define authentic problems and significant questions for investigation. • How to plan and mange activities to develop a solution or complete a project. • Collect and analyze data to identify solutions and/or make informed decisions. • How to use multiple processes and diverse perspectives to explore alternative solutions.	**Skills:** Students will be able to… • Use geographic maps to to plan and solve problems.

Knowledge: *Students will know…* ● How to identify and define authentic problems and significant questions for investigation. ● How to plan and mange activities to develop a solution or complete a project. ● Collect and analyze data to identify solutions and/or make informed decisions. ● How to use multiple processes and diverse perspectives to explore alternative solutions.	**Skills:** *Students will be able to…* ● Use geographic maps to plan and solve problems.

Stage 3 – Learning Plan	
Instructional Strategies	**Descriptions**
Suggested Learning Activities	**Possible Activities:** ● Use Google Earth to record what can be discovered about the earth. ● Explore the ocean basins and different tectonic plates. *Teacher is not limited to these activities ● **Interactive mini lecture/notes** – Students take notes, answer questions, turn and talk, participate in class discussions, look up information in text/online. ● **Do Now** – At start of class, students answer questions, reflect on learning, work on typing.com ● **Video Clips-** Shown to aid learning by providing a visual, engage the class ● **Demonstrations-** To enhance student learning, ignite curiosity, spur discussion, provide a visual, engage the class ● **Research questions-** Students are given a broad question to research. Students answer the question and provide evidence for their responses. (Independent or collaborative)

	• **Journaling-** Responses to various ideas, thoughts, class activities, and content • **Reflecting on Learning-** Students self reflect on their learning and "rate" themselves on a learning scale.
Modifications	**Special Education Students:** Adhere to IEP/504s and provide extra time, guided practice/notes

Unit Plan Title	The Nature of Technology: Creativity and Innovation
Suggested Time Frame	1-4 Weeks

Overview / Rationale

What is this unit about? What will students be able to independently use their learning to do?

WK1- Technology systems impact every aspect of the world in which we live. The students will understand the characteristics and scope of technology. The students will use the core concepts of technology. The students will show the relationships among technologies and the connections between technology and other fields of study.
WK2- Knowledge and understanding of human, cultural and society values are fundamental when designing technology systems and products in the global society. Students will understand the cultural, social, economic and political effects of technology.
Students will understand the effects of technology on the environment. The students will understand the role of society in the development and use of technology.
WK3- The design process is a systematic approach to solving problems. The students will understand the attributes of design. The students will understand the application of engineering design. The students will understand the role of troubleshooting, research and development, invention and innovation and experimentation in problem solving.
WK4- The designed world is the product of a design process that provides the means to convert resources into products and systems. The students will be able to apply the design process. The students will use and maintain technological products and systems. The students will assess the impact of products and systems

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Stage 1 – Desired Results
Established Goals: **Standards to be covered…** 8.2.2.A.1- Define products produced as a result of technology or of nature. 8.2.2.A.2-Describe how designed products and systems are useful at school, home and work. 8.2.2.A.3- Identify a system and the components that work together to accomplish its purpose. 8.2.2.A.4-Choose a product to make and plan the tools and materials needed. 8.2.2.A.5-Collaborate to design a solution to a problem affecting the community. 8.2.2.B.1- Identify how technology impacts or improves life. 8.2.2.B.2- Demonstrate how reusing a product affects the local and global environment. 8.2.2.B.3- Identify products or systems that are designed to meet human needs. 8.2.2.B.4- Identify how the ways people live and work has changed because of technology. 8.2.2.C.1- Brainstorm ideas on how to solve a problem or build a product. 8.2.2.C.2-Create a drawing of a product or device that communicates its function to peers and discuss. 8.2.2.C.3-Explain why we need to make new products. 8.2.2.C.4-Identify designed products and brainstorm how to improve one used in the classroom. 8.2.2.C.5-Describe how the parts of a common toy or tool interacts and works as part of a system. 8.2.2.C.6-Investigate a product that has stopped working and brainstorm ideas to correct the problem. 8.2.2.D.1- Collaborate and apply a design process to solve a simple problem from everyday experiences. 8.2.2.D.2- Discover how a product works by taking it apart, sketching how parts fit, and putting it back together. 8.2.2.D.3- Identify the strengths and weaknesses in a product or system.

8.2.2.D.4- Identify the resources needed to create technological products or systems. 8.2.2.D.5- Identify how using a tool (such as a bucket or wagon) aids in reducing work. 8.2.2.E.1- List and demonstrate the steps to an everyday task.
8.2.2.E.2- Demonstrate an understanding of how a computer takes input through a series of written commands and then interprets and displays information as output.
8.2.2.E.3- Create algorithms (a sets of instructions) using a pre-defined set of commands (e.g., to move a student or a character through a maze).
8.2.2.E.4- Debug an algorithm (i.e., correct an error).
8.2.2.E.5- Use appropriate terms in conversation (e.g., basic vocabulary words: input, output, the operating system, debug, and algorithm).

Enduring Understandings:	**Essential Questions:**
• Technology systems impact every aspect of the world in which we live. • Knowledge and understanding of human, cultural and society values are fundamental when designing technology systems and products in the global society. • The design process is a systematic approach to solving problems • The designed world is the product of a design process that provides the means to convert resources into products and systems.	• What kinds of products have been produced through nature or technology? • How does technology impact or improve our life? How are products recycled? • How has technology advanced throughout history? • Why is it necessary to constantly innovate or invent new advancements in technology? • How is the design process used in creating a product? What are the elements of the design process?

• Computational thinking builds and enhances problem solving, allowing students to move beyond using knowledge to creating knowledge.	• How does a computer work? • How specific do commands need to be in order to create a working product?
Knowledge: **Students will know…** • Appreciate the characteristics and scope of technology. • Understand the core concepts of technology. • Comprehend the relationships among technologies and the connections between technology and other fields of study. • Realize the cultural, social, economic and political effects of technology. • Recognize the effects of technology on the environment. • Identify the role of society in the development and use of technology. • Understand the influence of technology on history. • Recognize the attributes of design. • Realize the application of engineering design. • Comprehend the role of troubleshooting, research and development, invention and innovation and experimentation in problem solving. • How to apply the design process.	**Skills:** **Students will be able to…** • Define products produced as a result of technology or of nature. • Describe how designed products and systems are useful at school, home and work. • Identify a system and the components that work together to accomplish its purpose. • Choose a product to make and plan the tools and materials needed. • Collaborate to design a solution to a problem affecting the community • Identify how technology impacts or improves life. • Demonstrate how reusing a product affects the local and global environment. • Identify products or systems that are designed to meet human needs. • Identify how the ways people live and work has changed

• Use and maintain technological products and systems assess the impact of products and systems. • Understand computational thinking and computer programming as tools used in design and engineering.	because of technology. • Brainstorm ideas on how to solve a problem or build a product. • Create a drawing of a product or device that communicates its function to peers and discuss. • Explain why we need to make new products. • Identify designed products and brainstorm how to improve one used in the classroom. • Describe how the parts of a common toy or tool interact and work as part of a system. • Investigate a product that has stopped working and brainstorm ideas to correct the problem. • Collaborate and apply a design process to solve a simple problem from everyday experiences. • Discover how a product works by taking it apart, sketching how parts fit, and putting it back together. • Identify the strengths and weaknesses in a product or system. • Identify the resources needed to create technological products or systems. • Identify how using a tool (such as a bucket or wagon) aids in reducing work. • List and demonstrate the steps to an everyday task. • Demonstrate an understanding of how a computer takes input through a series of written commands and then interprets and displays information as output. • Create algorithms (a sets of instructions) using a pre-defined

	set of commands (e.g., to move a student or a character through a maze). ● Debug an algorithm (i.e., correct an error). ● Use appropriate terms in conversation (e.g., basic vocabulary words: input, output, the operating system, debug, and algorithm).

Stage 2 – Assessment Evidence	
Performance Task(s): *Research Projects* ● Design a new to from various components ● Teacher demonstration of following steps to completion ● Interactive "how to" tools, videos, and educational programs, Dora, Diego.	**Other Evidence:** *Pre-Assessments, Formative Assessments, Summative Assessments* ● Students explain how the parts of a toy work together ● Teacher observation of completed projects ● Teacher observation of student cooperation

Stage 3 – Learning Plan	
Instructional Strategies	**Descriptions**
Suggested Learning Activities	**Possible Activities:** ● Why were phones made? / How was life like with no electricity?/ Define products produced as a result of technology or of nature. ● How are computers used at school, home, work? - Describe how designed products and systems are useful at school, home and work. ● Identify a system and the components that work together to accomplish its purpose. ● Turn a doorknob and the door opens.

	● Lock the door using a key and the door lock. ● Choose a product to make and plan the tools and materials needed. ● Make a paper tower or tower out of straws and masking tape. Collaborate to design a solution to a problem affecting the community. ● The students will create a timeline of the history of technology. Students will also highlight a specific moment in history that has impacted or improved humanity as a result (e.g.- electricity, phones, trains). Use in social studies class. ● Demonstrate how reusing a product affects the local and global environment. ● Life cycle of paper waste ● Lesson about reusing, reducing and recycling materials. Teach a mini-lesson about the design process. *Teacher is not limited to these activities ● **Interactive mini lecture/notes –** Students take notes, answer questions, turn and talk, participate in class discussions, look up information in text/online. ● **Do Now –** At start of class, students answer questions, reflect on learning, work on typing.com ● **Video Clips-** Shown to aid learning by providing a visual, engage the class ● **Demonstrations-** To enhance student learning, ignite curiosity, spur discussion, provide a visual, engage the class ● **Research questions-** Students are given a broad question to research. Students answer the question and provide evidence for their responses. (Independent or collaborative) ● **Journaling-** Responses to various ideas, thoughts, class activities, and content. ● **Reflecting on Learning-** Students self reflect on their learning and "rate" themselves on a learning scale.
Modifications	**Special Education Students:** Adhere to IEP/504s and provide extra time, guided practice/notes

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Grades 3-5

Unit Plan Title	Technology Operations and Concepts
Suggested Time Frame	1-2 weeks

Overview / Rationale

What is this unit about? What will students be able to independently use their learning to do?

Students will demonstrate a sound understanding of technology concepts, systems and operations. Students will be able to understand and use technology systems. Students will be able to select and use applications effectively and productively.

Stage 1 – Desired Results

Established Goals:

Standards to be covered…

- 8.1.5.A.1- Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.
- 8.1.5.A.2- Format a document using a word processing application to enhance text and include graphics, symbols and/ or pictures.
- 8.1.5.A.3- Use a graphic organizer to organize information about problem or issue.
- 8.1.5.A.4- Graph data using a spreadsheet analyze and produce a report that explains the analysis of the data.
- 8.1.5.A.5- Create and use a database to answer basic questions.
- 8.1.5.A.6- Export data from a database into a spreadsheet; analyze and produce a report that explains the analysis of the data.

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Enduring Understandings:	**Essential Questions:**
● Students demonstrate a sound understanding of technology concepts, systems and operations.	● How does technology make work easier? ● Which technology should I chose for the job? ● What basic operations help me use technology more efficiently?
Knowledge: **Students will know…** ● How to use and understand technology systems. ● How to select and use applications effectively and productively.	**Skills:** **Students will be able to…** ● Create a document with proper formatting, page numbering, spacing and graphics using word processing software;

Stage 2 – Assessment Evidence	
Performance Task(s): *Research Projects* Grade 3- Serengeti project Grade 4- Choice project Grade 5- Excel project	**Other Evidence:** *Pre-Assessments, Formative Assessments, Summative Assessments* Worksheets, handouts
Stage 3 – Learning Plan	
Instructional Strategies	**Descriptions**

Suggested Learning Activities	**Possible Activities:** Grade 3- Serengeti Research Project Grade 4- Choice Research Project based on website evaluation activities Grade 5- Excel/Spreadsheet Project *Teacher is not limited to these activities or topics ● **Interactive mini lecture/notes** – Students take notes, answer questions, turn and talk, participate in class discussions, look up information in text/online. ● **Do Now** – At start of class, students answer questions, reflect on learning, work on typing.com ● **Video Clips-** Shown to aid learning by providing a visual, engage the class ● **Demonstrations-** To enhance student learning, ignite curiosity, spur discussion, provide a visual, engage the class ● **Research questions-** Students are given a broad question to research. Students answer the question and provide evidence for their responses. (Independent or collaborative) ● **Journaling-** Responses to various ideas, thoughts, class activities, and content. ● **Reflecting on Learning-** Students self reflect on their learning and "rate" themselves on a learning scale.
Modifications	**Special Education Students:** Adhere to IEP/504s and provide extra time, guided practice/notes

Unit Plan Title	Creativity and Innovation
Suggested Time Frame	1-2 weeks
Overview / Rationale	

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What is this unit about? What will students be able to independently use their learning to do?

Students demonstrate creative thinking, construct knowledge and develop innovative products and process using technology. Students will create original works as a mean of personal or group expression.

Stage 1 – Desired Results

Established Goals:
Standards to be covered…

- 8.1.5.B.1-Collaborative to produce a digital story about a significant local event or issue based on first-person interviews.

Enduring Understandings:	**Essential Questions:**
● Students demonstrate creative thinking, construct knowledge and develop innovative products and process using technology.	● What tools and digital resources can be taught and used by the students to accomplish specific tasks, solve problems and create original works? ● To properly create original works, what legal and ethical behaviors need to be taught to insure our students understand the meaning of good digital citizenship?
Knowledge: Students will know…	**Skills: Students will be able to…**
● How to apply existing knowledge to generate new ideas, products or processes. ● How to create original works as a means of personal or group expression.	● Collaborate to produce a digital story about a significant local event or issue based on first-person interviews.

Stage 3 – Learning Plan	
Instructional Strategies	**Descriptions**
Suggested Learning Activities	**Possible Activities:** Grade 3- Serengeti Research Project Grade 4- Choice Research Project Grade 5- Excel/Spreadsheet Project Use of Newspaper in Education to research local stories. Create a digital story using www.storybird.com or www.makebeliefcomix.com *Teacher is not limited to these activities or topics ● **Interactive mini lecture/notes –** Students take notes, answer questions, turn and talk, participate in class discussions, look up information in text/online. ● **Do Now –** At start of class, students answer questions, reflect on learning, work on typing.com ● **Video Clips-** Shown to aid learning by providing a visual, engage the class ● **Demonstrations-** To enhance student learning, ignite curiosity, spur discussion, provide a visual, engage the class ● **Research questions-** Students are given a broad question to research. Students answer the question and provide evidence for their responses. (Independent or collaborative) ● **Journaling-** Responses to various ideas, thoughts, class activities, and content. ● **Reflecting on Learning-** Students self reflect on their learning and "rate" themselves on a learning scale.
Modifications	**Special Education Students:** Adhere to IEP/504s and provide extra time, guided practice/note

Unit Plan Title	Communication and Collaboration
Suggested Time Frame	1-2 weeks

Overview / Rationale

What is this unit about? What will students be able to independently use their learning to do?

Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others. Students will be able to Interact, collaborate, and publish with peers, experts, or others by employing a variety of digital environments and media. Students will be able to communicate information and ideas to multiple audiences using a variety of media and formats. Students will be able to develop cultural understanding and global awareness by engaging with learners of other cultures. Students will be able to contribute to project teams to produce original works or solve problems.

Stage 1 – Desired Results

Established Goals: Standards to be covered…

- 8.1.5.C.1-Students will be able to engage in online discussions with learners of other cultures to investigate a worldwide issue from multiple perspectives and sources, evaluate findings and presents possible solutions, using digital tools and online resources for all steps.

Enduring Understandings:	**Essential Questions:**
● Students use digital media environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning others.	● Does a digital medium enable students to think more creatively and develop critical thinking skills? ● How will technology enable better communication with the global community? ● How can technology transform the student's learning and writing process?

Knowledge: Students will know…	**Skills: Students will be able to…**
● How to interact, collaborate, and publish with peers, experts, or others by employing a variety of digital environments and media. ● How to communicate information and ideas to multiple audiences using a variety of media and formats. ● How to develop cultural understanding and global awareness by engaging with learners of other cultures. ● How to contribute to project teams to produce original works or solve problems.	● Engage in online discussions with learners of other cultures to investigate a worldwide issue from multiple perspectives and sources, evaluate findings and present possible solutions, using digital tools and online resources for all steps.

Stage 3 – Learning Plan	
Instructional Strategies	**Descriptions**
Suggested Learning Activities	Possible Activities: Grade 3- Research Project Grade 4- Choice Research Project Grade 5- Excel/Spreadsheet Project *Teacher is not limited to these activities or topics ● **Interactive mini lecture/notes** – Students take notes, answer questions, turn and talk, participate in class discussions, look up information in text/online. ● **Do Now** – At start of class, students answer questions, reflect on learning, work on typing.com ● **Video Clips-** Shown to aid learning by providing a visual, engage the class ● **Demonstrations-** To enhance student learning, ignite curiosity, spur discussion, provide a visual, engage the class ● **Research questions-** Students are given a broad question to research. Students answer the question and provide evidence for their responses. (Independent or collaborative) ● **Journaling-** Responses to various ideas, thoughts, class activities, and content.

	• **Reflecting on Learning-** Students self reflect on their learning and "rate" themselves on a learning scale.
Modifications	**Special Education Students:** Adhere to IEP/504s and provide extra time, guided practice/notes

Unit Plan Title	Digital Citizenship
Suggested Time Frame	1-2 Weeks

Overview / Rationale

What is this unit about? What will students be able to independently use their learning to do?
Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior. Students will be able to advocate and practice safe, legal, and responsible use of information and technology. Students will be able to demonstrate personal responsibility for lifelong learning. Students will be able to exhibit leadership for digital citizenship.

Stage 1 – Desired Results

Established Goals: Standards to be covered…

- 8.1.5.D.1-Understand the need for and the use of copyrights.
- 8.1.5.D.2-Analyze the resource citations in online materials for proper use.
- 8.1.5.D.3-Demonstrate and understanding of the need to practice cyber safety, cyber security, and cyber ethics when using technologies and social media.
- 8.1.5.D.4- Understand digital citizenship and demonstrate an understanding of the personal consequences of inappropriate use of technology and social media.

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Enduring Understandings:	**Essential Questions:**
● Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.	● What skills must be demonstrated to insure understanding of responsible use of technology? ● What technology is appropriate at this level and how is it promoted in a positive and creative use? ● What is demonstration of safe, ethical, and personal responsibility when using technology, as student group experiences a new level of technology? ● What legal and ethical behaviors need to be taught to insure outcome to properly create original works?
Knowledge: Students will know… ● What are copyrights? ● How to use citations in proper context. ● How to be a good digital citizen. ● What cyber safety, cyber security and cyber ethics are How to use social media and technology correctly?	**Skills: Students will be able to…** ● Understand the need for and use of copyrights ● Analyze the resource citations in online materials for proper use. ● Demonstrate an understanding of the need to practice cyber safety, cyber security, and cyber ethics when using technologies and social media. ● Understand digital citizenship and demonstrate an understanding of the personal consequences of inappropriate use of technology and social media.
Stage 2 – Assessment Evidence	
Performance Task(s): *Common Sense Media Units* 5th Grade- Cyber Bullying Project 3rd & 4th- Internet Safety	**Other Evidence:** *Pre-Assessments, Formative Assessments, Summative Assessments* Worksheets, Handouts
Stage 3 – Learning Plan	

Instructional Strategies	Descriptions
Suggested Learning Activities	Possible Activities: 3rd -4th- Internet Safety 5th Grade- Cyberbullying Project Create appropriate citations for prior research project. ● Use the https://www.commonsensemedia.org/educators/scope-and-sequence#grades-3-5 lessons to teach digital citizenship and safety. ● **Rings of responsibility-**students explore what it means to be responsible to and respectful of their offline and online communities as a way to learn how to be good digital citizens. ● **Private and Personal Information-**How can you protect yourself from online identity theft? Students think critically about the information they share online. ● **The Power of Words-**Students consider that they may get online messages from other kids that can make them feel angry, hurt, sad, or fearful. Students identify actions that will make them Upstanders in the face of cyber bullying. ● **Whose is it, anyway**?-Students learn that copying the work of others and presenting it as one's own is called plagiarism. They also learn about when and how it's ok to use the work of others. ● **Unit Assessment 1** ● **Strong Passwords-**Students learn how to create secure passwords in order to protect their private information and accounts online. ● **Digital Citizenship Pledge-**Students work together to outline common expectations in order to build a strong digital citizenship community. Each member of the class signs a We the Digital Citizens Pledge. ● **You've Won a Prize-**Students learn what spam is, the forms it takes, and then identify strategies for dealing with it. ● **How to Cite a Site-**Students reflect on the importance of citing all sources when they do research. They then learn how to write bibliographical citations for online sources. ● **Unit 2 Assessment**

	● **Talking Safely Online-**Students learn that the Internet is a great place to develop rewarding relationships. But they also learn not to reveal private information to a person they know only online. ● **Super Digital Citizenship-**Students explore Spider-Man's motto, "with great power comes great responsibility" through the lens of digital citizenship. They create comic strips show a digital superhero that witnesses an act of poor digital citizenship, and then helps resolve it. ● **Privacy Rules-**Students learn that children's websites must protect their private information. They learn to identify these secure sites by looking for their privacy policies and privacy seals of approval. ● **What's Cyber bullying-**Students explore how it feels to be cyber bullied, how cyber bullying is similar to or different than in-person bullying, and learn strategies for handling cyber bullying when it arises. ● **Unit 3 Assessment** *Teacher is not limited to these activities ● **Interactive mini lecture/notes –** Students take notes, answer questions, turn and talk, participate in class discussions, look up information in text/online. ● **Do Now –** At start of class, students answer questions, reflect on learning, work on typing.com ● **Video Clips-** Shown to aid learning by providing a visual, engage the class ● **Demonstrations-** To enhance student learning, ignite curiosity, spur discussion, provide a visual, engage the class ● **Research questions-** Students are given a broad question to research. Students answer the question and provide evidence for their responses. (Independent or collaborative) ● **Journaling-** Responses to various ideas, thoughts, class activities, and content. ● **Reflecting on Learning-** Students self reflect on their learning and "rate" themselves on a learning scale.
Modifications	Special Education Students: Adhere to IEP/504s and provide extra time, guided practice/notes English Language

Unit Plan Title	Research and Information Fluency
Suggested Time Frame	1-2 Weeks
Overview / Rationale	
What is this unit about? What will students be able to independently use their learning to do? All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge. Students will be able to plan strategies to guide inquiry. Students will be able to locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media. Students will be able to evaluate and select information sources and digital tools based on the appropriateness for specific tasks	
Stage 1 – Desired Results	

<table>
<tr><td colspan="2">Established Goals: Standards to be covered…

● 8.1.5.E.1- Use digital tools to research and evaluate the accuracy of, relevance to, and appropriateness of using print and non-print electronic information sources to complete a variety of tasks.</td></tr>
<tr><td>Enduring Understandings:

● Students apply digital tools to gather, evaluate, and use information.</td><td>Essential Questions:

● What technology tools can be used to gather information?
● How can they be used effectively / ethically?
● How can information be evaluated for accuracy/relevance?
● What technology tools can be used to organize and present information?</td></tr>
<tr><td>Knowledge: Students will know…
● How to research information using print and non-print sources.</td><td>Skills: Students will be able to…
● Use digital tools to research and evaluate the accuracy of, relevance to, and appropriateness of using print and non-print electronic information sources to complete a variety of tasks.</td></tr>
</table>

<table>
<tr><th colspan="2">Stage 2 – Assessment Evidence</th></tr>
<tr><td>Performance Task(s):
Research Projects
Grade 3- Serengeti project
Grade 4- Choice project
Grade 5- Excel project</td><td>Other Evidence:
Pre-Assessments, Formative Assessments, Summative Assessments
Worksheets, handouts</td></tr>
</table>

Stage 3 – Learning Plan	
Instructional Strategies	**Descriptions**
Suggested Learning Activities	**Possible Activities:** Grade 3- Serengeti Research Project Grade 4- Choice Research Project based on website evaluation activities Grade 5- Citations/Plagiarism *Teacher is not limited to these activities or topics ● Research a topic using an Internet search engine and record one's findings. Evaluate the search results for accuracy and authority. ● **Interactive mini lecture/notes –** Students take notes, answer questions, turn and talk, participate in class discussions, look up information in text/online. ● **Do Now –** At start of class, students answer questions, reflect on learning, work on typing.com ● **Video Clips-** Shown to aid learning by providing a visual, engage the class ● **Demonstrations-** To enhance student learning, ignite curiosity, spur discussion, provide a visual, engage the class ● **Research questions-** Students are given a broad question to research. Students answer the question and provide evidence for their responses. (Independent or collaborative) ● **Journaling-** Responses to various ideas, thoughts, class activities, and content. ● **Reflecting on Learning-** Students self reflect on their learning and "rate" themselves on a learning scale.
Modifications	**Special Education Students:** Adhere to IEP/504s and provide extra time, guided practice/notes
Unit Plan Title	Critical Thinking, Problem Solving and Decision Making
Suggested Time Frame	1-2 Weeks

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Overview / Rationale	
What is this unit about? What will students be able to independently use their learning to do? Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources. Students will identify and define authentic problems and significant questions for investigation. The students will plan and manage activities to develop a solution or complete a project. Students will collect and analyze data to identify solutions and/or make informed decisions. The students will use multiple processes and divers perspectives to explore alternative solutions.	
Stage 1 – Desired Results	
Established Goals: Standards to be covered… ● 8.1.5.F.1 - Apply digital tools to collect, organize, and analyze data that support a scientific finding.	
Enduring Understandings: ● Students use critical thinking skills to plan and conduct research, mange projects, solve problems, and make informed decisions using appropriate digital tools and resources.	**Essential Questions:** ● How can students use technology to communicate with others in support of learning? ● How can technology enable a child to communicate beyond the classroom on a variety of topics? ● What technology resources can assist with critical thinking, problem solving, and decision-making? ● How can participating and collaborating in online learning communities enable the design of products that address local and global issues across the curriculum?
Knowledge: Students will know… ● How to collect, organize and analyze information about a scientific concept.	**Skills: Students will be able to…** ● Apply digital tools to collect, organize, and analyze that support a scientific finding.

Stage 2 – Assessment Evidence	
Performance Task(s): *Research Projects* Grade 3- Serengeti project Grade 4- Choice project Grade 5- Excel project	**Other Evidence:** *Pre-Assessments, Formative Assessments, Summative Assessments*

Stage 3 – Learning Plan	
Instructional Strategies	**Descriptions**
Suggested Learning Activities	**Possible Activities:** Refer to previous projects Grade 3- Serengeti Research Project Grade 4- Choice Research Project based on website evaluation activities Grade 5- Excel/Spreadsheet Project *Teacher is not limited to these activities or topics ● **Interactive mini lecture/notes –** Students take notes, answer questions, turn and talk, participate in class discussions, look up information in text/online. ● **Do Now –** At start of class, students answer questions, reflect on learning, work on typing.com ● **Video Clips-** Shown to aid learning by providing a visual, engage the class ● **Demonstrations-** To enhance student learning, ignite curiosity, spur discussion, provide a visual, engage the class ● **Research questions-** Students are given a broad question to research. Students answer the question and provide evidence for their responses. (Independent or collaborative) ● **Journaling-** Responses to various ideas, thoughts, class activities, and content. ● **Reflecting on Learning-** Students self reflect on their learning and "rate" themselves on a learning scale.

Modifications	**Special Education Students:** Adhere to IEP/504s and provide extra time, guided practice/notes

Unit Plan Title	The Nature of Technology: Creativity and Innovation
Suggested Time Frame	1- 5 Weeks

Overview / Rationale

What is this unit about? What will students be able to independently use their learning to do?

Technology systems impact every aspect of the world in which we live. The students will understand the characteristics and scope of technology. The students will use the core concepts of technology. The students will show the relationships among technologies and the connections between technology and other fields of study.

Knowledge and understanding of human, cultural and society values are fundamental when designing technology systems and products in the global society. Students will understand the cultural, social, economic and political effects of technology. Students will understand the effects of technology on the environment. The students will understand the role of society in the development and use of technology.

The design process is a systematic approach to solving problems. The students will understand the attributes of design. The students will understand the application of engineering design. The students will understand the role of troubleshooting, research and development, invention and innovation and experimentation in problem solving.

The designed world is the product of a design process that provides the means to convert resources into products and systems.

The students will be able to apply the design process. The students will use and maintain technological products and systems. The students will assess the impact of products and systems.

Computational thinking builds and enhances problem solving, allowing students to move beyond using knowledge to creating knowledge. The students will be able to use computational thinking and computer programming as tools used in design and engineering.

Stage 1 – Desired Results

Established Goals:

Standards to be covered…

- 8.2.5.A.1-Compare and contrast how products made in nature differ from products that are human made in how they are produced and used.
- 8.2.5.A.2-Investigate and present factors that influence the development and function of a product and a system.
- 8.2.5.A.3-Investigate and present factors that influence the development and function of products and systems, e.g., resources, criteria and constraints.
- 8.2.5.A.4- Compare and contrast how technologies have changed over time due to human needs and economic, political and/or cultural influences.
- 8.2.5.A.5- Identify how improvement in the understanding of materials science impacts technologies.
- 8.2.5.B.1- Examine ethical considerations in the development and production of a product through its life cycle.

  8.2.5.B.2- Examine systems used for recycling and recommend simplification of the systems and share with product developers.
- 8.2.5.B.3- Investigate ways that various technologies are being developed and used to reduce improper use of resources.
- 8.2.5.B.4-Research technologies that have changed due to society are changing needs and wants.
- 8.2.5.B.5- Explain the purpose of intellectual property law.
- 8.2.5.B.6- Compare and discuss how technologies have influenced history in the past century.
- 8.2.5.C.1-Collaborate with peers to illustrate components of designed system.
- 8.2.5.C.2- Explain how specifications and limitations can be used to direct a product's development.
- 8.2.5.C.3-Research how design modifications have lead to new products.
- 8.2.5.C.4-Collaborate and brainstorm with peers to solve a problem evaluating all solutions to provide the best results with supporting sketches or models.
- 8.2.5.C.5- Explain the functions of a system and subsystems.
- 8.2.5.D.1-Identify and collect information about a problem that can be solved by technology, generate ideas to solve the problem, and identify constraints and trade-offs to be considered.

- 8.2.5.D.2-Evaluate and test alternative solutions to a problem using the constraints and trade-offs identified in the design process to evaluate potential solutions.
- 8.2.5.E.1- Identify how computer programming impacts our daily lives.
- 8.2.5.E.2-Demonstate an understanding of how a computer takes input of data, processes and stores the data through a series of commands, and outputs information

Enduring Understandings:	**Essential Questions:**
• Technology systems impact every aspect of the world in which we live. • Knowledge and understanding of human, cultural and society values are fundamental when designing technology systems and products in the global society. • The design process is a systematic approach to solving problems. • The designed world is the product of a design process that provides the means to convert resources into products and systems. • Computational thinking builds and enhances problem solving, allowing students to move beyond using knowledge to creating knowledge.	• What tools and digital resources can be taught and used by the students to accomplish specific tasks, solve problems and create original works? • To properly create original works, what legal and ethical behaviors need to be taught to insure our students understand the meaning of good digital citizenship? • What does a product's life cycle consist of? How is a product recycled / remanufactured? • What are the trade-offs and constraints of a specific technological system? • What is computer programming and how does computer programming influence our lives?
Knowledge: Students will know…	**Skills: Students will be able to…**
• The difference between human made and nature created products • How to explain how technology has changed depending on various influences • How technology has advanced amongst the	• Compare and contrast how products made in nature differ from products that are human made in how they are produced and used • Investigate and present factors that influence the development and function of a product and a system

centuries ● How to explain the ethical considerations of a products development and life cycle ● How to identify the components of a designed system to discuss product development ● How to explain the functions of a system and subsystems. ● To identify the tradeoffs and constraints of a technological system How to identify alternative solution ● How computer programing impacts our life How to input data into a computer	● Investigate and present factors that influence the development and function of products and systems (e.g.- resources, criteria and constraints) ● Compare and contrast how technologies have changed over time due to human needs and economic, political, and / or cultural influences. ● Identify how improvement in the understanding of materials science impacts technologies ● Examine ethical considerations in the development and production of a product through its life cycle. ● Examine systems used for recycling and recommend simplification of the systems and share with product developers. ● Investigate ways that various technologies are being developed and used to reduce improper use of resources. ● Research technologies that have changed due to society's changing needs and wants. ● Explain the purpose of intellectual property law ● Compare and discuss how technologies have influenced history in the past century. ● How is the design process used to develop a product? ● Collaborate with peers to illustrate components of a designed system ● Explain how specifications and limitations can be used to direct a product's development. ● Research how design modifications have lead to new products.

	• Collaborate and brainstorm with peers to solve a problem evaluating all solutions to provide the best results with supporting sketches or models. • Explain the functions of a system and subsystems. • Identify and collect information about a problem that can be solved by technology, generate ideas to solve the problem, and identify constraints and trade-offs to be considered. • Evaluate and test alternative solutions to a problem using the constraints and trade-offs identified in the design process to evaluate potential solutions. • Identify how computer programming impacts our daily lives. • Demonstrate an understanding of how a computer takes input of data, processes and stores the data through a series of commands, and outputs information.
Stage 2 – Assessment Evidence	
Performance Task(s): *Research Projects* • Design a new to from various components • Teacher demonstration of following steps to completion • Interactive "how to" tools, videos, and educational programs, Dora, Diego.	**Other Evidence:** *Pre-Assessments, Formative Assessments, Summative Assessments* • Students explain how the parts of a toy work together • Teacher observation of completed projects • Teacher observation of student cooperation

Stage 3 – Learning Plan
Descriptions
WEEK 1 ● White Board Activity - Compare and contrast how products made in nature differ from products that are human made in how they are produced and used. ● How do cars affect our environment? - Investigate and present factors that influence the development and function of a product and a system. How are buildings made to withstand so many dynamic forces? - Investigate and present factors that influence the development and function of products and systems, e.g., resources, criteria and constraints. ● Create a timeline of various technologies (phones, TVs, computers, etc.) Compare and contrast how technologies have changed over time due to human needs and economic, political and/or cultural influences. ● STEM Activity- divide students into groups of 3 and provide each student a different material (Popsicle sticks, clay, pipe cleaners (materials can be substituted). Then have the team brainstorm ways to create the same item using the various materials that each student was given. Have students discuss how form follows function. ● Identify how improvement in the understanding of materials science impacts technologies. WEEK 2 Examine ethical considerations in the development and production of a product through its life cycle. ● Investigate the uses of a light bulb/battery

- How to dispose of it in a proper way to reduce environmental waste
- Research technologies that have changed due to society's changing needs and wants.
- Development off research robots. (outer space robots/rovers)
- Explain the purpose of intellectual property law.
- Mini-lesson about "What is Intellectual Property?" http://www.educateip.org/images/pdf/FINAL+Lesson+1.pdf
- Compare and discuss how technologies have influenced history in the past century.
- Discussion about how electricity impacts our lives

WEEK 3

Conduct the Design Squad:

- The Design Process in Action Lesson: http://pbskids.org/designsquad/parentseducators/workshop/process.html (Go through the design process in order to meet all the standards)

WEEK 4

Choose 1-2 units from the below list to teach these above standards:

- A Long Way Down: Designing Parachutes Astronomy Aerospace Paulo's Parachute Mission (Brazil) A
- To Get to the Other Side: Designing Bridges Balance & Forces Civil Javier Builds a Bridge (USA – Latino) B
- A Sticky Situation: Designing Walls Earth Materials Materials Yi Min's Great Wall (China) B
- A Slick Solution: Cleaning an Oil Spill Ecosystems Environmental Tehya's Pollution Solution (USA – Native American) A
- An Alarming Idea: Designing Alarm Circuits Electricity Electrical A Reminder for Emily (Australia) A
- Now You're Cooking: Designing Solar Ovens Energy Green Lerato Cooks Up a Plan (Botswana) A
- No Bones About It: Designing Knee Braces Human Body Biomedical Erik's Unexpected Twist (Germany) A
- The Best of Bugs: Designing Hand Pollinators Insects & Plants Agricultural Mariana Becomes a Butterfly (Dominican Republic) B
- A Stick in the Mud: Evaluating a Landscape Landforms Geotechnical Suman Crosses the Karnali River (Nepal) A
- Lighten Up: Designing Lighting Systems Light Optical Omar's Time to Shine (Egypt) A
- The Attraction is Obvious: Designing Maglev Systems Magnetism Transportation Hikaru's Toy Troubles (Japan) A

- Just Passing Through: Designing Model Membranes Organisms Bioengineering Juan Daniel's Fútbol Frog (El Salvador) A
- Thinking Inside the Box: Designing Plant Packages Plants Package A Gift From Fadil (Jordan) A
- Solid as a Rock: Replicating an Artifact Rocks Materials Galya and Natasha's Rocky Adventure (Russia) A
- Marvelous Machines: Making Work Easier Simple Machines Industrial Aisha Makes Work Easier (USA – African American) A
- Taking the Plunge: Designing Submersibles Sinking & Floating Ocean Despina Makes a Splash (Greece) A
- A Work in Process: Improving a Play Dough Process Solids & Liquids Chemical Michelle's MVP Award (Canada) B
- Sounds Like Fun: Seeing Animal Sounds Sound Acoustical Kwame's Sound (Ghana) A
- Water, Water Everywhere: Designing Water Filters Water Environmental Saving Salila's Turtle (India) A
- Catching the Wind: Designing Windmills Wind & Weather Mechanical Leif Catches the Wind (Denmark) B

WEEK 5

Use this unit in conjunction with Unit 1 from 8.1 in order to connect concepts.

- Students will participate in the "Hour of Code": https://hourofcode.com/us
- Human Computer Activity: http://csunplugged.org/activities/
- Choose from the following list of activities: http://csunplugged.org/activities/
-

*Teacher is not limited to these activities.

- **Interactive mini lecture/notes –** Students take notes, answer questions, turn and talk, participate in class discussions, look up information in text/online.
- **Do Now –** At start of class, students answer questions, reflect on learning, work on typing.com
- **Video Clips-** Shown to aid learning by providing a visual, engage the class
- **Demonstrations-** To enhance student learning, ignite curiosity, spur discussion, provide a visual, engage the class
- **Research questions-** Students are given a broad question to research. Students answer the question and provide evidence for their

responses. (Independent or collaborative) • **Journaling-** Responses to various ideas, thoughts, class activities, and content. • **Reflecting on Learning-** Students self reflect on their learning and "rate" themselves on a learning scale.	
Modifications	**Special Education Students:** Adhere to IEP/504s and provide extra time, guided practice/notes

Grade 6

Unit Plan Title	Introduction to Technology Education
Suggested Time Frame	~ 4 Days
Overview / Rationale	
What is this unit about? What will students be able to independently use their learning to do? The students will understand the nature of technology and discuss its importance on society. The students will also be introduced to classroom routines and procedures. Students will be introduced to the Engineering Design Process.	
Stage 1 – Desired Results	
Established Goals: Standards to be covered… 8.1.8.A.1- Demonstrate knowledge of a real world problem using digital tools.	

Enduring Understandings:	**Essential Questions:**
• Technology is constantly changing and requires continuous learning of new skills. • Selection of technology should be based on personal and / or career needs assessment. • A tool is only as good as the person using it.	• What are the classroom routines and procedures for this class? • How can I transfer what I know to new technological situations or experiences?
Knowledge: Students will know… • How to use digital tools to complete a task • How to navigate the classroom, understand daily learning goals & objectives • How to organize one's self for success	**Skills: Students will be able to…** • Use digital tools to complete a task • Navigate the classroom, understand daily learning goals / objectives • Organize one's self for success

Stage 3 – Learning Plan		
Descriptions		
Daily Sequence	**Standard**	**Lesson Objective & Learning Activity**
Day 1	**8.1.8.A.1**	**Objective:** Students will be introduced to technology education and the nature of technology. **Activity:** Students will model the classroom procedures and routines as well as be provided with a username and password for the schools computers, Google Classroom and the Typing.com website.

Day 2	**8.1.8.A.1**	**Objective:** Students will become familiar with the basics of using a computer interface. **Activity:** Students will practice using Google Classroom as well as login into a computer and the Typing.com website.
Day 3	**8.1.8.A.1**	**Objective:** Students will explore the nature of technology and how it has advanced throughout history. **Activity:** Students will complete guided notes for the History of Computers.
Modifications	**Special Education Students:** reduce / revise assignments as per IEP; use manipulatives; calculators; provide individual & small group help; notes, and study guides; provide background knowledge; flexible grouping; peer grouping; visual demonstration; text magnification; color coding; repetition; pre-teaching; chunking; differentiating content.	

Unit Plan Title	Technology Operations & Concepts
Suggested Time Frame	2 weeks (~10 days)
Overview / Rationale	

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What is this unit about? What will students be able to independently use their learning to do?

The students will demonstrate a sound understanding of technology concepts, systems, and operations. The students will understand and use technology systems as well as select and use applications effectively and productively. Students will effectively model proper techniques to accurately input data using touch keyboarding while using specific features of an operating system.

Stage 1 – Desired Results

Established Goals:

Standards to be covered…

- 8.1.8.A.1- Demonstrate knowledge of a real world problem using digital tools.
- 8.1.8.A.2- Create a document (e.g. newsletter, reports, personalized learning plan, business letters or flyer's) using one or more digital applications to be critiqued by professionals for usability.
- 8.1.8.A.3- Use and/or develop a simulation that provides an environment to solve a real world problem or theory.
- 8.1.8.A.4- Graph and calculate data within a spreadsheet and present a summary of the results.
- 8.1.8.A.5- Create a database query, sort and create a report and describe the process, and explain the report results.
- 8.1.8.B.1- Synthesize and publish information about a local or global issue or event (ex. Tele-collaborative project, blog, school web).

Enduring Understandings:	**Essential Questions:**
● Technology is constantly changing and requires continuous learning of new skills. ● Selection of technology should be based on personal and & or career needs assessment. ● A tool is only as good as the person using it.	● In a world of constant change, what skills should we learn? ● How do I choose which technological tools to use and when is it appropriate to use them? ● How can I transfer what I know to new technological situations or experiences?

Knowledge: Students will know…	**Skills: Students will be able to…**
● How to use digital tools to complete a task ● How to create a document using one or more digital applications ● How to graph and calculate data in a spreadsheet ● How to create and analyze a database query report ● How to demonstrate and use intermediate features and functions on a computer ● How to choose appropriate software and hardware resources	● How to use digital tools to complete a task ● How to create a document using one or more digital applications ● How to graph and calculate data in a spreadsheet ● How to create and analyze a database query report ● Understand and use simple programming languages and code ● Demonstrate the ability to upload and download files through an online resource ● Recognize and name software used to create a typed document and/or a presentation ● Create and format presentations, spreadsheets, etc. ● Demonstrate appropriate hardware and software maintenance and troubleshooting
Stage 2 – Assessment Evidence	
Performance Task(s): *Research Projects* *Design Brief Documentation* **Homework:** Typing.com > Beginner Course Lessons	**Other Evidence:** *Pre-Assessments* ● KWL Chart ● Do Now's ● Technology Literacy Pre-Assessment *Formative Assessments* ● Observations ● Student Progress Reports ● Electronic portfolio of completed assignments and projects. Rubrics will be used to assess projects.

	• Exit Tickets *Summative Assessment* • Unit Test / Unit Project • Teacher created assessments on terminology and procedures.

Stage 3 – Learning Plan			
Instructional Strategies	**Descriptions**		
Suggested Learning Activities	**Daily Sequence**	**Standard**	**Lesson Objective & Learning Activity**
	Day 1	**8.1.8.A.1** **8.1.8.B.1**	**Objective:** Students will research about a specific topic to discuss a real world problem (e.g.-environmental disaster). **Activity:** The students will research what their specific topic was and how it impacted the world. The students will record their findings on a graphic organizer.
	Day 2	**8.1.8.A.1** **8.1.8.B.1**	**Objective:** Students will create a Google Slide to discuss a real world problem (e.g.-environmental disaster). **Activity:** The students will demonstrate their understanding of using a digital tool such as Google Slides to explain their knowledge about their given/chosen topic. Before the end of class, we will discuss each student's topic as a class and each student will share their thoughts.
	Day 3	**8.1.8.A.2** **8.1.8.B.1**	**Objective:** Students will research about a specific career field (e.g.- biomedical engineer, aerospace engineer, etc.) **Activity:** Students will visit the eGFI-Dream Up the Future website

			(http://www.egfi-k12.org/#) and choose a career to investigate/research. Students will use the interactive website to discover what that career entails and document their findings on an electronic graphic organizer.

	Day 4	**8.1.8.A.2** **8.1.8.B.1**	**Objective:** Students will create a professional handout discussing a specific career field (e.g.-biomedical engineer, aerospace engineer, etc.) **Activity:** Students will use their acquired information from the eGFI-Dream Up the Future website (http://www.egfi-k12.org/#) and create a professional handout that can be used to inform other students around the school about possible career types.
	Day 5	**8.1.8.A.3** **8.1.8.B.1**	**Objective:** Students will describe how the depletion of fossil fuels is a serious global issue. The students will explain why an increased dependence on renewable energy sources is an inevitable part of our future. (*Teacher is not limited to this topic/activity) **Activity:** The students will participate in a hands-on activity called "Renew-a-Bead." Students will simulate the annual consumption of energy for 20 years using a bag with 100 beads. Students will record their data on their spreadsheet. (*Student Handout)
	Day 6	**8.1.8.A.4** **8.1.8.B.1**	**Objective:** Students will use recorded data to graph and calculate data within a spreadsheet. **Activity:** Students will construct a spreadsheet and enter the data gathered from yesterday's "Renew-a-Bead" experiment. Students will graph the data as well as use the spreadsheet to calculate the results. (*If on a Google Sheet, have each group of students make 1 spreadsheet and share it

			with each other so that each member can edit the spreadsheet.)
	Day 7	**8.1.8.A.4** **8.1.8.B.1**	**Objective:** Students will present a summary of their results. **Activity:** Students will finalize their spreadsheet and present their results to the class. (Students should upload their presentation to Google Classroom.)
	Day 8	**8.1.8.A.4** **8.1.8.A.5** **8.1.8.B.1**	**Objective:** Students will create a database query, sort and create a report. **Activity:** Students will use the "Renew-a-Bead" spreadsheet to create a database query and have the database sort the data from least to greatest. Students should then generate a report of the results and describe the process.
	Day 9	**8.1.8.A.5** **8.1.8.B.1**	**Objective:** Students will create a database query, sort and create a report, and describe the process. **Activity:** Students should continue working on finalizing their report and describing the process.

	Day 10	**8.1.8.A.5** **8.1.8.B.1**	**Objective:** Students will explain the results of their report to the class. **Activity:** The students will upload their reports and communicate their data results to the class. Students should use evidence from their research to validate and support their results.
Modifications	**Special Education Students:** reduce / revise assignments as per IEP; use manipulatives; calculators; provide individual & small group help; notes, and study guides; provide background knowledge; flexible grouping; peer grouping; visual demonstration; text magnification; color coding; repetition; pre-teaching; chunking; differentiating content.		

Unit Plan Title	Communication and Collaboration
Suggested Time Frame	1 week (~5 days)
Overview / Rationale	

What is this unit about? What will students be able to independently use their learning to do?

The students will use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others. Students will interact, collaborate, and publish with peers, experts, or others by employing a variety of digital environments and media. They will communicate information and ideas to multiple audiences using a variety of media and formats. They will develop cultural understanding and global awareness by engaging with learners of other cultures. Students will contribute to project teams to produce original works or solve problems.

Stage 1 – Desired Results

Established Goals: Standards to be covered…

- 8.1.8.C.1- Collaborate to develop and publish work that provides perspectives on a global problem for discussions with learners from other countries.

Enduring Understandings:	**Essential Questions:**
• Digital tools allow for communication and collaboration anytime/anyplace worldwide.	• How has the use of digital tools improved opportunities for communication and collaboration?
Knowledge: *Students will know…* • How to expand their knowledge of digital tools and their use • Realize the effect digital communication has with interpersonal relationships	**Skills:** *Students will be able to…* • Learn to use multi-media tools: (e.g.- smart phones, video, sound, clip art, transitions, animations) • Choose the appropriate tool, format style to communicate information

Stage 2 – Assessment Evidence

<table>
<tr><td colspan="2">Performance Task(s):
Research Projects

Design Brief Documentation

Homework: Typing.com > Beginner Course Lessons</td><td colspan="2">Other Evidence:
Pre-Assessments
● KWL Chart
● Do Now's
● Technology Literacy Pre-Assessment

Formative Assessments
● Observations
● Student Progress Reports
● Electronic portfolio of completed assignments and projects. Rubrics will be used to assess projects.
● Exit Tickets

Summative Assessment
● Unit Test / Unit Project
● Teacher created assessments on terminology and procedures.</td></tr>
<tr><td colspan="4">Stage 3 – Learning Plan</td></tr>
<tr><td>Instructional Strategies</td><td colspan="3">Descriptions</td></tr>
<tr><td rowspan="2">Suggested Learning Activities</td><td>Daily Sequence</td><td>Standard</td><td>Lesson Objective & Learning Activity</td></tr>
<tr><td>Day 1</td><td>8.1.8.C.1</td><td>Objective: Students will understand the impact of digital communication.
Activity: Introduce the impact of online communication/collaboration. Show "With Power Comes Responsibility", "Top Secret", or "The Ups</td></tr>
</table>

			and Downs of Digital Life". Complete the "Build Your Online Ideal Community" handout. Discuss the importance of online communities.
	Day 2	**8.1.8.C.1**	**Objective:** The students will research information about a topic and pose questions/ data/ concerns/solutions about the topic. **Activity:** The students will be introduced to their sister school and be given a topic to research and prepare a discussion/presentation to communicate with their sister school.
	Day 3	**8.1.8.C.1**	**Objective:** The students will organize their thoughts about their specific topic and prepare questions/solutions to discuss with their sister school. **Activity:** The students will take out their results and make an outline of what they want to discuss with their sister school. Students will discuss logistics and conference specifics. Students will construct questions and information to share.
	Day 4	**8.1.8.C.1**	**Objective:** Students will conduct a videoconference with our sister school Zheng De Junior High School in New Taipei City, Taiwan and discuss a specific issue (e.g.- environmental). (*This can be another school as well) **Activity:** Students will take out their pre-written questions and comments and begin the videoconference. Students will work together with the students in Taiwan to discuss a specific global issue.
	Day 5	**8.1.8.C.1**	**Objective:** Students will reflect on their video conferencing and record their reflections on a digital Sticky Note Board. **Activity:** The students will reflect on their videoconference and explain in a class discussion what was discussed and how they can

			improve upon the topic.
Modifications	**Special Education Students:** reduce / revise assignments as per IEP; use manipulatives; calculators; provide individual & small group help; notes, and study guides; provide background knowledge; flexible grouping; peer grouping; visual demonstration; text magnification; color coding; repetition; pre-teaching; chunking; differentiating content.		

Unit Plan Title	Digital Citizenship
Suggested Time Frame	2 weeks (~10 days)
Overview / Rationale	
What is this unit about? What will students be able to independently use their learning to do? Students will understand human, cultural, and societal issues related to technology and practice legal and ethical behavior. The students will learn how to advocate and practice safe, legal, and responsible use of information and technology. They will demonstrate personal responsibility for lifelong learning. In addition, they will exhibit leadership for digital citizenship.	
Stage 1 – Desired Results	

Established Goals: Standards to be covered…

- 8.1.8.D.1- Understand and model appropriate online behaviors related to cyber safety, cyber bullying, cyber security, and cyber ethics including appropriate use of social media.
- 8.1.8.D.2- Demonstrate the application of appropriate citations to digital content.
- 8.1.8.D.3- Demonstrate an understanding of fair use and Creative Commons to intellectual property.
- 8.1.8.D.4- Assess the credibility and accuracy of digital content.
- 8.1.8.D.5- Understand appropriate uses for social media and the negative consequences of misuse

Enduring Understandings:	**Essential Questions:**
● Technology can have positive or negative impact on both users and those affected by their use. ● Technological advancements create societal concerns regarding the practice of safe, legal, and ethical behaviors.	● What are an individual's responsibilities for using technology? ● What constitutes misuse and how can it best be prevented? ● What are our rights and responsibilities as Digital Citizens? ● What does it mean to be a Digital Citizen? ● What are an individual's responsibilities for using technology? ● What constitutes misuse and how can it best be prevented? ● What does cyber-bullying look like?

Knowledge: **Students will know…**	**Skills:** **Students will be able to…**
● How to demonstrate appropriate online behaviors related to cyber safety, cyber bullying, cyber security, and cyber ethics including appropriate use of social media. ● How to demonstrate the application of appropriate citations to digital content. How to demonstrate an understanding of fair use and Creative Commons to intellectual property. ● How to assess the credibility and accuracy of digital content. ● Appropriate uses for social media and the negative consequences of misuse	● Understand and model appropriate online behaviors related to cyber safety, cyber bullying, cyber security, and cyber ethics including appropriate use of social media. ● Demonstrate the application of appropriate citations to digital content. ● Demonstrate an understanding of fair use and Creative Commons to intellectual property. ● Assess the credibility and accuracy of digital content. ● Understand appropriate uses for social media and the negative consequences of misuse

Stage 2 – Assessment Evidence

Performance Task(s):	**Other Evidence:**
Research Projects *Design Brief Documentation* **Homework:** Typing.com > Beginner Course Lessons	*Pre-Assessments* ● KWL Chart ● Do Now's ● Technology Literacy Pre-Assessment *Formative Assessments* ● Observations ● Student Progress Reports ● Electronic portfolio of completed assignments and projects. Rubrics will be used to assess projects. ● Exit Tickets *Summative Assessment* ● Unit Test / Unit Project ● Teacher created assessments on terminology and procedures.

Stage 3 – Learning Plan

Instructional Strategies	**Descriptions**		
Suggested Learning Activities	**Daily Sequence**	**Standard**	**Lesson Objective & Learning Activity**
	Day 1	**8.1.8.D.2**	**Objective:** Student will be able to understand academic integrity, plagiarism, proper Boolean logic for researching and basics of MLA citation format. **Activity:** Introduce students to MLA Citations. Students will practice citing literary texts as well as digital content. (*MLA Citation Packet)
	Day 2	**8.1.8.D.3**	**Objective:** Students will demonstrate an understanding of fair use and Creative Commons to intellectual property. **Activity:** Introduce Fair Use and Creative Commons. Show "Who's is it?" video. Students will be able to understand that copyright is a legal system that protects their rights to creative work. Exit Ticket - Fair Use & Creative Commons *Use Common Sense Media - Creative Rights Lesson
	Day 3	**8.1.8.D.4**	**Objective:** Students will assess the credibility and accuracy of digital content. **Activity:** Introduce discreditable/credible websites and ways of determining credibility. Discuss some searching strategies and then perform a search online. Have students compare two websites and their (credibility and accuracy of information)

	Day 4	**8.1.8.D.1**	**Objective: Cyber Safety-** Students will identify Internet safety procedures. **Activity:** Show "Perspectives of Chatting Online" Common Sense Education video (https://www.commonsensemedia.org/videos/perspectives-on-social-media?page=1) . Introduce ways of staying safe online. Review Internet Safety Tips Handout.
	Day 5	**8.1.8.D.1**	**Objective: Cyber Security-** Students will be able to understand what identity theft is and why it is important to guard against it. SWBAT learn to recognize strategies that scam artists use to access private information. SWBAT learn how to guard against phishing and identity theft. **Activity:** Begin by defining the terms scam, identity theft, vulnerable. Introduce the topic of identity theft and phishing. Discuss how to protect ourselves from online scams.
	Day 6	**8.1.8.D.1**	**Objective: Cyber bullying-** Students will be able to reflect on what it means to be brave and stand up for others offline and online. SWBAT learn to show empathy for those who have been cyber bullied. SWBAT generate multiple solutions for helping others when cyber bullying occurs. **Activity:** Begin by defining bystander, up stander and empathize. Introduce the topic of Cyber bullying. Have students individually or

			as a class work on Digizen to discuss cyber bullying. (http://old.digizen.org/cyberbullying/interactive/default.aspx)

	Day 7	**8.1.8.D.1**	**Objective: Cyber Ethics** (Including Social Media)- Students will identify and model proper netiquette. **Activity:** Introduce cyber ethics & netiquette and show BrainPop: Digital Etiquette video (https://www.brainpop.com/technology/computersandinternet/digitaleti quette/). Complete quiz and have students make an online poster using Google Slides about the importance of netiquette, especially on social media.

	Day 8	**8.1.8.D.5**	**Objective:** Students will research information about social media and record their findings on a graphic organizer. **Activity:** Show "Perspectives on Social Media" Common Sense Education video. Discuss ways to prevent *over sharing* online. Students will be divided into two teams, and one team will research positives for using social media and the other team will research negatives to using social media.
	Day 9	**8.1.8.D.5**	**Objective:** Students will engage in a debate to discuss the appropriate uses for social media and the negative consequences of misuse. **Activity:** Students will sit on either side of the debate table and the class will engage in a debate about the appropriate uses for social media and the negative consequences of misuse.
	Day 10	**8.1.8.D.1**	**Objective:** Students will demonstrate their understanding of being a digital citizen. **Activity:** Students will complete a Digital Citizenship unit test / project
Modifications	**Special Education Students:** reduce / revise assignments as per IEP; use manipulative's; calculators; provide individual & small group help; notes, and study guides; provide background knowledge; flexible grouping; peer grouping; visual demonstration; text magnification; color coding; repetition; pre-teaching; chunking; differentiating content		

Technology Curriculum
2017

Unit Plan Title	Research and Information Fluency
Suggested Time Frame	4 days
Overview / Rationale	

What is this unit about? What will students be able to independently use their learning to do?

Students will apply digital tools to gather, evaluate, and use information. Students will plan strategies to guide inquiry. They will locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media. Students will evaluate and select information sources and digital tools based on the appropriateness for specific tasks. They will also process data and report results.

Stage 1 – Desired Results

Established Goals: Standards to be covered…

- *8.1.8.E.1- Effectively use a variety of search tools and filters in professional public databases to find information to solve a real world problem.*

Enduring Understandings:	**Essential Questions:**
• Information is spread worldwide within seconds due to technological advancements and has an immediate impact. • Students will encounter databases in almost any career they might pursue. • Students learn that building, sorting, and filtering data in a database depends on many factors. • Students realize the potential of databases by starting to use technology tools to create their own simplified versions of personal databases.	• Why is the evaluation and appropriate use of accurate information more important than ever in the technological age? • How do you look up words using a Boolean search? • Why is it important to know how to use a database? • What key terms would one use to filter data in a database to make the search more meaningful? • How can one use a database to assist them in completing schoolwork or personal activities?
Knowledge: **Students will know…** • How to apply filters to public databases to find information • Use graphic organizers to plan research • Recognize information available on primary and secondary	**Skills:** **Students will be able to…** • Identify reliable databases for use • Independently use digital tools to find information • Use effective search techniques

sources ● Evaluate search results and identify most appropriate sources ● Take notes to summarize and paraphrase relevant information ● Correctly cite sources	● Identify primary/ secondary sources ● Evaluate information ● Summarize/paraphrase information ● Cite sources on the internet

Stage 2 – Assessment Evidence	
Performance Task(s): *Research Projects* *Design Brief Documentation* **Homework:** Typing.com > Beginner Course Lessons	**Other Evidence:** *Pre-Assessments* ● KWL Chart ● Do Now's ● Technology Literacy Pre-Assessment *Formative Assessments* ● Observations ● Student Progress Reports ● Electronic portfolio of completed assignments and projects. Rubrics will be used to assess projects. ● Exit Tickets *Summative Assessment* ● Unit Test / Unit Project ● Teacher created assessments on terminology and procedures.

Stage 3 – Learning Plan	
Instructional Strategies	**Descriptions**

Suggested Learning Activities	Daily Sequence	Standard	Lesson Objective & Learning Activity
	Day 1	**8.1.8.E.1**	**Objective:** Students conduct a database search on a given topic demonstrating proper searching techniques & MLA Citation Format. **Activity:** Introduce research and information fluency by discussing searching techniques. Discuss primary and secondary sources. Identify proper searching techniques. Have students practice using those techniques and document their yielded search. (*Use NJ State Public Databases http://www.njstatelib.org/electronic_resources/databases/)
	Day 2	**8.1.8.E.1**	**Objective:** Students conduct a database search on a given topic demonstrating proper searching techniques. **Activity:** Review the proper searching techniques. Explain research project (can be cross-curricular- e.g.- Ancient World, animal/galaxy classification). Have students use a graphic organizer to document their findings. (*Use My NASA Data+ http://mynasadata.larc.nasa.gov/lesson-plans/lesson-plans-middle-school-educators/)

	Day 3	**8.1.8.E.1**	**Objective:** Students will use data to construct a simple database using Microsoft Excel/Google Sheets. **Activity:** Introduce Microsoft Excel/Google Sheets. Students will use their data to construct a simple database in Microsoft Excel/Google Sheets. Have students use their graphic organizer to help them plan out their database.
	Day 4	**8.1.8.E.1**	**Objective:** Students will review the proper database strategies and finalize their database. Students will demonstrate their understanding of using database-searching techniques to focus their research. **Activity:** Review the database searching strategies and have the students finish working on their database. Once completed, have students turn and talk to their neighbor to discuss what type of database they made.
Modifications	**Special Education Students:** Flexible grouping, peer grouping, visual demonstration, text magnification, color coding, repetition, pre-teaching, chunking, differentiating content		

Unit Plan Title	Critical Thinking, Problem Solving, and Decision Making
Suggested Time Frame	3 days

Overview / Rationale

What is this unit about? What will students be able to independently use their learning to do?

Students will use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources. Students will identify and define authentic problems and significant questions for investigation. They will plan and manage activities to develop a solution or complete a project. Then they will collect and analyze data to identify solutions and/or make informed decisions. The students will also use multiple processes and diverse perspectives to explore alternative solutions.

Stage 1 – Desired Results

Established Goals: Standards to be covered…

- 8.1.8.F.1- Explore a local issue, by using digital tools to collect and analyze data to identify a solution and make an informed decision.

Enduring Understandings:	**Essential Questions:**
● Selection of technology should be based on personal and/or career needs assessment. ● A tool is only as good as the person using it.	● How do I choose which technological tools to use and when it is appropriate to use them? ● How can I transfer what I know to new technological situations or experiences?
Knowledge: **Students will know…** ● How to identify a problem	**Skills:** **Students will be able to…** ● Input data into digital tools

• What is causing the technological problem	• Create a presentation using images, transitions, text • Analyze data and construct a decision

Stage 2 – Assessment Evidence	
Performance Task(s): *Research Projects* *Design Brief Documentation* **Homework:** Typing.com > Beginner Course Lessons	**Other Evidence:** *Pre-Assessments* • KWL Chart • Do Now's • Technology Literacy Pre-Assessment *Formative Assessments* • Observations • Student Progress Reports • Electronic portfolio of completed assignments and projects. Rubrics will be used to assess projects. • Exit Tickets *Summative Assessment* • Unit Test / Unit Project • Teacher created assessments on terminology and procedures.

Stage 3 – Learning Plan			
Instructional Strategies	**Descriptions**		
Suggested Learning Activities	**Daily Sequence**	**Standard**	**Lesson Objective & Learning Activity**
	Day 1	**8.1.8.F.1**	**Objective:** Students will use digital tools to collect data about a local issue. **Activity:** Introduce research topic and as a class, have the students identify the problem with the research topic. Then have the students use digital tools (databases, search engines, books etc.) to collect information about their topic. Students will record their findings on a graphic organizer and properly cite sources using MLA citations.
	Day 2	**8.1.8.F.1**	**Objective:** Students will analyze their collected data to identify a solution. **Activity:** Students will continue to research about their topic and then analyze their collected data to identify the solution to the problem. Students will use their analyzed data to create an informed decision to the research topic and present their decision to the class using evidence from their references.

	Day *3*	**8.1.8.F.1**	**Objective:** Student's will use their analyzed data and synthesize it to make an informed decision. **Activity**: Students will use their research and informed decision to create a 1-slide presentation informing people in their community about their solution to the established problem. Students will present their presentation to the class and the class will pose questions to the presenter.
Modifications	**Special Education Students:** reduce / revise assignments as per IEP; use manipulatives; calculators; provide individual & small group help; notes, and study guides; provide background knowledge; flexible grouping; peer grouping; visual demonstration; text magnification; color coding; repetition; pre-teaching; chunking; differentiating content**.**		