GRADES K-2

TECHNOLOGY CURRICULUM

MIDDLE TOWNSHIP PUBLIC SCHOOLS
216 S. MAIN STREET
CAPE MAY COURT HOUSE, NJ

Born On Date: May 17, 2018

Content Area:	Technology		Grade(s) K
Unit Plan Title:	Basic Computer Skills and Tools		

Standard

8.1 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.

Overview/Rationale

Elementary students in Middle Township School District will develop basic computer technology skills, knowledge, and competencies that will enhance learning in all areas of the curriculum. Computer use is being integrated into all areas of the curriculum and classroom. Computers are being used as tools to enhance the learning process. Basic competencies with computers need to be developed by students to be successful in the regular classroom.

Students in Kindergarten will develop skills and behaviors that will serve as the foundation for future learning. By the end of kindergarten students will be able to identify the parts of the computer and the keys necessary to use the computer as a learning tool. They will begin using computer applications for simple age appropriate tasks. They will begin to discuss ethical computer use. They will understand and demonstrate proper etiquette behavior and body position when using computers.

Strand(s)

A- Technology Operations and Concepts: Students demonstrate a sound understanding of technology concepts, systems and operations.

Technology Standard(s)

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.

Interdisciplinary Standard(s)

Enduring Understandings: (What are the big ideas? What specific understandings about them are desired? What misunderstandings are predictable?)

Students will understand that computers are a tool to help us learn.

Students will learn how we use a computer to help us learn.

Essential Question(s) : (What provocative questions will foster inquiry, understanding, and transfer of learning?)

What are the parts of a computer?

How is each part of the computer used?

How do we use computers to help us?

In this unit plan, the following 21ˢᵗ Century themes and skills are addressed:

Check all that apply. 21ˢᵗ Century Themes			Indicate whether these skills are E-Encouraged, T-Taught, or A-Assessed in this unit by marking E, T, A on the line before the appropriate skill. 21ˢᵗ Century Skills		
		Global Awareness		T	Critical Thinking & Problem Solving
		Environmental Literacy		T	Creativity and Innovation

		Health Literacy		E	Collaboration, Teamwork and Leadership
	X	Civic Literacy		E	Cross-Cultural and Interpersonal Communication
	X	Financial, Economic, Business and Entrepreneurial Literacy		E	Communication and Media Fluency
				E	Accountability, Productivity and Ethics

In this unit plan, the following Career Ready Practices are addressed:

*Indicate whether these skills are **E**-Encouraged, **T**-Taught, or **A**-Assessed in this unit by marking **E, T, A** on the line before the appropriate skill.*

	E	CRP1. Act as a responsible and contributing citizen and employee
	T	CRP2. Apply appropriate academic and technical skills
	E	CRP3. Attend to personal health and financial well-being
	E	CRP4. Communicate clearly and effectively with reason
	E	CRP5. Consider the environmental, social and economic impacts of decisions
	T	CRP6. Demonstrate creativity and innovation
	E	CRP7. Employ valid and reliable research strategies
	E	CRP8. Utilize critical thinking to make sense of problems and persevere in solving them
	E	CRP9. Model integrity, ethical leadership and effective management
	E	CRP10. Plan education and career paths aligned to personal goals
	T	CRP11. Use technology to enhance productivity
	E	CRP12. Work productively in teams while using cultural global competence

Student Learning Goals/Objectives: (What key knowledge and skills will students acquire as a result of this unit? What should they eventually be able to do as a result of such knowledge and skill?)

Students will know	Students will be able to use the computer mouse.

The basic parts of a computer The basic features of the computer and how they function	Students will be able to use the basic parts of the computer to navigate an online program. Students will be able to use the basic parts of the computer to produce a simple digital project.

Assessment Evidence:

Performance Tasks: Students will exhibit the ability to use the computer to work with online programs and how well they use the parts of a computer to navigate a program.	Other Assessment Measures: Students will be assessed on class participation, teacher observation, and project assessment.

Teaching and Learning Actions: (What learning experiences and instruction will enable students to achieve the desired results?

Instructional Strategies and Activities D	**I can identify the parts of a computer-** **I can explain the jobs for each part of the computer.** **I can use a computer mouse** **I can navigate a computer program.** **In a group setting using a smart board and digital presentation, students will identify and discuss each basic part of a computer. They will identify monitor, mouse, keyboard, CPU (central processing unit), and headphones. They will further investigate how each part functions and how they function collectively.** **Students will then be provided with an opportunity to practice how the parts of the computer function by working in a simple online program. (Star fall) As students are working independently, this will provide the teacher with an opportunity to work with students individually that may require additional support.**

Resources

Computer, Keyboard, Mouse, Star fall subscription, Smart Board, Tablet

Suggested Time Frame:	6 weeks

D – Indicates differentiation at the Lesson Level (Identify Modifications for ELL, Gifted and Talented, Title 1, Special Education)

Content Area:	Technology	Grade(s) K
Unit Plan Title:	Technology Applications	

Standard

8.1 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.

Overview/Rationale

Elementary students in Middle Township School District will develop basic computer technology skills, knowledge, and competencies that will enhance learning in all areas of the curriculum. Computer use is being integrated into all areas of the curriculum and classroom. Computers are being used as tools to enhance the learning process. Basic competencies with computers need to be developed by students to be successful in the regular classroom.

Students in Kindergarten will develop skills and behaviors that will serve as the foundation for future learning. By the end of kindergarten students will be able to identify the parts of the computer and the keys necessary to use the computer as a learning tool. They will begin using computer applications for simple age appropriate tasks. They will begin to discuss ethical computer use. They will understand and demonstrate proper etiquette behavior and body position when using computers.

Strand(s)

Strand B: Creativity and Innovation: Students demonstrate creative thinking construct knowledge and develop innovative products and process using technology
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.
Strand D: Digital citizenship: students understand human, cultural, and societal issues related to technology and practiced legal and ethical behavior.
Strand E: Research and Information Fluency
Strand F: Critical Thinking Problem-Solving and Decision-Making: Students use critical thinking skills to plan and conduct research, manage products, problems, and make informed decisions using appropriate digital tools and resources.

Technology Standard(s)

8.1.2.B.1	Illustrate and communicate original ideas and stories using multiple digital tools and resources.
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.
8.1.2.D.1	Develop an understanding of ownership of print and nonprint information.
8.1.2.E.1	Use digital tools and online resources to explore a problem or issue.
8.1.2.F.1	Use geographic mapping tools to plan and solve problems.

Interdisciplinary Standard(s)

Enduring Understandings: (What are the big ideas? What specific understandings about them are desired? What misunderstandings are predictable?)

Students will learn that the use of digital tools and media rich resources enhances creativity and the construction of knowledge.

Students will understand that information accessed through the use of digital tools assists in generating solutions and making decisions.

Students will learn how to create a document with text using a word processing program.

Students will learn how demonstrate the ability to navigate in virtual environments that are developmentally appropriate.

Students will learn that effective use of digital tools assists in gathering and managing information.

Essential Question(s) : (What provocative questions will foster inquiry, understanding, and transfer of learning?)

How can I use digital tools to enhance creativity and knowledge?

How can I transfer what I know to new technological situations and/or experiences?

How can I collaborate and use electronic tools to solve problems?

What are my responsibilities for using technology?

What constitutes misuse and how can it best be prevented?

In this unit plan, the following 21st Century themes and skills are addressed:

		Check all that apply. **21st Century Themes**			*Indicate whether these skills are E-Encouraged, T-Taught, or A-Assessed in this unit by marking E, T, A on the line before the appropriate skill.* **21st Century Skills**
	X	Global Awareness		T	Critical Thinking & Problem Solving
		Environmental Literacy		T	Creativity and Innovation
		Health Literacy		E	Collaboration, Teamwork and Leadership
	X	Civic Literacy		E	Cross-Cultural and Interpersonal Communication
	X	Financial, Economic, Business and Entrepreneurial Literacy		E	Communication and Media Fluency
				E	Accountability, Productivity and Ethics

In this unit plan, the following Career Ready Practices are addressed:

Indicate whether these skills are E-Encouraged, T-Taught, or A-Assessed in this unit by marking E, T, A on the line before the appropriate skill.

	E	CRP1. Act as a responsible and contributing citizen and employee
	T	CRP2. Apply appropriate academic and technical skills
	E	CRP3. Attend to personal health and financial well-being
	E	CRP4. Communicate clearly and effectively with reason

	E	CRP5. Consider the environmental, social and economic impacts of decisions
	T	CRP6. Demonstrate creativity and innovation
	E	CRP7. Employ valid and reliable research strategies
	E	CRP8. Utilize critical thinking to make sense of problems and persevere in solving them
	E	CRP9. Model integrity, ethical leadership and effective management
	E	CRP10. Plan education and career paths aligned to personal goals
	T	CRP11. Use technology to enhance productivity
	E	CRP12. Work productively in teams while using cultural global competence

Student Learning Goals/Objectives: (What key knowledge and skills will students acquire as a result of this unit? What should they eventually be able to do as a result of such knowledge and skill?)

Students will know the names of the basic parts of a computer and other available technologies.
Students will know the basic features of the computer and other available technologies, and how they function.
Students will know how to use a computer program to complete an assignment.
Students will know how to illustrate and communicate original ideas and stories using digital tools and media rich resources such as kid pix.
Students will be able to use digital tools to access, manage, evaluate and synthesize information or to solve problems individually and collaboratively and communicate knowledge.

Assessment Evidence:

Performance Tasks:	*Other Assessment Measures:*
Students will be assessed on assigned projects.	Students will be assessed on class participation and teacher

Students will be assessed on their ability to apply learned technology concepts and operations. **Students will be assessed on their ability to produce grade appropriate documents. Students will work with IPads appropriately.** **Students will work with Chromebooks appropriately.**	**observation.**

Teaching and Learning Actions: (What learning experiences and instruction will enable students to achieve the desired results?

Instructional Strategies and Activities *D*	**Students will create projects (math problems, simple pictures, research) using Kid Pix.** **Students will create documents with age appropriate vocabulary and writing using Microsoft Word.** **Students will create a multi-slide presentation using PowerPoint.** **Students will create a mini newspaper using a template.** **Students will collaborate with peers to create a video presentation using a variety of available digital tools.** **Students will use available technologies such as online software to enhance or practice grade level skills.** **Students will create graphs using data collected.** **Students will create projects and site sources used in said products.** **Students will demonstrate appropriate digital citizenship when gathering information for projects.** **Students will demonstrate the ability to cite sources appropriately when gathering information for assigned projects.** **Students will practice using navigational tools such as Google Earth and Discovery Atlas' Interactive maps.** **Students will compare existing digital tools to tools that were using the past to create same projects students will create a map using digital tools.** **Students will explore various types of digital tools and their intended uses.** **Students will additionally determine whether these digital tools are harmful or helpful, thus practicing digital citizenship.**

Resources
IPads, Tablets, Chromebooks, computers, Printers, Star fall, Kid Pix, Brain Pop Jr. Book Flix, Tumble books, Interactive White Board

Suggested Time Frame:	6 weeks

D – Indicates differentiation at the Lesson Level (Identify Modifications for ELL, Gifted and Talented, Title 1, Special Education)

Content Area:	Technology	Grade K
Unit Plan Title:	Technology Education and Design	

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 in the designed world as they relate to the individual, global society, and the environment.

Overview/Rationale

Elementary students in Middle Township School District will develop basic computer technology skills, knowledge, and competencies that will enhance learning in all areas of the curriculum. Computer use is being integrated into all areas of the curriculum and classroom. Computers are being used as tools to enhance the learning process. Basic competencies with computers need to be developed by students to be successful in the regular classroom.

Students in Kindergarten will develop skills and behaviors that will serve as the foundation for future learning. By the end of kindergarten students will be able to identify the parts of the computer and the keys necessary to use the computer as a learning tool. They will begin using computer applications for simple age appropriate tasks. They will begin to discuss ethical computer use. They will understand and demonstrate proper etiquette behavior and body position when using computers.

Strand(s)

Strand A: The Nature of Technology Creativity and Innovation
Strand B: Technology and Society
Strand C: Design
Strand D: Abilities for a Technological World
Strand E: Computational Thinking Programming

Technology Standard(s)

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 interact and work as part of a system.
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).

Interdisciplinary Standard(s)

Enduring Understandings: (What are the big ideas? What specific understandings about them are desired? What misunderstandings are predictable?)

Students will learn that the use of digital tools and media rich resources enhances creativity and the construction of knowledge.

Students will understand that information accessed through the use of digital tools assists in generating solutions and making decisions.

Students will learn how to create a document with text using a word processing program.

Students will learn how demonstrate the ability to navigate in virtual environments that are developmentally appropriate.

Students will learn that effective use of digital tools assists in gathering and managing information.

Essential Question(s) : (What provocative questions will foster inquiry, understanding, and transfer of learning?)

How can I use digital tools to enhance creativity and knowledge?

How can I transfer what I know to new technological situations and/or experiences?

How can I collaborate and use electronic tools to solve problems?

What are my responsibilities for using technology?

What constitutes misuse and how can it best be prevented?

In this unit plan, the following 21st Century themes and skills are addressed:

Check all that apply. 21ˢᵗ Century Themes			*Indicate whether these skills are E-Encouraged, T-Taught, or A-Assessed in this unit by marking E, T, A on the line before the appropriate skill.* 21ˢᵗ Century Skills		
		Global Awareness		T	Critical Thinking & Problem Solving

		Environmental Literacy		T	Creativity and Innovation
		Health Literacy		E	Collaboration, Teamwork and Leadership
	X	Civic Literacy		E	Cross-Cultural and Interpersonal Communication
	X	Financial, Economic, Business and Entrepreneurial Literacy		E	Communication and Media Fluency
				E	Accountability, Productivity and Ethics

In this unit plan, the following Career Ready Practices are addressed:

Indicate whether these skills are E-Encouraged, T-Taught, or A-Assessed in this unit by marking E, T, A on the line before the appropriate skill.

	E	CRP1. Act as a responsible and contributing citizen and employee
	T	CRP2. Apply appropriate academic and technical skills
	E	CRP3. Attend to personal health and financial well-being
	E	CRP4. Communicate clearly and effectively with reason
	E	CRP5. Consider the environmental, social and economic impacts of decisions
	T	CRP6. Demonstrate creativity and innovation
	E	CRP7. Employ valid and reliable research strategies
	E	CRP8. Utilize critical thinking to make sense of problems and persevere in solving them
	E	CRP9. Model integrity, ethical leadership and effective management
	E	CRP10. Plan education and career paths aligned to personal goals
	T	CRP11. Use technology to enhance productivity
	E	CRP12. Work productively in teams while using cultural global competence

Student Learning Goals/Objectives: (What key knowledge and skills will students acquire as a result of this unit? What should they eventually

be able to do as a result of such knowledge and skill?)	
Students will know how to use a computer program to complete an assignment. Students will know how to illustrate and communicate original ideas and stories using digital tools and media rich resources such as kid pix. Students will be able to use digital tools to access, manage, evaluate and synthesize information or to solve problems individually and collaboratively and communicate knowledge.	Students will be able to use the basic parts of the computer to navigate an online program.

Assessment Evidence:	
Performance Tasks: Students will be assessed on assigned projects. Students will be assessed on their ability to apply learned technology concepts and operations. Students will be assessed on their ability to produce grade appropriate documents. Students will work with IPads appropriately. Students will work with Chromebooks appropriately.	*Other Assessment Measures:* Students will be assessed on class participation and teacher observation.

Teaching and Learning Actions: (What learning experiences and instruction will enable students to achieve the desired results?	
Instructional Strategies and Activities D	Students will create projects (math problems, simple pictures, research) using Kid Pix. Students will create documents with age appropriate vocabulary and writing using Microsoft Word. Students will create a multi-slide presentation using PowerPoint. Students will create a mini newspaper using a template. Students will collaborate with peers to create a video presentation using a variety of available digital tools. Students will use available technologies such as online software to enhance or practice grade level skills. Students will create graphs using data collected. Students will create projects and site sources used in said products. Students will demonstrate appropriate digital citizenship when gathering information for projects. Students will demonstrate the ability to cite sources appropriately when gathering information for assigned

	projects. **Students will practice using navigational tools such as Google Earth and Discovery Atlas' Interactive maps.** **Students will compare existing digital tools to tools that were using the past to create same projects students will create a map using digital tools.** **Students will explore various types of digital tools and their intended uses.** **Students will additionally determine whether these digital tools are harmful or helpful, thus practicing digital citizenship.**
Resources	
IPads, tablets, Chromebooks, computers, Printers, Star fall, Kid Pix, Brain Pop Jr. Book Flix, Tumble books, Interactive White Board	
Suggested Time Frame:	6 weeks

D – Indicates differentiation at the Lesson Level (Identify Modifications for ELL, Gifted and Talented, Title 1, Special Education)

Content Area:	Technology	Grade(s) 1
Unit Plan Title:	Basic Technology Skills and Tools	

Standard

8.1 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.

Overview/Rationale

Elementary students in Middle Township School District will develop basic computer technology skills, knowledge, and competencies that will enhance learning in all areas of the curriculum. Computer use is being integrated into all areas of the curriculum and classroom. Computers are being used as tools to enhance the learning process. Basic competencies with computers need to be developed by students to be successful in the regular classroom.

Students in First Grade will continue to develop skills learned in Kindergarten. By the end of First Grade students will begin to use "Home Row" keys and additional keys on the keyboard, including the ability to use shift to capitalize letters. Students will continue to practice essential skills necessary to expand on the use of available technologies, (i.e. IPads, Chromebooks, computers) as a learning tool. They will create simple word processing documents and digital projects. First Graders will continue to explore ethical use of the computer. They will continue to demonstrate proper etiquette behavior and body position when using available technology (i.e. IPads, Chromebooks, and computers).

Strand(s)

A- Technology Operations and Concepts: Students demonstrate a sound understanding of technology concepts, systems and operations.

Technology Standard(s)

Understand and use technology systems.	8.1.P.A.1	Use an input device to select an item and navigate the screen
	8.1.P.A.2	Navigate the basic functions of a browser.
Select and use applications effectively and productively.	8.1.P.A.3	Use digital devices to create stories with pictures, numbers, letters and words.
	8.1.P.A.4	Use basic technology terms in the proper context in conversation with peers and teachers (e.g., camera, tablet, Internet, mouse, keyboard, and

		printer).
	8.1.P.A.5	Demonstrate the ability to access and use resources on a computing device.
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.

Interdisciplinary Standard(s)

Enduring Understandings: (What are the big ideas? What specific understandings about them are desired? What misunderstandings are predictable?)

Students will understand that available technologies (i.e. IPads, Tablets, Chromebooks, and Computers) are tools to help us learn.

Students will learn how we use a computer to help us learn. Students will learn how we use an IPAD to help us learn.

Students will learn how we use a Chromebook to help us learn.

Essential Question(s): (What provocative questions will foster inquiry, understanding, and transfer of learning?)

What are the parts of a computer? How is each part of the computer used? How do we use computers to help us? (also IPAD, tablets, and Chromebook)

In this unit plan, the following 21st Century themes and skills are addressed:

		Check all that apply. 21st Century Themes			Indicate whether these skills are **E**-Encouraged, **T**-Taught, or **A**-Assessed in this unit by marking **E, T, A** on the line before the appropriate skill. 21st Century Skills
	X	Global Awareness		T	Critical Thinking & Problem Solving
		Environmental Literacy		T	Creativity and Innovation
		Health Literacy		E	Collaboration, Teamwork and Leadership
	X	Civic Literacy		E	Cross-Cultural and Interpersonal Communication
	X	Financial, Economic, Business and Entrepreneurial Literacy		E	Communication and Media Fluency
				T	Accountability, Productivity and Ethics

In this unit plan, the following Career Ready Practices are addressed:

*Indicate whether these skills are **E**-Encouraged, **T**-Taught, or **A**-Assessed in this unit by marking **E, T, A** on the line before the appropriate skill.*

	E	CRP1. Act as a responsible and contributing citizen and employee
	T	CRP2. Apply appropriate academic and technical skills
	E	CRP3. Attend to personal health and financial well-being
	E	CRP4. Communicate clearly and effectively with reason
	E	CRP5. Consider the environmental, social and economic impacts of decisions
	T	CRP6. Demonstrate creativity and innovation
	E	CRP7. Employ valid and reliable research strategies
	E	CRP8. Utilize critical thinking to make sense of problems and persevere in solving them

E	**CRP9.** Model integrity, ethical leadership and effective management	
E	**CRP10.** Plan education and career paths aligned to personal goals	
T	**CRP11.** Use technology to enhance productivity	
E	**CRP12.** Work productively in teams while using cultural global competence	

Student Learning Goals/Objectives: (What key knowledge and skills will students acquire as a result of this unit? What should they eventually be able to do as a result of such knowledge and skill?)

Students will know the basic parts of a computer and other available technologies. Students will know how basic features of the computer and other available technologies, and their function. Students will know how to use a computer program to complete an assignment. Students will know basic features of an operating system. Students will know how to access available technologies and maintain its integrity.	Students will be able to use the basic parts of the computer to navigate an online program. Students will use the computer to complete simple assignments and digital projects. . Students will use basic computer icons and technology vocabulary. Students will be able to access available technologies, manage the technologies appropriately and secure technologies when tasks are complete.

Assessment Evidence:

Performance Tasks: Students will be assessed on how they use technology vocabulary and their understanding of operations of available technologies. Students will be assessed on their ability to produce grade appropriate documents. Students will work with IPads, Tablets appropriately. Students will work with Chromebooks appropriately. Students will be assessed on how they use the parts of a computer to navigate a program, and how the students access IPads, Tablets, and Chromebooks from a cart and secure technologies when they are finished using them.	Other Assessment Measures: Students will be assessed on class participation, teacher observation and completed class projects.

	Teaching and Learning Actions: (What learning experiences and instruction will enable students to achieve the desired results?
Instructional Strategies and Activities D	**I can identify the parts of a computer, Chromebook, tablet and IPAD.** **I can explain what each part of the computer does.** **I can use computer icons to access assigned programs.** **I can navigate an assigned computer programs.** **I can create a document using a computer program.** **I can use assigned programs on a Chromebook or IPAD.** **I can take care of a (n) IPAD, commuter, Chromebook.** **Students will review parts of a computer. Students will then be provided with an opportunity to practice how the parts of the computer function by working in a simple online program. (Star fall)** **Students will be introduced to the Chromebook and IPads. Students will access the IPads and the Chromebooks in the charging cart. Students will practice managing the devices by unplugging them, logging on and securing them back in the charging cart when they are finished. Students will work independently to complete an assignment. On the computers using the program Kid Pix. Students will create a simple document that has age appropriate text and graphics. Students will be able to conference with the teacher while they are creating their assignment so that they can Rethink and Revise their work. Students will print their document as evidence of their completed assignment. Students will share their assignments with their peers. As students are working independently, this will provide the teacher with an opportunity to work with students individually that may require additional support.** ***Consider how will the design will:*** **W** = Help the students know Where the unit is going and What is expected? Help the teacher know Where the students are coming from (prior knowledge and interests)? **H**= Hook all students and Hold their interest? **E**= Equip students, help the Experience the key ideas and Explore the issue? **R**=Provide opportunities to Rethink and Revise their understandings and work? **E**=Allow students to Evaluate their work and its implications? **T**=be Tailored (personalized to the different needs, interests and abilities of learners? **O**=be Organized to maximize initial and sustained engagement as well as effective learning?

Resources	
IPads, Chromebooks, tablets, computers, printer, Star fall, Kid Pix, Brain Pop Jr. Book Flix, Tumble books	
Suggested Time Frame:	6 weeks

D – Indicates differentiation at the Lesson Level (Identify Modifications for ELL, Gifted and Talented, Title 1, Special Education)

Content Area:	Technology	Grade 1
Unit Plan Title:	Technology Applications	

Standard
8.1 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.

Overview/Rationale
Elementary students in Middle Township School District will develop basic computer technology skills, knowledge, and competencies that will enhance learning in all areas of the curriculum. Computer use is being integrated into all areas of the curriculum and classroom. Computers are being used as tools to enhance the learning process. Basic competencies with computers need to be developed by students to be successful in the regular classroom. **Students in <u>First Grade</u> will continue to develop skills learned in Kindergarten. By the end of First Grade students will begin to use "Home Row" keys and additional keys on the keyboard, including the ability to use shift to capitalize letters. Students will continue to practice essential skills necessary to expand on the use of available technologies, (i.e. IPads, Chromebooks, computers) as a learning tool. They will create simple word processing documents and digital projects. First Graders will continue to explore ethical use of the computer. They will continue to demonstrate proper etiquette behavior and body position when using available technology (i.e. IPads, Chromebooks, and computers).**

Strand(s)
Strand B: Creativity and Innovation: Students demonstrate creative thinking construct knowledge and develop innovative products and process using technology **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.** **Strand D: Digital citizenship: students understand human, cultural, and societal issues related to technology and practiced legal and ethical behavior.** **Strand E: Research and Information Fluency** **Strand F: Critical Thinking Problem-Solving and Decision-Making: Students use critical thinking skills to plan and conduct research, manage products, problems, and make informed decisions using appropriate digital tools and resources.**

Technology Standard(s)	
8.1.P.B.1	Create a story about a picture taken by the student on a digital camera or

	mobile device.
8.1.2.B.1	Illustrate and communicate original ideas and stories using multiple digital tools and resources.
8.1.5.B.1	Collaborative to produce a digital story about a significant local event or issue based on first-person interviews.
8.1.P.C.1	Collaborate with peers by participating in interactive digital games or activities.
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.
8.1.2.D.1	Develop an understanding of ownership of print and nonprint information.
8.1.P.E.1	Use the Internet to explore and investigate questions with a teacher's support.
8.1.2.E.1	Use digital tools and online resources to explore a problem or issue.
8.1.2.F.1	Use geographic mapping tools to plan and solve problems.

Interdisciplinary Standard(s)

Enduring Understandings: (What are the big ideas? What specific understandings about them are desired? What misunderstandings are predictable?)

Students will learn that the use of digital tools and media rich resources enhances creativity and the construction of knowledge.

Students will understand that information accessed through the use of digital tools assists in generating solutions and making decisions.

Students will learn how to create a document with text using a word processing program.

Students will learn how demonstrate the ability to navigate in virtual environments that are developmentally appropriate.

Students will learn that effective use of digital tools assists in gathering and managing information.

Essential Question(s): (What provocative questions will foster inquiry, understanding, and transfer of learning?)

How can I use digital tools to enhance creativity and knowledge?

How can I transfer what I know to new technological situations and/or experiences?

How can I collaborate and use electronic tools to solve problems?

What are my responsibilities for using technology?

What constitutes misuse and how can it best be prevented?

In this unit plan, the following 21st Century themes and skills are addressed:

Check all that apply.			Indicate whether these skills are E-Encouraged, T-Taught, or A-Assessed in this unit by marking E, T, A on the line before the appropriate skill.		
21st Century Themes			**21st Century Skills**		
	X	**Global Awareness**		T	**Critical Thinking & Problem Solving**
		Environmental Literacy		T	**Creativity and Innovation**
		Health Literacy		E	**Collaboration, Teamwork and Leadership**
	X	**Civic Literacy**		E	**Cross-Cultural and Interpersonal Communication**
	X	**Financial, Economic, Business and Entrepreneurial Literacy**		E	**Communication and Media Fluency**
				T	**Accountability, Productivity and Ethics**

In this unit plan, the following Career Ready Practices are addressed:

Indicate whether these skills are E-Encouraged, T-Taught, or A-Assessed in this unit by marking E, T, A on the line before the appropriate skill.

		E	CRP1. Act as a responsible and contributing citizen and employee
		T	CRP2. Apply appropriate academic and technical skills
		E	CRP3. Attend to personal health and financial well-being
		E	CRP4. Communicate clearly and effectively with reason
		E	CRP5. Consider the environmental, social and economic impacts of decisions
		T	CRP6. Demonstrate creativity and innovation
		E	CRP7. Employ valid and reliable research strategies
		E	CRP8. Utilize critical thinking to make sense of problems and persevere in solving them
		E	CRP9. Model integrity, ethical leadership and effective management
		E	CRP10. Plan education and career paths aligned to personal goals
		T	CRP11. Use technology to enhance productivity
		E	CRP12. Work productively in teams while using cultural global competence

Student Learning Goals/Objectives: (What key knowledge and skills will students acquire as a result of this unit? What should they eventually be able to do as a result of such knowledge and skill?)

Students will know how to use a computer program to complete an assignment. Students will know how to illustrate and communicate original ideas and stories using digital tools and media rich resources such as kid pix. Students will be able to use digital tools to access, manage, evaluate and synthesize information or to solve problems individually and collaboratively and communicate knowledge.	Students will be able to use the basic parts of the computer to navigate an online program. Students will be able to respect each other's work and use recourses as directed by the teacher.

Assessment Evidence:

Performance Tasks: Students will be assessed on how they use technology	

vocabulary and their understanding of operations of available technologies. Students will be assessed on their ability to produce grade appropriate documents. Students will work with IPads appropriately. Students will work with Chromebooks appropriately. Students will be assessed on how they use the parts of a computer to navigate a program, and how the students access IPads and Chromebooks from a cart and secure technologies when they are finished using them.	Other Assessment Measures: Students will be assessed on class participation and teacher observation and completed class projects.

Teaching and Learning Actions: (What learning experiences and instruction will enable students to achieve the desired results?	
Instructional Strategies and Activities *D*	**Students will create projects (math problems, simple pictures, research) using Kid Pix.** **Students will create documents with age appropriate vocabulary and writing using Microsoft Word.** **Students will create a multi-slide presentation using PowerPoint.** **Students will create a mini newspaper using a template.** **Students will collaborate with peers to create a video presentation using a variety of available digital tools.** **Students will use available technologies such as online software to enhance or practice grade level skills.** **Students will create graphs using data collected.** **Students will create projects and site sources used in said products.** **Students will demonstrate appropriate digital citizenship when gathering information for projects.** **Students will demonstrate the ability to cite sources appropriately when gathering information for assigned projects.** **Students will practice using navigational tools such as Google Earth and Discovery Atlas' Interactive maps.** **Students will compare existing digital tools to tools that were using the past to create same projects students will create a map using digital tools.** **Students will explore various types of digital tools and their intended uses.** **Students will additionally determine whether these digital tools are harmful or helpful, thus practicing digital citizenship.**

Resources	
IPads, Tablets, Chromebooks, computers, Printers, Star fall, Kid Pix, Brain Pop Jr. Book Flix, Tumble books, Interactive White Board, Word Processing programs such as Microsoft office and Google Docs, Power point, Prezi	

Suggested Time Frame:	6 weeks

D – Indicates differentiation at the Lesson Level (Identify Modifications for ELL, Gifted and Talented, Title 1, Special Education)

Content Area:	Technology	Grade 1
Unit Plan Title:	Technology Education and Design	

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 in the designed world as they relate to the individual, global society, and the environment.

Overview/Rationale

Elementary students in Middle Township School District will develop basic computer technology skills, knowledge, and competencies that will enhance learning in all areas of the curriculum. Computer use is being integrated into all areas of the curriculum and classroom. Computers are being used as tools to enhance the learning process. Basic competencies with computers need to be developed by students to be successful in the regular classroom.

Students in <u>First Grade</u> **will continue to develop skills learned in Kindergarten. By the end of First Grade students will begin to use "Home Row" keys and additional keys on the keyboard, including the ability to use shift to capitalize letters. Students will continue to practice essential skills necessary to expand on the use of available technologies, (i.e. IPads, Chromebooks, computers) as a learning tool. They will create simple word processing documents and digital projects. First Graders will continue to explore ethical use of the computer. They will continue to demonstrate proper etiquette behavior and body position when using available technology (i.e. IPads, Chromebooks, and computers).**

Strand(s)

Strand A: The Nature of Technology Creativity and Innovation
Strand B: Technology and Society
Strand C: Design
Strand D: Abilities for a Technological World
Strand E: Computational Thinking Programming

Technology Standard(s)

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 interact and work 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).

Interdisciplinary Standard(s)

RF.K.3. Know and apply grade-level phonics and word analysis skills in decoding and encoding words.

Enduring Understandings: (What are the big ideas? What specific understandings about them are desired? What misunderstandings are predictable?)

Students will learn that the use of digital tools and media rich resources enhances creativity and the construction of knowledge.

Students will understand that information accessed through the use of digital tools assists in generating solutions and making decisions.

Students will learn how to create a document with text using a word processing program.

Students will learn how demonstrate the ability to navigate in virtual environments that are developmentally appropriate.

Students will learn that effective use of digital tools assists in gathering and managing information.

Essential Question(s) : (What provocative questions will foster inquiry, understanding, and transfer of learning?)

How can I use digital tools to enhance creativity and knowledge?

How can I transfer what I know to new technological situations and/or experiences?

How can I collaborate and use electronic tools to solve problems?

What are my responsibilities for using technology?

What constitutes misuse and how can it best be prevented?

In this unit plan, the following 21ˢᵗ Century themes and skills are addressed:

		Check all that apply. **21ˢᵗ Century Themes**			Indicate whether these skills are **E**-Encouraged, **T**-Taught, or **A**-Assessed in this unit by marking **E, T, A** on the line before the appropriate skill. **21ˢᵗ Century Skills**
	X	**Global Awareness**		T	**Critical Thinking & Problem Solving**
		Environmental Literacy		T	**Creativity and Innovation**
		Health Literacy		E	**Collaboration, Teamwork and Leadership**

	X	Civic Literacy		E	Cross-Cultural and Interpersonal Communication
	X	Financial, Economic, Business and Entrepreneurial Literacy		E	Communication and Media Fluency
				T	Accountability, Productivity and Ethics

In this unit plan, the following Career Ready Practices are addressed:

Indicate whether these skills are E-Encouraged, T-Taught, or A-Assessed in this unit by marking E, T, A on the line before the appropriate skill.

	E	CRP1. Act as a responsible and contributing citizen and employee
	T	CRP2. Apply appropriate academic and technical skills
	E	CRP3. Attend to personal health and financial well-being
	E	CRP4. Communicate clearly and effectively with reason
	E	CRP5. Consider the environmental, social and economic impacts of decisions
	T	CRP6. Demonstrate creativity and innovation
	E	CRP7. Employ valid and reliable research strategies
	E	CRP8. Utilize critical thinking to make sense of problems and persevere in solving them
	E	CRP9. Model integrity, ethical leadership and effective management
	E	CRP10. Plan education and career paths aligned to personal goals
	T	CRP11. Use technology to enhance productivity
	E	CRP12. Work productively in teams while using cultural global competence

Student Learning Goals/Objectives: (What key knowledge and skills will students acquire as a result of this unit? What should they eventually be able to do as a result of such knowledge and skill?)

Students will know the names of the basic parts of a computer and other available technologies.	

Students will know the basic features of the computer and other available technologies, and how they function. **Students will know how to use a computer program to complete an assignment.** **Students will know how to illustrate and communicate original ideas and stories using digital tools and media rich resources such as kid pix.** **Students will be able to use digital tools to access, manage, evaluate and synthesize information or to solve problems individually and collaboratively and communicate knowledge.**	

Assessment Evidence:

Performance Tasks: **Students will be assessed on how they use technology vocabulary and their understanding of operations of available technologies. Students will be assessed on their ability to produce grade appropriate documents. Students will work with IPads appropriately.** **Students will work with Chromebooks appropriately.** **Students will be assessed on how they use the parts of a computer to navigate a program, and how the students access IPads and Chromebooks from a cart and secure technologies when they are finished using them.**	**Other Assessment Measures***:* **Students will be assessed on class participation and teacher observation and completed class projects.**

Teaching and Learning Actions: (What learning experiences and instruction will enable students to achieve the desired results?

Instructional Strategies and Activities	**Students will create projects (math problems, simple pictures, research) using Kid Pix.** **Students will create documents with age appropriate vocabulary and writing using Microsoft Word.** **Students will create a multi-slide presentation using PowerPoint.** **Students will create a mini newspaper using a template.** **Students will collaborate with peers to create a video presentation using a variety of available digital tools.** **Students will use available technologies such as online software to enhance or practice grade level skills.** **Students will create graphs using data collected.** **Students will create projects and site sources used in said products.** **Students will demonstrate appropriate digital citizenship when gathering information for projects.**

	Students will demonstrate the ability to cite sources appropriately when gathering information for assigned projects. **Students will practice using navigational tools such as Google Earth and Discovery Atlas' Interactive maps.** **Students will compare existing digital tools to tools that were using the past to create same projects students will create a map using digital tools.** **Students will explore various types of digital tools and their intended uses.** **Students will additionally determine whether these digital tools are harmful or helpful, thus practicing digital citizenship.**
Resources	
IPads, tablets, Chromebooks, computers, Printers, Star fall, Kid Pix, Brain Pop Jr. Book Flix, Tumble books, Interactive White Board, Word Processing programs such as Microsoft office and Google Docs, Power point, Prezi	
Suggested Time Frame:	

D – Indicates differentiation at the Lesson Level (Identify Modifications for ELL, Gifted and Talented, Title 1, Special Education)

Content Area:	Technology	Grade 2
Unit Plan Title:	Basic Technology Skills and Tools	

Standard

8.1   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.

Elementary students in the Middle Township School District will develop basic computer technology skills, knowledge, and competencies that will enhance learning in all areas of the curriculum. Computer use is being integrated into all areas of the curriculum and classroom. Computers are being used as tools to enhance the learning process. Basic competencies with computers need to be developed by students to be successful in the regular classroom.

Students in Second Grade will focus on learning proper keyboarding skills. By the end of Second Grade students will have a greater understanding of most of the keys on a keyboard and their proper functions. Students will begin saving, printing, formatting and inserting graphics into simple documents and digital projects. They will use word processing programs to produce simple digital projects and additional programs to create presentations. They will be able to use a browser to navigate to websites. Second Graders will continue to explore ethical use of the computer. They will continue to demonstrate proper etiquette, behavior, and body position when using computers.

Strand(s)

A- Technology Operations and Concepts: Students demonstrate a sound understanding of technology concepts, systems and operations.

Technology Standard(s)

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.

Interdisciplinary Standard(s)

Enduring Understandings: (What are the big ideas? What specific understandings about them are desired? What misunderstandings are predictable?)
Students will understand that available technologies (i.e. IPads, Chromebooks, and Computers) are tools to help us learn. Students will learn how we use a computer to help us learn. Students will learn how we use an IPAD to help us learn. Students will learn how we use a Chromebook to help us learn.

Essential Question(s): (What provocative questions will foster inquiry, understanding, and transfer of learning?)
What are the parts of a computer? How is each part of the computer used? How do we use computers to help us? (also IPAD and Chromebook)

In this unit plan, the following 21st Century themes and skills are addressed:

Check all that apply. **21st Century Themes**			*Indicate whether these skills are E-Encouraged, T-Taught, or A-Assessed in this unit by marking E, T, A on the line before the appropriate skill.* **21st Century Skills**		
	x	**Global Awareness**		T	**Critical Thinking & Problem Solving**
		Environmental Literacy		T	**Creativity and Innovation**

		Health Literacy		E	Collaboration, Teamwork and Leadership
	x	Civic Literacy		E	Cross-Cultural and Interpersonal Communication
	x	Financial, Economic, Business and Entrepreneurial Literacy		T	Communication and Media Fluency
				T	Accountability, Productivity and Ethics

In this unit plan, the following Career Ready Practices are addressed:

Indicate whether these skills are E-Encouraged, T-Taught, or A-Assessed in this unit by marking E, T, A on the line before the appropriate skill.

	E	CRP1. Act as a responsible and contributing citizen and employee
	T	CRP2. Apply appropriate academic and technical skills
	E	CRP3. Attend to personal health and financial well-being
	E	CRP4. Communicate clearly and effectively with reason
	E	CRP5. Consider the environmental, social and economic impacts of decisions
	T	CRP6. Demonstrate creativity and innovation
	E	CRP7. Employ valid and reliable research strategies
	E	CRP8. Utilize critical thinking to make sense of problems and persevere in solving them
	E	CRP9. Model integrity, ethical leadership and effective management
	E	CRP10. Plan education and career paths aligned to personal goals
	T	CRP11. Use technology to enhance productivity
	E	CRP12. Work productively in teams while using cultural global competence

Student Learning Goals/Objectives: (What key knowledge and skills will students acquire as a result of this unit? What should they eventually be able to do as a result of such knowledge and skill?)

Students will the basic parts of a computer and other available technologies.	*Students will be able to (do)…*

Students will know how basic features of the computer and other available technologies, their function(s). Students will know how to use a computer program to complete an assignment. Students will know basic features of an operating system. Students will know how to access available technologies.	Students will be able to use the basic parts of the computer to navigate an online program. Students will be able to use the computer to complete assignments. Students will be able to use the computer to create documents and digital projects. Students will be able to use basic computer icons and technology vocabulary when appropriate. Students will be able to physically access available technologies, manage the technologies appropriately, and secure technologies when tasks are complete.

Assessment Evidence:

Performance Tasks: Students will be assessed on how they use technology vocabulary and their understanding of operations of available technologies. Students will be assessed on their ability to produce grade appropriate documents. Students will work with IPads/tablets appropriately. Students will work with Chromebooks appropriately. Students will be assessed on how they use the parts of a computer to navigate a program, and how the students access IPads and Chromebooks from a cart and secure technologies when they are finished using them.	Other Assessment Measures: Students will be assessed on class participation, teacher observation and completed class projects.

Teaching and Learning Actions: (What learning experiences and instruction will enable students to achieve the desired results?

Instructional Strategies and Activities	I can identify the parts of a computer, Chromebook and IPAD. I can explain what each part of the computer does. I can use computer icons to access assigned programs. I can navigate to and in an assigned online program. I can create a document using a computer program. I can create a digital project using a computer program. I can use assigned programs on a Chromebook, tablet, or IPAD.

I can take care of a(n) IPAD, computer, Chromebook, or tablet.

Students will review the parts of a computer. Students will then be provided with an opportunity to practice how the parts of the computer function by working in a simple online program. (i.e. Star fall)
Students will be introduced to Chromebook, IPads, and tablets. Students will access the iPads, tablets and Chromebook in the charging cart. Students will work independently to complete an assignment using available technologies, (i.e. Kid Pix, Word, etc.) Students will create a simple document that has age appropriate text and graphics. Students will be able to conference with the teacher while they are creating their assignment so that they can Rethink and Revise their work. Students will print their document as evidence of their completed assignment. Students will share their assignments with their peers. As students are working independently, this will provide the teacher with an opportunity to work with students individually that may require additional support.

Consider how will the design will:
W = Help the students know Where the unit is going and What is expected? Help the teacher know Where the students are coming from (prior knowledge and interests)?
H= Hook all students and Hold their interest?
E= Equip students, help the Experience the key ideas and Explore the issue?
R=Provide opportunities to Rethink and Revise their understandings and work?
E=Allow students to Evaluate their work and its implications?
T=be Tailored (personalized to the different needs, interests and abilities of learners?
O=be Organized to maximize initial and sustained engagement as well as effective learning?

Resources

IPads, Chromebooks, computers, printer, Star fall, Kid Pix, Brain Pop Jr. Book Flix, Tumble books

Suggested Time Frame:	6 weeks

D – Indicates differentiation at the Lesson Level (Identify Modifications for ELL, Gifted and Talented, Title 1, Special Education)

Content Area:	Technology	Grade 2
Unit Plan Title:	Technology Applications	

Standard

8.1 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.

Overview/Rationale

Elementary students in Middle Township School District will develop basic computer technology skills, knowledge, and competencies that will enhance learning in all areas of the curriculum. Computer use is being integrated into all areas of the curriculum and classroom. Computers are being used as tools to enhance the learning process. Basic competencies with computers need to be developed by students to be successful in the regular classroom.

Students in Second Grade will continue to build on skills learned in first grade. By the end of Second Grade students will have a greater understanding of most of the keys on a keyboard and their proper functions. Students will begin saving, printing, formatting and inserting graphics into simple documents and digital projects. They will use word processing programs to produce simple digital projects and additional programs to create presentations. They will be able to use a browser to navigate to websites. Second Graders will continue to explore ethical use of the computer. They will continue to demonstrate proper etiquette, behavior, and body position when using computers.

Strand(s)

Strand B: Creativity and Innovation: Students demonstrate creative thinking construct knowledge and develop innovative products and process using technology
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.
Strand D: Digital citizenship: students understand human, cultural, and societal issues related to technology and practiced legal and ethical behavior.
Strand E: Research and Information Fluency
Strand F: Critical Thinking Problem-Solving and Decision-Making: Students use critical thinking skills to plan and conduct research, manage products, problems, and make informed decisions using appropriate digital tools and resources.

Technology Standard(s)

8.1.2.B.1	Illustrate and communicate original ideas and stories using multiple digital tools and resources.
8.1.2.D.1	Develop an understanding of ownership of print and non-print information.
8.1.2.E.1	Use digital tools and online resources to explore a problem or issue.
8.1.2.F.1	Use geographic mapping tools to plan and solve problems.

Interdisciplinary Standard(s)

Enduring Understandings: (What are the big ideas? What specific understandings about them are desired? What misunderstandings are predictable?)

Students will learn that the use of digital tools and media rich resources enhances creativity and the construction of knowledge.

Students will understand that information accessed through the use of digital tools assists in generating solutions and making decisions.

Students will learn how to create a document with text using a word processing program.

Students will learn how demonstrate the ability to navigate in virtual environments that are developmentally appropriate.

Students will learn that effective use of digital tools assists in gathering and managing information.

Essential Question(s): (What provocative questions will foster inquiry, understanding, and transfer of learning?)

What are the parts of a computer? How is each part of the computer used? How do we use computers to help us? (also IPAD, tablet, and Chromebook)

In this unit plan, the following 21ˢᵗ Century themes and skills are addressed:

Check all that apply. **21ˢᵗ Century Themes**	*Indicate whether these skills are **E**-Encouraged, **T**-Taught, or **A**-Assessed in this unit by marking **E, T, A** on the line before the appropriate skill.* **21ˢᵗ Century Skills**

	X	Global Awareness		E	Critical Thinking & Problem Solving
		Environmental Literacy		T	Creativity and Innovation
		Health Literacy		E	Collaboration, Teamwork and Leadership
	X	Civic Literacy		E	Cross-Cultural and Interpersonal Communication
	X	Financial, Economic, Business and Entrepreneurial Literacy		E	Communication and Media Fluency
				T	Accountability, Productivity and Ethics

In this unit plan, the following Career Ready Practices are addressed:

Indicate whether these skills are E-Encouraged, T-Taught, or A-Assessed in this unit by marking E, T, A on the line before the appropriate skill.

	E	CRP1. Act as a responsible and contributing citizen and employee
	T	CRP2. Apply appropriate academic and technical skills
	E	CRP3. Attend to personal health and financial well-being
	E	CRP4. Communicate clearly and effectively with reason
	E	CRP5. Consider the environmental, social and economic impacts of decisions
	T	CRP6. Demonstrate creativity and innovation
	E	CRP7. Employ valid and reliable research strategies
	E	CRP8. Utilize critical thinking to make sense of problems and persevere in solving them
	E	CRP9. Model integrity, ethical leadership and effective management
	E	CRP10. Plan education and career paths aligned to personal goals
	T	CRP11. Use technology to enhance productivity
	E	CRP12. Work productively in teams while using cultural global competence

Student Learning Goals/Objectives: (What key knowledge and skills will students acquire as a result of this unit? What should they eventually be able to do as a result of such knowledge and skill?)	
Students will know the names of the basic parts of a computer and other available technologies. Students will know the basic features of the computer and other available technologies, and how they function. Students will know how to use a computer program to complete an assignment. Students will know basic features of an operating system. Students will know how to access available technologies and maintain its integrity.	Students will be able to use the computer mouse properly. Students will be able to use the basic parts of the computer to navigate an online program. Students will use the computer to complete a simple finished document using a simple desktop publishing program. Students will use basic computer icons and technology vocabulary. Students will be able to physically obtain available technologies, manage the technologies appropriately and secure technologies when tasks are complete.

Assessment Evidence:	
Performance Tasks: Students will be assessed on how they use technology vocabulary and their understanding of operations of available technologies. Students will be assessed on their ability to produce grade appropriate documents. Students will work with IPads appropriately. Students will work with Chromebooks appropriately. Students will be assessed on how they use the parts of a computer to navigate a program, and how the students access IPads and Chromebooks from a cart and secure technologies when they are finished using them.	Other Assessment Measures*:* Students will be assessed on class participation and teacher observation and completed class projects.

Teaching and Learning Actions: (What learning experiences and instruction will enable students to achieve the desired results?	
Instructional Strategies and Activities D	I can identify the parts of a computer, Chromebook and IPAD. I can explain what each part of the computer does. I can use computer icons to access assigned programs.

	I can navigate a assigned computer programs. **I can create a document using a computer program.** **I can use assigned programs on a Chromebook or IPAD.** **I can take care of a(n) IPAD, commuter, Chromebook.** **Students will review the parts of a computer. Students will then be provided with an opportunity to practice how the parts of the computer function by working in a simple online program. (Star fall)** **Students will be introduced to the Chromebooks and IPads. Students will access the iPads and the Chromebook in the charging cart. Students will practice managing the devices by un-connecting, logging on and securing them back in the charging cart when they are finished. Students will work independently to complete an assignment. On the computers using the program Kid Pix. Students will create a simple document that has age appropriate text and graphics. Students will be able to conference with the teacher while they are creating their assignment so that they can Rethink and Revise their work. Students will print their document as evidence of their completed assignment. Students will share their assignments with their peers. As students are working independently, this will provide the teacher with an opportunity to work with students individually that may require additional support.**
Resources	
IPads, Tablets, Chromebooks, computers, printer, Star fall, Kid Pix, Brain Pop Jr. Book Flix, Tumble books	
Suggested Time Frame:	6 weeks

D – Indicates differentiation at the Lesson Level (Identify Modifications for ELL, Gifted and Talented, Title 1, Special Education)

Content Area:	Technology	Grade 2
Unit Plan Title:	Technology Education and Design	

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 in the designed world as they relate to the individual, global society, and the environment.

Overview/Rationale

Elementary students in Middle Township School District will develop basic computer technology skills, knowledge, and competencies that will enhance learning in all areas of the curriculum. Computer use is being integrated into all areas of the curriculum and classroom. Computers are being used as tools to enhance the learning process. Basic competencies with computers need to be developed by students to be successful in the regular classroom.

Students in Second Grade will focus on learning proper keyboarding skills. By the end of Second Grade students will have a greater understanding of most of the keys on a keyboard and their proper functions. Students will begin saving, printing, formatting and inserting graphics into simple documents and digital projects. They will use word processing programs to produce simple digital projects and additional programs to create presentations. They will be able to use a browser to navigate to websites. Second Graders will continue to explore ethical use of the computer. They will continue to demonstrate proper etiquette, behavior, and body position when using computers.

Strand(s)

Strand A: The Nature of Technology Creativity and Innovation
Strand B: Technology and Society
Strand C: Design
Strand D: Abilities for a Technological World
Strand E: Computational Thinking Programming

Technology Standard(s)

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 interact and work 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).

Interdisciplinary Standard(s)

Enduring Understandings: (What are the big ideas? What specific understandings about them are desired? What misunderstandings are predictable?)

Students will learn that the use of digital tools and media rich resources enhances creativity and the construction of knowledge.

Students will understand that information accessed through the use of digital tools assists in generating solutions and making decisions.

Students will learn how to create a document with text using a word processing program.

Students will learn how to create presentations using power point or similar presentation software.

Students will learn how demonstrate the ability to navigate in virtual environments that are developmentally appropriate.

Students will learn that effective use of digital tools assists in gathering and managing information.

Essential Question(s) : (What provocative questions will foster inquiry, understanding, and transfer of learning?)

In this unit plan, the following 21ˢᵗ Century themes and skills are addressed:

Check all that apply.			Indicate whether these skills are **E**-Encouraged, **T**-Taught, or **A**-Assessed in this unit by marking **E, T, A** on the line before the appropriate skill.	
21ˢᵗ Century Themes			**21ˢᵗ Century Skills**	
	X	Global Awareness	T	Critical Thinking & Problem Solving
		Environmental Literacy	T	Creativity and Innovation
		Health Literacy	E	Collaboration, Teamwork and Leadership
	X	Civic Literacy	E	Cross-Cultural and Interpersonal Communication
	X	Financial, Economic, Business and	E	Communication and Media Fluency

		Entrepreneurial Literacy		E	Accountability, Productivity and Ethics

In this unit plan, the following Career Ready Practices are addressed:

Indicate whether these skills are E-Encouraged, T-Taught, or A-Assessed in this unit by marking E, T, A on the line before the appropriate skill.

	E	**CRP1. Act as a responsible and contributing citizen and employee**
	T	**CRP2. Apply appropriate academic and technical skills**
	E	**CRP3. Attend to personal health and financial well-being**
	E	**CRP4. Communicate clearly and effectively with reason**
	E	**CRP5. Consider the environmental, social and economic impacts of decisions**
	T	**CRP6. Demonstrate creativity and innovation**
	E	**CRP7. Employ valid and reliable research strategies**
	E	**CRP8. Utilize critical thinking to make sense of problems and persevere in solving them**
	E	**CRP9. Model integrity, ethical leadership and effective management**
	E	**CRP10. Plan education and career paths aligned to personal goals**
	T	**CRP11. Use technology to enhance productivity**
	E	**CRP12. Work productively in teams while using cultural global competence**

Student Learning Goals/Objectives: (What key knowledge and skills will students acquire as a result of this unit? What should they eventually be able to do as a result of such knowledge and skill?)

Students will know how to use a computer program to complete an assignment. Students will know how to illustrate and communicate original ideas and stories using digital tools and media rich resources such as kid pix. Students will be able to use digital tools to access, manage, evaluate and	Students will be able to use the functions of a computer in order to navigate an online program. Students will be able to recognize account privacy and work practices. Students will demonstrate a responsible use of online resources

synthesize information or to solve problems individually and collaboratively and communicate knowledge.	Students will be able to log into specific locations and enter password independently. Students will begin to use two hands on the keyboard. Students will be able to locate and print the files with minimal assistance

Assessment Evidence:

Performance Tasks: Students will be assessed on how they use technology vocabulary and their understanding of operations of available technologies. Students will be assessed on their ability to produce grade appropriate documents. Students will work with IPads appropriately. Students will work with Chromebooks appropriately. Students will be assessed on how they use the parts of a computer to navigate a program, and how the students access IPads and Chromebooks from a cart and secure technologies when they are finished using them.	*Other Assessment Measures:* Students will be assessed on class participation and teacher observation and completed class projects.

Teaching and Learning Actions: (What learning experiences and instruction will enable students to achieve the desired results?

Instructional Strategies and Activities	Students will create projects (math problems, simple pictures, research) using Kid Pix. Students will create documents with age appropriate vocabulary and writing using Microsoft Word. Students will create a multi-slide presentation using PowerPoint. Students will create a mini newspaper using a template. Students will collaborate with peers to create a video presentation using a variety of available digital tools. Students will use available technologies such as online software to enhance or practice grade level skills. Students will create graphs using data collected. Students will create projects and site sources used in said products. Students will demonstrate appropriate digital citizenship when gathering information for projects. Students will demonstrate the ability to cite sources appropriately when gathering information for assigned projects. Students will practice using navigational tools such as Google Earth and Discovery Atlas' Interactive maps. Students will compare existing digital tools to tools that were using the past to create same projects students

	will create a map using digital tools. **Students will explore various types of digital tools and their intended uses.** **Students will additionally determine whether these digital tools are harmful or helpful, thus practicing digital citizenship.**
Resources	
IPads, tablets, Chromebooks, computers, Printers, Star fall, Kid Pix, Brain Pop Jr. Book Flix, Tumble books, Interactive White Board, Word Processing programs such as Microsoft office and Google Docs, Power point, Prezi	
Suggested Time Frame:	6 weeks

D – Indicates differentiation at the Lesson Level (Identify Modifications for ELL, Gifted and Talented, Title 1, Special Education)