

SUBJECT AREA: TECHNOLOGY - STEM

GRADE LEVEL: K		BRIEF SUMMARY OF UNIT: Students explore the basics of desktop computing with this introductory unit that includes: learning the parts of the computer and the login/log-out process, manipulating the mouse, using the keyboard, navigating the internet, and learning to use a word processing application (MS-Word) to create their first documents.			
UNIT 1: UNDERSTANDING AND USING TECH. SYSTEMS/ INTRODUCTION TO MS WORD					
CONTENT/OBJECTIVE	STANDARDS	SKILLS – SWBAT	SUGGESTED ACTIVITIES	SUGGESTED ASSESSMENTS	TIME FRAME
<p>A. Technology Operations & Concepts ▪ <u>UNDERSTAND AND USE TECH. SYSTEMS</u> -digital devices: identifying parts and purpose -mouse and keyboard skills</p> <p>▪ <u>SELECT AND USE APPLICATIONS</u> -MS Word: introduction -internet browser: navigation skills</p>	<p>8.1.2.A.1 8.1.2.A.2 8.1.2.A.4</p> <p>8.2.2.A.2 8.2.2.A.3</p>	<p>1. Identify the basic features of a digital device and explain its purpose.</p> <p>2. Create a document using a word processing application.</p> <p>3. Demonstrate developmentally appropriate navigation skills in virtual environments (i.e. games, museums).</p> <p>4. Describe how designed products and systems are useful at school, home and work.</p> <p>5. Identify a system and the components that work together to accomplish its purpose.</p>	<p>LESSONS 1-3 Students learn about and become familiar with the parts of the computer by navigating to and exploring interactive websites that teaches them the parts of the computer and mouse navigation skills.</p> <p>LESSONS 4- 8 Having learned about the parts of the computer, each student will use Microsoft Word program to create a document about computer parts with labels and illustrations. (CI, ML)</p> <p>EXTENSION/ ALTERNATE LESSONS: After completing lessons 1-3, students explore Microsoft Word program on their own and create documents on any topic of their choice, using any features of the program they want to apply. (LCS, IL,CTPS)</p>	<p>DIAGNOSTIC (at unit's start) -informal survey</p> <p>FORMATIVE -anecdotal records -discussions -questioning -student responses -teacher observations</p> <p>SUMMATIVE -completed work -performance assessments of the activities described</p>	<p>SEPT.-NOV.</p> <p>1st MP (8-10 classes)</p>
<p>A.(8.2) The Nature of Technology</p> <p>▪ <u>CHARACTERISTICS AND SCOPE</u> -usefulness of designed products</p> <p>▪ <u>CORE CONCEPTS OF TECHNOLOGY</u> -identify a system and its components</p>					
INTEGRATED COMPONENTS					
21ST CENTURY THEMES		Civic Literacy			Global Awareness
		Financial, Economic, Business, and Entrepreneurial Literacy			Health Literacy
21ST CENTURY SKILLS	X	Creativity and Innovation		Communication and Collaboration	X Life and Career Skills

	X	Critical Thinking and Problem Solving	X	Information Literacy	X	Media Literacy
INTERDISCIPLINARY CONNECTIONS ELA: L.K.1.a, L.K.2.c, L.K.2.d, L.K.4.a, W.K.6, W.K.8						
INTEGRATION OF TECHNOLOGY	THROUGHOUT ALL UNITS					
RESOURCES	For Teachers -computer, timer		For Students -SMART board, computer, internet, MS Word			
DIFFERENTIATION	Modifications for Special Ed./504 students -comply with all IEPs and 504s -provide preferential seating -provide extra time		Modifications for EL students -assign "buddy" -provide extended time on activities -provide extra help		Modifications for Gifted students -provide opportunity to explore other applications e.g. MS PowerPoint -explore more advanced formatting options.	

SUBJECT AREA: TECHNOLOGY- STEM					
GRADE LEVEL: K		BRIEF SUMMARY OF UNIT:			
UNIT 2: INTRODUCTION TO MS POWERPOINT		Students explore the basic features of MS PowerPoint and gain understanding of some characteristics of technology by distinguishing between natural and manufactured products. They will then demonstrate this knowledge by creating simple PowerPoint Presentations on the topic followed by more complex presentations on any topic of their choice.			
CONTENT/OBJECTIVE	STANDARDS	SKILLS – SWBAT	SUGGESTED ACTIVITIES	SUGGESTED ASSESSMENTS	TIME FRAME
<p>A. Technology Operations & Concepts ▪ <u>SELECT AND USE APPLICATIONS</u> -introduction to MS PowerPoint -compare/contrast MS Word w/MS PPT</p>	<p>8.1.2.A.3 8.1.2.B.1 8.2.2.A.1 8.2.2.D.3 8.2.2.D.5</p>	<p>1. Create a presentation, using MS PowerPoint</p> <p>2. Compare the common uses of MS Word and MS PowerPoint and identify the advantages and disadvantages of using each.</p> <p>3. Illustrate and communicate original ideas and stories using multiple digital tools and resources.</p>	<p><u>LESSONS 1-2</u> Students explore the basic features of MS PowerPoint and practice navigating the program. They will learn how to create new presentations, add slides, text and clipart by creating short presentations about natural vs. manufactured products.</p> <p><u>LESSONS 4- 8</u> Students continue to build their knowledge of using MS PowerPoint by creating presentations on any topic of their choice. (CI)</p>	<p><u>DIAGNOSTIC</u> (at unit's start) -informal survey</p> <p><u>FORMATIVE</u> -anecdotal records -discussions -questioning -student responses -teacher observations</p> <p><u>SUMMATIVE</u> -completed work -performance</p>	<p>NOV.-JAN.</p> <p>2nd MP (8-10 classes)</p>
<p>B. Creativity and Innovation ▪ <u>CREATE ORIGINAL WORK</u> -personal/group expressions</p>					

<p>A.(8.2) The Nature of Technology ▪ <u>CHARACTERISTICS AND SCOPE OF TECH.</u> -natural vs. manufactured products</p>		<p>4. Identify the strengths and weaknesses in a product or system.</p>	<p>EXTENSION/ ALTERNATE LESSONS: <i>Students will be asked to include at least one word and one picture on each slide. They will also be asked to explore the “ribbon” with all the features and learn to use at least one on their own and then share their knowledge with the rest of the class.</i> (CC, IL, LCS)</p>	<p>assessments of the activities described</p>	
<p>D.(8.2) Abilities for a Technological World ▪ <u>USE AND MAINTAIN TECH. PRODUCTS</u> -strengths and weaknesses of a product</p>					

INTEGRATED COMPONENTS

<p>21ST CENTURY THEMES</p>	<p>Civic Literacy</p>	<p>Global Awareness</p>
	<p>Financial, Economic, Business, and Entrepreneurial Literacy</p>	<p>Health Literacy</p>

<p>21ST CENTURY SKILLS</p>	<p>X Creativity and Innovation</p>	<p>X Communication and Collaboration</p>	<p>Life and Career Skills</p>
	<p>Critical Thinking and Problem Solving</p>	<p>X Information Literacy</p>	<p>Media Literacy</p>

INTERDISCIPLINARY CONNECTIONS ELA: SL.K.1.a, W.K.1, W.K.5, L.K.2.d, L.K.4.a, RF.K.1.b

<p>INTEGRATION OF TECHNOLOGY</p>	<p>THROUGHOUT ALL UNITS</p>		
<p>RESOURCES</p>	<p>For Teachers -computer, timer</p>	<p>For Students -SMART board, computer, internet, MS PowerPoint</p>	
<p>DIFFERENTIATION</p>	<p>Modifications for Special Ed./504 students -comply with all IEPs and 504s -provide extra time</p>	<p>Modifications for EL students -assign “buddy” -provide extended time on activities</p>	<p>Modifications for Gifted students -use other options in MS PowerPoint, such as the drawing tool.</p>

SUBJECT AREA: TECHNOLOGY-STEM

<p>GRADE LEVEL: K</p>	<p>BRIEF SUMMARY OF UNIT:</p>
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UNIT 3: INTRODUCTION TO ADOBE PHOTOSHOP		Students explore the basic features of Adobe Photoshop CS5 and practice using the engineering design process by brainstorming new toy ideas and sketching out the prototypes on Adobe Photoshop. Students will be given the option to improve and enhance their prototype drawing as they gain knowledge of the program or use their knowledge of the program to create new compositions on any topic of their choice.				
CONTENT/OBJECTIVE	STANDARDS	SKILLS – SWBAT	SUGGESTED ACTIVITIES	SUGGESTED ASSESSMENTS	TIME FRAME	
<p>A. Technology Operations & Concepts ▪ <u>SELECT AND USE APPLICATIONS</u> -Adobe Photoshop: introduction -compare /contrast w/MS PPT</p>	8.1.2.A.3 8.1.2.B.1 8.2.2.B.1 8.2.2.D.1	<ol style="list-style-type: none"> Compare the common uses of at least two different digital applications and identify the advantages and disadvantages of using each. Illustrate and communicate original ideas and stories using multiple digital tools and resources. Identify how technology impacts or improves life. Collaborate and apply a design process to solve a simple problem from everyday experiences 	<p>LESSONS 1-3 Students learn how to: identify and open the program, create and save new documents, and familiarize themselves with using the basic drawing tools by creating illustrations of self-designed toys. (CTPS)</p> <p>LESSONS 4- 8 Students continue with their toy prototype projects or use their knowledge of the program to create new illustrations/ compositions on any topic of their choice. (CI, IL)</p> <p>EXTENSION/ ALTERNATE LESSONS: <i>Students will be asked to use at least four tools to complete their tasks. They will also be asked to explore other tools on their own, learn how to use them, and then share their knowledge with the rest of the class. (CC)</i></p>	<p>DIAGNOSTIC (at unit's start) -informal survey</p> <p>FORMATIVE -anecdotal records -discussions -questioning -student responses -teacher observations</p> <p>SUMMATIVE -completed work -performance assessments of the activities described</p>	JAN-MARCH 3RD MP (8-10 classes)	
<p>B. Creativity and Innovation ▪ <u>CREATE ORIGINAL WORK</u> -personal/group expression</p>						
<p>B.(8.2) Technology and Society ▪ <u>CULTURAL AND SOCIAL EFFECTS OF TECH:</u> -tech: impact/improvement in life</p>						
<p>D.(8.2) Apply the Design Process ▪ <u>ASSESS THE IMPACT OF PRODUCTS & SYSTEMS</u> -design process to solve simple problem</p>						
INTEGRATED COMPONENTS						
21ST CENTURY THEMES		Civic Literacy			Global Awareness	
		Financial, Economic, Business, and Entrepreneurial Literacy			Health Literacy	
21ST CENTURY SKILLS	X	Creativity and Innovation	X	Communication and Collaboration	X	Life and Career Skills
	X	Critical Thinking and Problem Solving	X	Information Literacy		Media Literacy

INTERDISCIPLINARY CONNECTIONS ELA: SL.K.1.a, SL.K.5 ART: 1.3.D.1, 1.3.D.4, 1.3.D.5 SCIENCE: K-2-ETS1-1, K-2-ETS1-2, K-2-ETS1-3			
INTEGRATION OF TECHNOLOGY	THROUGHOUT ALL UNITS		
RESOURCES	For Teachers -computer, timer	For Students -SMART board, computer, internet, Adobe Photoshop	
DIFFERENTIATION	Modifications for Special Ed./504 students -comply with all IEPs and 504s -provide extra time	Modifications for EL students -assign "buddy" -provide extended time on activities	Modifications for Gifted students -explore other features in Adobe Photoshop.

SUBJECT AREA: TECHNOLOGY-STEM					
GRADE LEVEL: K		BRIEF SUMMARY OF UNIT: <i>(Introductory Level- Course I (code.org): Intro to sequences, algorithms, events, loops, and debugging)</i> Students explore the basic algorithmic thinking of computer programming by using a visual-based language (blockley) to solve problems, manipulate virtual characters, and build simple programs while gaining knowledge and applying the logic of programming.			
UNIT 4: INTRODUCTION TO PROGRAMMING					
CONTENT/OBJECTIVE	STANDARDS	SKILLS – SWBAT	SUGGESTED ACTIVITIES	SUGGESTED ASSESSMENTS	TIME FRAME
A. Technology Operations & Concepts ▪ <u>SELECT AND USE APPLICATIONS</u> <i>-online application: code.org</i>	8.1.2.A.4 8.1.2.E.1 8.2.2.E.1 8.2.2.E.3	1. Demonstrate developmentally appropriate navigation skills in virtual environments. 2. Use digital tools and online resources to explore a problem or issue. 3. List and demonstrate the steps to an everyday task. 4. Create algorithms (a sets of instructions) using a pre defined set of commands (e.g., to move a student	LESSONS 1-2 Students accustom themselves to the Code.org system and also to the idea of dragging and dropping by completing simple sequencing tasks in the program. LESSONS 3- 5 Students create simple algorithms, using code blocks that get a character through a maze and other tasks to understand the importance of sequence in programming. (IL) LESSONS 6- 8 Students will practice "debugging" and fixing the pre-written program that fails to get the character to the goal. They will then use new commands to program the characters to move around the	DIAGNOSTIC (at unit's start) -informal survey FORMATIVE -anecdotal records -discussions -questioning -student responses -teacher observations SUMMATIVE -completed work -performance assessments of the activities described	APRIL.-JUNE 4TH MP (8-10 classes)
E. Research and Information Fluency ▪ <u>PLAN STRATEGIES TO GUIDE INQUIRY</u> -using online tools as resources					
E.(8.2) Computational Thinking ▪ <u>COMPUTER PROGRAMMING</u> <i>-list/demonstrate steps to a task</i> <i>-create algorithms using commands</i>					

		or a character through a maze).	environment. (CTPS, LCS)		
INTEGRATED COMPONENTS					
21ST CENTURY THEMES		Civic Literacy			Global Awareness
		Financial, Economic, Business, and Entrepreneurial Literacy			Health Literacy
21ST CENTURY SKILLS					
		Creativity and Innovation		Communication and Collaboration	X Life and Career Skills
	X	Critical Thinking and Problem Solving	X	Information Literacy	Media Literacy
INTERDISCIPLINARY CONNECTIONS ELA: SL.K.1.a, SL.K.3 MATH: K.CC.A.2, K.CC.B.4, K.OA.A.3, K.OA.A.5, K.G.A.1 SCIENCE: K-2-ETS1-1, K-2-PS3-2					
INTEGRATION OF TECHNOLOGY	THROUGHOUT ALL UNITS				
RESOURCES	For Teachers -computer, timer		For Students -SMART board, computer, internet, visual-based coding language resources (e.g. code.org)		
DIFFERENTIATION	Modifications for Special Ed./504 students -comply with all IEPs and 504s -provide extra time		Modifications for EL students -assign “buddy” -provide extended time on activities		Modifications for Gifted students -use code studio to create own program and games

SUBJECT AREA: TECHNOLOGY- STEM					
GRADE LEVEL: 1		BRIEF SUMMARY OF UNIT: Students explore the basics of Google Apps for Education (GAFE) with this introductory unit that includes: learning the logging-in/out process, navigating the Google Drive folder system, using Google Drawing, and creating and sharing files for collaboration.			
UNIT 1: INTRODUCTION TO GAFE: DRIVE, DRAWING, SLIDES					
CONTENT/OBJECTIVE	STANDARDS	SKILLS – SWBAT	SUGGESTED ACTIVITIES	SUGGESTED ASSESSMENTS	TIME FRAME

<p>A. Technology Operations & Concepts ▪ <u>SELECT AND USE APPLICATIONS</u> <i>-Google Apps: Drive, Docs, Draw</i> <i>-compare/contrast GAFE w/MS Office</i></p>	<p>8.1.2.A.2 8.1.2.A.3 8.1.2.B.1 8.1.2.C.1</p>	<p>1. Create a document using a word processing application.</p>	<p>LESSONS 1-3 Students learn how to: log-in to GAFE, navigate the Drive folder system, create new files (Google Draw), and share their files for collaboration. (CC, CTPS)</p>	<p>DIAGNOSTIC (at unit's start) -informal survey</p>	<p>SEPT.-NOV.</p>
<p>B. Creativity and Innovation ▪ <u>CREATE ORIGINAL WORK</u> <i>-personal/group expression</i></p>	<p>8.2.2.B.2</p>	<p>2. Compare the common uses of at least two different digital applications and identify the advantages and disadvantages of using each.</p>	<p>LESSONS 4- 8 Students continue to build their skills in using GAFE by creating presentation slides on any topic of their choice with the option to work independently or to collaborate with one or more of their peers. (CI)</p>	<p>FORMATIVE -anecdotal records -discussions -questioning -student responses -teacher observations</p>	<p>1st MP (8-10 classes)</p>
<p>C. Communication and Collaboration ▪ <u>INTERACT, COLLABORATE, AND PUBLISH</u> -with peers using GAFE</p>		<p>3. 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.</p>	<p>EXTENSION/ ALTERNATE LESSONS: <i>Students will be asked to include at least one sentence and one picture on each slide. They will also be asked to explore as many feature/tools of the program as they wish and use at least ten features. They will also be asked to share their knowledge of at least two features with the rest of the class. (LCS)</i></p>	<p>SUMMATIVE -completed work -performance assessments of the activities described</p>	
<p>B.(8.2) Technology and Society ▪ <u>EFFECTS OF TECH. ON THE ENVIRONMENT</u> -reusing: local and global impact</p>		<p>4. Demonstrate how reusing a product affects the local and global environment.</p>			

INTEGRATED COMPONENTS

21ST CENTURY THEMES	Civic Literacy	Global Awareness
	Financial, Economic, Business, and Entrepreneurial Literacy	Health Literacy

21ST CENTURY SKILLS	X Creativity and Innovation	X Communication and Collaboration	X Life and Career Skills
	X Critical Thinking and Problem Solving	Information Literacy	Media Literacy

INTERDISCIPLINARY CONNECTIONS ELA: W.1.5, W.1.6, SL.1.1.a, SL.1.1.b, SL.1.1.c, SL.1.5 **ART:** 1.3.D.1, 1.3.D.4, 1.3.D.5

INTEGRATION OF TECHNOLOGY	THROUGHOUT ALL UNITS	
RESOURCES	For Teachers	For Students

	-computer, timer	-SMART board, computer, Google Apps for Education (GAPE)	
DIFFERENTIATION	Modifications for Special Ed./504 students -comply with all IEPs and 504s -provide extra time	Modifications for EL students -assign "buddy" -provide extended time on activities	Modifications for Gifted students -explore other features of GAPE

SUBJECT AREA: TECHNOLOGY- STEM					
GRADE LEVEL: 1		BRIEF SUMMARY OF UNIT:			
UNIT 2: GAPE PART II: SLIDES, DOCS		Students progress towards GAPE proficiency as they continue to explore and apply the basic and advanced features of Google Slides and Google Docs, on any topic of their choice.			
CONTENT/OBJECTIVE	STANDARDS	SKILLS – SWBAT	SUGGESTED ACTIVITIES	SUGGESTED ASSESSMENTS	TIME FRAME
A. Technology Operations & Concepts ▪ <u>SELECT AND USE APPLICATIONS</u> <i>-Google Apps: Drive, Slides</i> <i>-Adobe Photoshop CS5</i>	8.1.2.A.2 8.1.2.B.1 8.1.2.C.1 8.1.2.F.1	1. Create works using a presentation and drawing application.	<u>LESSONS 1-2</u> Students continue to build their skills in using GAPE by creating presentation slides on any topic of their choice with the option to work independently or to collaborate with one or more of their peers. <u>LESSONS 3- 8</u> Students use Google Docs to create a report on any topic of their choice with the option to work independently or to collaborate with one or more of their peers. (CI) <u>EXTENSION/ ALTERNATE LESSONS:</u> <i>Students will be asked to include at least 5 pages in their Google Docs project. They will also be asked to explore as many feature/tools of the program as they wish and use at least seven features. They will be asked to share their knowledge of at least two features with the rest of the class. (CC, LCS)</i>	<u>DIAGNOSTIC</u> (at unit's start) -informal survey <u>FORMATIVE</u> -anecdotal records -discussions -questioning -student responses -teacher observations <u>SUMMATIVE</u> -completed work -performance assessments of the activities described	NOV.-JAN. 2nd MP (8-10 classes)
B. Creativity and Innovation ▪ <u>CREATE ORIGINAL WORK</u> <i>-personal/group expression</i>	8.2.2.B.2	2. Plan and manage activities to develop a solution or complete a project.			
C. Communication and Collaboration ▪ <u>INTERACT, COLLABORATE, AND PUBLISH</u> -with peers using GAPE		3. Engage in a variety of developmentally appropriate learning activities with other students.			
F. Critical Thinking, Problem Solving ▪ <u>DECISION MAKING</u> <i>-plan and manage own project</i>		4. Demonstrate how reusing a product affects the local and global environment.			
INTEGRATED COMPONENTS					

21ST CENTURY THEMES		Civic Literacy		Global Awareness		
		Financial, Economic, Business, and Entrepreneurial Literacy		Health Literacy		
21ST CENTURY SKILLS	X	Creativity and Innovation	X	Communication and Collaboration	X	Life and Career Skills
		Critical Thinking and Problem Solving		Information Literacy		Media Literacy
INTERDISCIPLINARY CONNECTIONS ELA: W.1.2, W.1.5, W.1.6, SL.1.1.a, SL.1.1.b, SL.1.1.c, SL.1.5 ART: 1.3.D.1, 1.3.D.4, 1.3.D.5						
INTEGRATION OF TECHNOLOGY	THROUGHOUT ALL UNITS					
RESOURCES	For Teachers -computer, timer		For Students -SMART board, computer, internet, Google Apps for Education (GAPE)			
DIFFERENTIATION	Modifications for Special Ed./504 students -comply with all IEPs and 504s -provide extra time		Modifications for EL students -assign "buddy" -provide extended time on activities		Modifications for Gifted students -provide opportunity to explore advanced features of GAPE	

SUBJECT AREA: TECHNOLOGY- STEM						
GRADE LEVEL: 1		BRIEF SUMMARY OF UNIT: Students explore Level I features (<i>pencil, paint, gradient, text, move tools</i>) of Adobe Photoshop CS5 and practice using the engineering design process by brainstorming new computer game ideas and drawing/rendering the prototypes on Adobe Photoshop. Students will have the option to work on their prototypes for the duration of the unit or create new compositions on any topic of their choice.				
UNIT 3: ADOBE PHOTOSHOP: LEVEL I						
CONTENT/OBJECTIVE	STANDARDS	SKILLS – SWBAT	SUGGESTED ACTIVITIES	SUGGESTED ASSESSMENTS	TIME FRAME	
A. Technology Operations & Concepts ▪ <u>SELECT AND USE APPLICATIONS</u> -Adobe Photoshop CS	8.1.2.A.3 8.1.2.B.1 8.2.2.A.4 8.2.2.B.3 8.2.2.C.3 8.2.2.D.2 8.2.2.D.4	1. Illustrate and communicate original ideas and stories using multiple digital tools and resources. 2. Choose a product to make and plan the tools and materials needed.	LESSONS 1-3 Students explore level I tools along with some filter and image tools to create a basic drawings of new self-designed computer games. (CI, CTPS) LESSONS 4- 8 Students continue with their game	DIAGNOSTIC (at unit's start) -informal survey FORMATIVE -anecdotal records -discussions -questioning	JAN-MARCH 3RD MP (8-10 classes)	

<p>A.(8.2) Creativity and Innovation ▪ <u>CORE CONCEPTS OF TECHNOLOGY</u> <i>-choose a product to make and plan</i></p>		<p>3. Identify products or systems that are designed to meet human needs.</p>	<p>prototype projects or use their knowledge of the program to create new illustrations/ compositions on any topic of their choice.</p>	<p>-student responses -teacher observations</p>	
<p>B.(8.2) Technology and Society ▪ <u>ROLE OF SOCIETY IN TECH. DEVELOPMENT</u> <i>-id products designed for human needs</i></p>		<p>4. Explain why we need to make new products.</p> <p>5. Identify the resources needed to create technological products or systems.</p>	<p><u>EXTENSION/ ALTERNATE LESSONS:</u> <i>Students will be asked to use at least four tools to complete their tasks. They will also be asked to explore other tools on their own, learn how to use them, and then share their knowledge with the rest of the class.</i> (CC, LCS)</p>	<p><u>SUMMATIVE</u> -completed work -performance assessments of the activities described</p>	
<p>C.(8.2) Design Process to Solving Problems ▪ <u>ATTRIBUTES OF DESIGN</u> <i>-explain the need for new products</i></p>					

INTEGRATED COMPONENTS

<p>21ST CENTURY THEMES</p>	<p>Civic Literacy</p>	<p>Global Awareness</p>
	<p>Financial, Economic, Business, and Entrepreneurial Literacy</p>	<p>Health Literacy</p>

<p>21ST CENTURY SKILLS</p>	<p>X Creativity and Innovation</p>	<p>X Communication and Collaboration</p>	<p>X Life and Career Skills</p>
	<p>X Critical Thinking and Problem Solving</p>	<p>Information Literacy</p>	<p>Media Literacy</p>

INTERDISCIPLINARY CONNECTIONS **ELA:** SL.1.1.a, SL.1.5 **ART:** 1.3.D.1, 1.3.D.4, 1.3.D.5 **SCIENCE:** K-2-ETS1-1, K-2-ETS1-2, K-2-ETS1-3

<p>INTEGRATION OF TECHNOLOGY</p>	<p>THROUGHOUT ALL UNITS</p>		
<p>RESOURCES</p>	<p>For Teachers -computer, timer</p>	<p>For Students -SMART board, computer, internet, Adobe Photoshop</p>	
<p>DIFFERENTIATION</p>	<p>Modifications for Special Ed./504 students -comply with all IEPs and 504s -provide extra time</p>	<p>Modifications for EL students -assign "buddy" -provide extended time on activities</p>	<p>Modifications for Gifted students -provide opportunity to explore advanced features in Adobe Photoshop</p>

SUBJECT AREA: TECHNOLOGY- STEM

GRADE LEVEL: 1		BRIEF SUMMARY OF UNIT:				
UNIT 4: COMPUTER PROGRAMMING: LEVEL I		<i>(Level I- Course II(code.org): algorithms, events, loops, and debugging, problem-solving & perseverance techniques)</i> Building on computer programming skills acquired from the previous year, students use visual-based language to practice sequencing commands and arranging blocks of code to build more games and programs while practicing problem solving skills and applying algorithmic thinking.				
CONTENT/OBJECTIVE	STANDARDS	SKILLS – SWBAT	SUGGESTED ACTIVITIES	SUGGESTED ASSESSMENTS	TIME FRAME	
<p>A. Technology Operations & Concepts ▪ <u>SELECT AND USE APPLICATIONS</u> <i>-online application: code.org</i></p>	8.1.2.A.4 8.1.2.E.1 8.2.2.D.3 8.2.2.E.2 8.2.2.E.3	<ol style="list-style-type: none"> 1. Demonstrate developmentally appropriate navigation skills in virtual environments. 2. Use digital tools and online resources to explore a problem or issue. 3. List and demonstrate the steps to an everyday task. 4. 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). 	<p>LESSONS 1-2 Students write simple algorithms to move a cartoon bee around that gathers nectar and makes honey. (CTPS)</p> <p>LESSONS 3- 4 Students write programs that move a character around, drawing a line behind it wherever it goes. They will also practice “debugging” and fixing the pre-written program that fails to get the character to the goal. (CTPS, LCS)</p> <p>LESSONS 5- 8 Students write programs that draw simple shapes, while describing their position relative to other shapes (above, below, etc.). They will also practice the concept of concept of loops (repeated instructions). (CI)</p>	<p>DIAGNOSTIC (at unit’s start) -informal survey</p> <p>FORMATIVE -anecdotal records -discussions -questioning -student responses -teacher observations</p> <p>SUMMATIVE -completed work -performance assessments of the activities described</p>	APRIL.-JUNE 4TH MP (8-10 classes)	
<p>E. Research and Information Fluency ▪ <u>PLAN STRATEGIES TO GUIDE INQUIRY</u> -using online tools as resources</p>						
<p>E.(8.2) Computational Thinking ▪ <u>COMPUTER PROGRAMMING</u> <i>-understand and use input commands -create algorithms using commands</i></p>						
INTEGRATED COMPONENTS						
21ST CENTURY THEMES		Civic Literacy			Global Awareness	
		Financial, Economic, Business, and Entrepreneurial Literacy			Health Literacy	
21ST CENTURY SKILLS	X	Creativity and Innovation		Communication and Collaboration	X	Life and Career Skills
	X	Critical Thinking and Problem Solving		Information Literacy		Media Literacy

INTERDISCIPLINARY CONNECTIONS ELA: L.1.6, SL.1.1.a, SL.1.5 MATH: 1.OA.A.1, 1.OA.C.5, 1.OA.D.7 SCIENCE: K-2-ETS1-1, K-2-PS3-2			
INTEGRATION OF TECHNOLOGY	THROUGHOUT ALL UNITS		
RESOURCES	For Teachers -computer, timer	For Students -SMART board, computer, internet, visual-based coding language resources (e.g. code.org)	
DIFFERENTIATION	Modifications for Special Ed./504 students -comply with all IEPs and 504s -provide extra time	Modifications for EL students -assign "buddy" -provide extended time on activities	Modifications for Gifted students -use code studio to create own program and games

SUBJECT AREA: TECHNOLOGY- STEM					
GRADE LEVEL: 2		BRIEF SUMMARY OF UNIT:			
UNIT 1: INTRODUCTION TO GAFE: FORMS, SHEETS		Students explore the functionality of and the relationship between Google Forms and Google Sheets by creating surveys and digitally distributing them to classmates, collecting the data in Google sheets, and then processing the data in the form of charts and graphs for data analysis.			
CONTENT/OBJECTIVE	STANDARDS	SKILLS – SWBAT	SUGGESTED ACTIVITIES	SUGGESTED ASSESSMENTS	TIME FRAME
<p>A. Technology Operations & Concepts ▪ <u>SELECT AND USE APPLICATIONS</u> -GAFE Forms and Spreadsheet -enter info into spreadsheet -id components of database -enter and filter info in</p>	8.1.2.A.5 8.1.2.A.6 8.1.2.A.7 8.1.2.C.1 8.1.2.E.1 8.1.2.F.1	<ol style="list-style-type: none"> 1. Create a survey using Google Forms 2. Enter information into a spreadsheet and sort the information. 3. Identify the structure and components of a database. 4. Enter information into a database or spreadsheet and filter the information. 5. Use digital tools and online resources to explore a problem or issue. 6. Plan and manage activities to develop a solution or 	<p>LESSONS 1-3 Students explore the basic features of Google Forms by creating surveys and/or quizzes for distribution. Next, they will learn how to actually distribute the forms in order to collect data. (CI, CTPS)</p> <p>LESSONS 4- 8 Having created and distributed forms/quizzes, students will use Google Spreadsheets to collect and analyze the data. They will create charts and graphs with the collected data, using Google Sheets. Lastly, they will share their findings with the rest of</p>	<p>DIAGNOSTIC (at unit's start) -informal survey</p> <p>FORMATIVE -anecdotal records -discussions -questioning -student responses -teacher observations</p> <p>SUMMATIVE -completed work -performance assessments of the activities described</p>	<p>SEPT.-NOV.</p> <p>1st MP (8-10 classes)</p>
<p>C. Communication and Collaboration <u>INTERACT, COLLABORATE, AND PUBLISH</u> -with peers using GAFE</p>					

F. Critical Thinking, Problem Solving ▪ <u>DECISION MAKING</u> <i>-plan and manage own project</i>		complete a project.	the class. (LCS, CC)			
INTEGRATED COMPONENTS						
21ST CENTURY THEMES		Civic Literacy			Global Awareness	
		Financial, Economic, Business, and Entrepreneurial Literacy			Health Literacy	
21ST CENTURY SKILLS	X	Creativity and Innovation	X	Communication and Collaboration	X	Life and Career Skills
	X	Critical Thinking and Problem Solving		Information Literacy		Media Literacy
INTERDISCIPLINARY CONNECTIONS ELA: W.2.2, W.2.5, W.2.6, SL.2.1.a, SL.2.1.b, SL.2.1.c MATH: 2.MD.D.9, 2.MD.D.10						
INTEGRATION OF TECHNOLOGY	THROUGHOUT ALL UNITS					
RESOURCES	For Teachers -computer, timer		For Students -SMART board, computer, internet, Google Apps for Education (GAPE)			
DIFFERENTIATION	Modifications for Special Ed./504 students -comply with all IEPs and 504s -provide extra time		Modifications for EL students -assign "buddy" -provide extended time on activities		Modifications for Gifted students -provide opportunity to explore advanced features of GAPE	

SUBJECT AREA: TECHNOLOGY- STEM					
GRADE LEVEL: 2		BRIEF SUMMARY OF UNIT: Students expand their knowledge of Google Slides and improve the quality of their presentations as they learn and apply more advanced formatting features and innovative techniques for adding text in Google Slides.			
UNIT 2: GAPE: SLIDES, DRAW- ADVANCED FEATURES I					
CONTENT/OBJECTIVE	STANDARDS	SKILLS – SWBAT	SUGGESTED ACTIVITIES	SUGGESTED ASSESSMENTS	TIME FRAME

<p>A. Technology Operations & Concepts ▪ <u>SELECT AND USE APPLICATIONS</u> -Google Apps: Drive, Slides -Adobe Photoshop CS5</p>	<p>8.1.2.A.2 8.1.2.B.1 8.1.2.C.1 8.1.2.F.1 8.2.2.B.2</p>	<p>1. Create works using a presentation and drawing application.</p> <p>2. Plan and manage activities to develop a solution or complete a project.</p> <p>3. 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.</p> <p>4. Demonstrate how reusing a product affects the local and global environment.</p>	<p>LESSONS 1-3 Students use the topic of their surveys created in Google Forms in the previous unit and create presentations. They will learn how to insert spreadsheets, charts, and graphs into their presentations. (CC, LCS)</p> <p>LESSONS 4- 8 Students continue with their presentation project, adding works created from Photoshop and online programs such as Taxedo. They will also employ innovative and more advanced techniques for adding text to their presentations for maximum effect/impact. (CI, CTPS)</p>	<p>DIAGNOSTIC (at unit's start) -informal survey</p> <p>FORMATIVE -anecdotal records -discussions -questioning -student responses -teacher observations</p> <p>SUMMATIVE -completed work -performance assessments of the activities described</p>	<p>NOV.-JAN. 2nd MP (8-10 classes)</p>
<p>B. Creativity and Innovation ▪ <u>CREATE ORIGINAL WORK</u> -personal/group expression</p>					
<p>C. Communication and Collaboration ▪ <u>INTERACT, COLLABORATE, AND PUBLISH</u> -with peers using GAFE</p>					
<p>F. Critical Thinking, Problem Solving ▪ <u>DECISION MAKING</u> -plan and manage own project</p>					

INTEGRATED COMPONENTS

<p>21ST CENTURY THEMES</p>	<p>Civic Literacy</p>	<p>Global Awareness</p>
	<p>Financial, Economic, Business, and Entrepreneurial Literacy</p>	<p>Health Literacy</p>

<p>21ST CENTURY SKILLS</p>	<p>X Creativity and Innovation</p>	<p>X Communication and Collaboration</p>	<p>X Life and Career Skills</p>
	<p>X Critical Thinking and Problem Solving</p>	<p>Information Literacy</p>	<p>Media Literacy</p>

INTERDISCIPLINARY CONNECTIONS ELA: W.2.2, W.2.5, W.2.6, SL.2.1.a, SL.2.1.b, SL.2.1.c **ART:** 1.3.D.1, 1.3.D.4, 1.3.D.5

<p>INTEGRATION OF TECHNOLOGY</p>	<p>THROUGHOUT ALL UNITS</p>	
<p>RESOURCES</p>	<p>For Teachers -computer, timer</p>	<p>For Students -SMART board, computer, internet, Google Apps for Education (GAFE)</p>

DIFFERENTIATION	Modifications for Special Ed./504 students -comply with all IEPs and 504s -provide extra time	Modifications for EL students -assign "buddy" -provide extended time on activities	Modifications for Gifted students -provide opportunity to explore advanced features of GAFE
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SUBJECT AREA: TECHNOLOGY- STEM					
GRADE LEVEL: 2		BRIEF SUMMARY OF UNIT: Students explore Level II features (<i>selection tool and filter options in addition to all Level I tools</i>) of Adobe Photoshop CS5 and practice using the engineering design process by brainstorming new school tool ideas and drawing/ rendering the prototypes on Adobe Photoshop. Students will have the option to work on their prototypes for the duration of the unit or create new compositions on any topic of their choice.			
UNIT 3: ADOBE PHOTOSHOP: LEVEL II					
CONTENT/OBJECTIVE	STANDARDS	SKILLS – SWBAT	SUGGESTED ACTIVITIES	SUGGESTED ASSESSMENTS	TIME FRAME
A. Technology Operations & Concepts ▪ <u>SELECT AND USE APPLICATIONS</u> <i>-Adobe Photoshop CS: animation</i>	8.1.2.A.3 8.1.2.B.1 8.2.2.A.5 8.2.2.B.4 8.2.2.C.2-6 8.2.2.D.1 8.2.2.D.4	1. Collaborate to design a solution to a problem affecting the community. 2. Identify how the ways people live and work has changed because of technology 3. Identify products or systems that are designed to meet human needs. 4. Create a drawing of a product or device that communicates its function to peers and discuss. 5. Develop an understanding of ownership of print and non print information	<u>LESSONS 1-3</u> Students explore level II tools along with some image adjustment tools to create basic drawings of new self-designed school tool/equipment. (CTPS, CI) <u>LESSONS 4- 8</u> Students continue with their school tool prototype projects or use their knowledge of the program to create new illustrations/ compositions on any topic of their choice. (CI) <u>EXTENSION/ ALTERNATE LESSONS:</u> <i>Students will be asked to use at least four tools to complete their tasks. They will also be asked to explore other tools on their own, learn how to use them, and then share their knowledge with the rest of the class.</i> (CC, LCS)	<u>DIAGNOSTIC</u> (at unit's start) -informal survey <u>FORMATIVE</u> -anecdotal records -discussions -questioning -student responses -teacher observations <u>SUMMATIVE</u> -completed work -performance assessments of the activities described	JAN-MARCH 3RD MP (8-10 classes)
A.(8.2) Creativity and Innovation ▪ <u>CONNECTIONS: TECH. & OTHER FIELDS</u> -choose a product to make and plan					
C.(8.2) Design ▪ <u>APPLICATION OF THE ENGINEERING DESIGN</u> -create a drawing of product with details					
D.(8.2) Design Process to Solving Problems ▪ <u>ATTRIBUTES OF DESIGN</u> <i>-explain the need for new products</i>					
INTEGRATED COMPONENTS					

21ST CENTURY THEMES	Civic Literacy		Global Awareness			
	Financial, Economic, Business, and Entrepreneurial Literacy		Health Literacy			
21ST CENTURY SKILLS	X	Creativity and Innovation	X	Communication and Collaboration	X	Life and Career Skills
	X	Critical Thinking and Problem Solving		Information Literacy		Media Literacy
INTERDISCIPLINARY CONNECTIONS ELA: SL.2.1.a, SL.2.1.b, SL.2.1.c ART: 1.3.D.1, 1.3.D.4, 1.3.D.5 SCIENCE: K-2-ETS1-1, K-2-ETS1-2, K-2-ETS1-3						
INTEGRATION OF TECHNOLOGY	THROUGHOUT ALL UNITS					
RESOURCES	For Teachers -computer, timer		For Students -SMART board, computer, internet, Adobe Photoshop			
DIFFERENTIATION	Modifications for Special Ed./504 students -comply with all IEPs and 504s -provide extra time		Modifications for EL students -assign “buddy” -provide extended time on activities		Modifications for Gifted students -provide opportunity to explore advanced features in Adobe Photoshop	

SUBJECT AREA: TECHNOLOGY- STEM						
GRADE LEVEL: 2		BRIEF SUMMARY OF UNIT: Students continue to learn and apply core programming logic and sharpen their problem-solving skills with “debugging” exercises as they use visual language to arrange blocks of code in the programming process. They will review how to sequence commands, using more complex algorithms and incorporate loops, events, and conditionals into their games, stories, and animations.				
UNIT 4: COMPUTER PROGRAMMING: LEVEL II						
CONTENT/OBJECTIVE	STANDARDS	SKILLS – SWBAT	SUGGESTED ACTIVITIES	SUGGESTED ASSESSMENTS	TIME FRAME	
A. Technology Operations & Concepts ▪ <u>SELECT AND USE APPLICATIONS</u> -online application: code.org -online application: scratch.mit.edu	8.1.2.A.4 8.1.2.E.1 8.2.2.D.3 8.2.2.E.2 8.2.2.E.3 8.2.2.E.4	1. Demonstrate developmentally appropriate navigation skills in virtual environments. 2. Use digital tools and online resources to explore a	LESSONS 1-2 Students are presented with a pre-written program that fails to complete the puzzle. Students will have to “debug” or fix the pre-written program. (CTPS, IL) LESSONS 3- 4	DIAGNOSTIC (at unit’s start) -informal survey FORMATIVE -anecdotal records -discussions	APRIL.-JUNE 4TH MP (8-10 classes)	

<p>E. Research and Information Fluency ▪ <u>PLAN STRATEGIES TO GUIDE INQUIRY</u> -using online tools as resources</p>	8.2.2.E.5	<p>problem or issue.</p> <p>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).</p>	<p>Students write programs using conditional statements and are introduced to the programming concept of “events,”</p> <p>LESSONS 5- 8</p> <p>Using the concept of “Events,” students will create their own game with events. Applying all the different programming concepts they have learned, students will make customized, interactive stories or games of their own. (CI, LCS)</p>	<p>-questioning -student responses -teacher observations</p> <p>SUMMATIVE</p> <p>-completed work -performance assessments of the activities described</p>	
<p>E.(8.2) Computational Thinking</p> <p>▪ <u>COMPUTER PROGRAMMING</u> -understand and use input commands -create algorithms using commands</p>		<p>4. Debug an algorithm (i.e., correct an error).</p> <p>5. Use appropriate terms in conversation.</p>			

INTEGRATED COMPONENTS

<p>21ST CENTURY THEMES</p>	Civic Literacy	Global Awareness
	Financial, Economic, Business, and Entrepreneurial Literacy	Health Literacy

<p>21ST CENTURY SKILLS</p>	<p>X Creativity and Innovation</p>	<p>Communication and Collaboration</p>	<p>X Life and Career Skills</p>
	<p>X Critical Thinking and Problem Solving</p>	<p>X Information Literacy</p>	<p>Media Literacy</p>

INTERDISCIPLINARY CONNECTIONS ELA: L.2.6, SL.2.1.a, SL.2.1.b, SL.2.1.c **MATH:** 2OA.A.1, 2.OA.B.2, 2.OA.C.4 **SCIENCE:** K-2-ETS1-1, K-2-PS3-2, 2OA.A.1

<p>INTEGRATION OF TECHNOLOGY</p>	THROUGHOUT ALL UNITS		
<p>RESOURCES</p>	<p>For Teachers -computer, timer</p>	<p>For Students -SMART board, computer, internet, visual-based coding language resources (e.g. code.org)</p>	
<p>DIFFERENTIATION</p>	<p>Modifications for Special Ed./504 students -comply with all IEPs and 504s -provide extra time</p>	<p>Modifications for EL students -assign “buddy” -provide extended time on activities</p>	<p>Modifications for Gifted students -use code studio to create own program and games</p>

SUBJECT AREA: TECHNOLOGY- STEM

GRADE LEVEL: 3		BRIEF SUMMARY OF UNIT: Students explore and apply the basic structuring and design features of Google Sites to create their first websites. Applying existing themes and templates to create the webpage layouts, students will familiarize themselves with the process of styling webpages and structuring them for content.				
UNIT 1: INTRODUCTION TO GOOGLE SITES: STRUCTURE AND DESIGN						
CONTENT/OBJECTIVE	STANDARDS	SKILLS – SWBAT	SUGGESTED ACTIVITIES	SUGGESTED ASSESSMENTS	TIME FRAME	
<p>A. Technology Operations & Concepts ▪ <u>SELECT AND USE APPLICATIONS</u> -GAFE-SITES: website maker -Use formatting to enhance work</p>	8.1.5.A.1 8.1.5.A.2 8.1.5.B.1 8.1.5.D.1	<ol style="list-style-type: none"> 1. Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems. 2. Format a document to enhance text and include graphics, symbols and/ or pictures. 3. Create original works as a means of personal or group expression. 4. Understand the need for and use of copyrights. 	<p>LESSONS 1-3 Students explore and use the appropriate tools in Google Sites users’ dashboard to create structures for their websites. Students will familiarize themselves with the Google Sites interface and systems to set up their webpages and prepare them for content. (CI, CTPS)</p> <p>LESSONS 4- 8 Students will add themes and design elements to their websites, using existing themes and templates in Google Sites. They will also use the site management options to configure and customize the design of the site header, content area, sidebar gadgets, and horizontal navigation sections of their webpages. Students will begin adding content to their websites. (CI, CTPS, CC, LCS)</p>	<p>DIAGNOSTIC (at unit’s start) -informal survey</p> <p>FORMATIVE -anecdotal records -discussions -questioning -student responses -teacher observations</p> <p>SUMMATIVE -completed work -performance assessments of the activities described</p>	SEPT.-NOV. 1st MP (8-10 classes)	
<p>B. Creativity and Innovation <u>CREATE ORIGINAL WORKS</u> -personal expression</p>						
<p>D. Digital Citizenship ▪ <u>UNDERSTAND RESPONSIBLE USE OF TECH.</u> -need for and use of copyright</p>						
INTEGRATED COMPONENTS						
21ST CENTURY THEMES		Civic Literacy			Global Awareness	
		Financial, Economic, Business, and Entrepreneurial Literacy			Health Literacy	
21ST CENTURY SKILLS	X	Creativity and Innovation	X	Communication and Collaboration	X	Life and Career Skills
	X	Critical Thinking and Problem Solving		Information Literacy		Media Literacy
INTERDISCIPLINARY CONNECTIONS ELA: SL.3.1.b, SL.3.1.c, SL.3.1.d, SL.3.6 ART: 1.3.5.D.1, 1.3.5.D.4, 1.3.5.D.5						

INTEGRATION OF TECHNOLOGY	THROUGHOUT ALL UNITS		
RESOURCES	For Teachers -computer, timer	For Students -SMART board, computer, GAFE (Google Sites)	
DIFFERENTIATION	Modifications for Special Ed./504 students -comply with all IEPs and 504s -provide extra time	Modifications for EL students -assign "buddy" -provide extended time on activities	Modifications for Gifted students -provide opportunity to explore advanced features of GAFE

SUBJECT AREA: TECHNOLOGY- STEM

GRADE LEVEL: 3		BRIEF SUMMARY OF UNIT: Students continue to build their knowledge of website construction by creating and adding self-created contents produced using various applications such as GAFE and Photoshop. At this point, students will replace all system website themes and templates with their original works (e.g. background images) designed with Adobe Photoshop.			
UNIT 2: INTRODUCTION TO GOOGLE SITES: BUILDING CONTENT					
CONTENT/OBJECTIVE	STANDARDS	SKILLS – SWBAT	SUGGESTED ACTIVITIES	SUGGESTED ASSESSMENTS	TIME FRAME
<p>A. Technology Operations & Concepts ▪ <u>SELECT AND USE APPLICATIONS</u> -GAFE-SITES, Spreadsheet, Slides, Docs, Draw, Forms -Spreadsheet: graph data, produce report</p>	<p>8.1.5.A.1 8.1.5.A.4 8.1.5.B.1 8.1.5.E.1</p> <p>8.2.5.B.2 8.2.5.B.4</p>	<p>1. Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.</p> <p>2. Graph data using a spreadsheet, analyze and produce a report that explains the analysis of the data.</p> <p>3. Examine systems used for recycling and recommend simplification of the systems and share with product developers.</p> <p>4. Research technologies that have changed due to society's changing needs and wants.</p>	<p>LESSONS 1-3 Students will begin add content to their websites, using works created in GAFE, Photoshop and online programs. (CI)</p> <p>LESSONS 4- 8 Having familiarized themselves with the basic features of Google Sites, students will now replace all system themes and templates used on their websites with ones they create themselves, using Adobe Photoshop and other image editing/graphic design software. Students will also continue adding content to their websites. (CI, CTPS,LCS)</p>	<p>DIAGNOSTIC (at unit's start) -informal survey</p> <p>FORMATIVE -anecdotal records -discussions -questioning -student responses -teacher observations</p> <p>SUMMATIVE -completed work -performance assessments of the activities described</p>	<p>SEPT.-NOV.</p> <p>1st MP (8-10 classes)</p>
<p>B. Creativity and Innovation <u>CREATE ORIGINAL WORKS</u> -personal expression</p>					
<p>B.(8.2) Technology and Society</p> <ul style="list-style-type: none"> ▪ <u>EFFECTS OF TECH. ON ENVIRONMENT</u> -research and recommend a recycling sys. ▪ <u>SOCIETY'S ROLE IN TECH. USE AND</u> 					

<u>DEV.</u> -research tech's changes: needs/wants					
INTEGRATED COMPONENTS					
21ST CENTURY THEMES		Civic Literacy			Global Awareness
		Financial, Economic, Business, and Entrepreneurial Literacy			Health Literacy
21ST CENTURY SKILLS					
21ST CENTURY SKILLS	X	Creativity and Innovation		Communication and Collaboration	X Life and Career Skills
	X	Critical Thinking and Problem Solving		Information Literacy	Media Literacy
INTERDISCIPLINARY CONNECTIONS ELA: W.3.2, W.3.3, SL.3.1.b, SL3.1.c, SL3.1.d, SL.3.6 MATH: 3.MD.B.3 ART: 1.3.5.D.1, 1.3.5.D.4, 1.3.5.D.5					
INTEGRATION OF TECHNOLOGY	THROUGHOUT ALL UNITS				
RESOURCES	For Teachers -computer, timer		For Students -SMART board, computer, internet, GAFE, Google Sites		
DIFFERENTIATION	Modifications for Special Ed./504 students -comply with all IEPs and 504s -provide extra time		Modifications for EL students -assign "buddy" -provide extended time on activities		Modifications for Gifted students -provide opportunity to explore advanced features of GAFE

SUBJECT AREA: TECHNOLOGY- STEM					
GRADE LEVEL: 3		BRIEF SUMMARY OF UNIT: Students explore Level III feature (<i>3D and animation tools along with all Level I and II tools</i>) s of Adobe Photoshop CS5 and practice the engineering design process by using Adobe Photoshop to create visual documentations of the evolution of any technological devices of their choice (e.g. telephone). Students will have the option to work on their documentations for the duration of the unit or create new compositions on any topic of their choice.			
UNIT 3: ADOBE PHOTOSHOP: LEVEL III					
CONTENT/OBJECTIVE	STANDARDS	SKILLS – SWBAT	SUGGESTED ACTIVITIES	SUGGESTED ASSESSMENTS	TIME FRAME

<p>A. Technology Operations & Concepts ▪ <u>SELECT AND USE APPLICATIONS</u> <i>-Adobe Photoshop CS: animation</i></p>	<p>8.1.5.A.2 8.2.5.A.1 8.2.5.A.2 8.2.5.A.4</p>	<p>1. Collaborate to design a solution to a problem affecting the community.</p> <p>2. Compare and contrast how technologies have changed over time due to human needs and economic, political and/or cultural influences.</p>	<p>LESSONS 1-3 Students explore level III tools along with some style tools to create visual documentations of the evolution of any tech. device in modern history. (CTPS)</p>	<p>DIAGNOSTIC (at unit's start) -informal survey</p> <p>FORMATIVE -anecdotal records -discussions -questioning -student responses -teacher observations</p>	<p>JAN-MARCH 3RD MP (8-10 classes)</p>
<p>A.(8.2) Creativity and Innovation ▪ <u>CONNECTIONS: TECH. AND OTHER FIELDS.</u> <i>-compare/contrast changing technologies</i></p>	<p>8.2.5.C.1-3 8.2.5.D.1</p>	<p>3. Collaborate with peers to illustrate components of a designed system.</p>	<p>LESSONS 4- 8 Students continue with their visual documentation projects or use their knowledge of the program to create new illustrations/ compositions on any topic of their choice. (CI, LCS)</p>	<p>SUMMATIVE -completed work -performance assessments of the activities described</p>	
<p>C.(8.2) Design ▪ <u>ATTRIBUTES OF DESIGN</u> <i>-create a drawing of product with details</i></p>		<p>4. Identify and collect information about a problem that can be solved by technology.</p>	<p>EXTENSION/ ALTERNATE LESSONS: <i>Students will be asked to use at least four tools to complete their tasks. They will also be asked to explore other tools on their own, learn how to use them, and then share their knowledge with the rest of the class.</i></p>		
<p>D.(8.2) Abilities of a Technological World ▪ <u>APPLY THE DESIGN PROCESS</u> <i>-identify a problem that tech. can solve</i></p>			<p>(CC)</p>		

INTEGRATED COMPONENTS

<p>21ST CENTURY THEMES</p>	<p>Civic Literacy</p>	<p>Global Awareness</p>
	<p>Financial, Economic, Business, and Entrepreneurial Literacy</p>	<p>Health Literacy</p>

<p>21ST CENTURY SKILLS</p>	<p>X Creativity and Innovation</p>	<p>X Communication and Collaboration</p>	<p>X Life and Career Skills</p>
	<p>X Critical Thinking and Problem Solving</p>	<p>Information Literacy</p>	<p>Media Literacy</p>

INTERDISCIPLINARY CONNECTIONS ELA: SL.3.1.b, SL3.1.c, SL3.1.d, SL.3.6 **ART:** 1.3.5.D.1, 1.3.5.D.4, 1.3.5.D.5 **SCIENCE:** 3-5-ETS1-1, 3-5-ETS1-2, 3-5-ETS1-3

<p>INTEGRATION OF TECHNOLOGY</p>	<p>THROUGHOUT ALL UNITS</p>	
<p>RESOURCES</p>	<p>For Teachers -computer, timer</p>	<p>For Students -SMART board, computer, internet, Adobe Photoshop</p>

DIFFERENTIATION	Modifications for Special Ed./504 students -comply with all IEPs and 504s -provide extra time	Modifications for EL students -assign "buddy" -provide extended time on activities	Modifications for Gifted students -provide opportunity to explore advanced features in Adobe Photoshop
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SUBJECT AREA: TECHNOLOGY- STEM					
GRADE LEVEL: 3		BRIEF SUMMARY OF UNIT: Students revisit and delve deeper into the core programming concepts of algorithms, conditionals, events, loops, and functions as they construct more complex programs. Students will also sharpen their problem solving skills and persistence techniques with "debugging" exercises that require the application of many of the core programming concepts.			
UNIT 4: COMPUTER PROGRAMMING: LEVEL III					
CONTENT/OBJECTIVE	STANDARDS	SKILLS – SWBAT	SUGGESTED ACTIVITIES	SUGGESTED ASSESSMENTS	TIME FRAME
<p style="text-align: center;">A.</p> <p>Technology Operations & Concepts ▪ <u>SELECT AND USE APPLICATIONS</u> -online application: code.org -online application: scratch.mit.edu</p>	<p>8.1.5.A.4 8.1.5.E.1</p> <p>8.2.5.D.3 8.2.5.E.1 8.2.5.E.2 8.2.5.E.3 8.2.5.E.4</p>	<p>1. Identify how computer programming impacts our everyday lives.</p> <p>2. Demonstrate an understanding of how a computer takes input of data, processes and stores the data through a series of commands, and outputs information.</p> <p>3. Using a simple, visual programming language, create a program using loops, events and procedures to generate specific output.</p> <p>4. Debug an algorithm (i.e., correct an error).</p>	<p><u>LESSONS 1-2</u> Students write programs to draw different shapes while identifying patterns in their code. They learn about the programming concept of loops (repeated statements), which can be used to make their programs more efficient. (CTPS)</p> <p><u>LESSONS 3- 5</u> Students employ all the different programming concepts they have learned in the curriculum this far to make a customized, interactive story or game of their own. (CI, LCS)</p> <p><u>LESSONS 6- 8</u> Students write programs that draw interesting and beautiful patterns using nested loops. (CTPS, CI)</p>	<p><u>DIAGNOSTIC</u> (at unit's start) -informal survey</p> <p><u>FORMATIVE</u> -anecdotal records -discussions -questioning -student responses -teacher observations</p> <p><u>SUMMATIVE</u> -completed work -performance assessments of the activities described</p>	<p style="text-align: center;">APRIL.-JUNE</p> <p style="text-align: center;">4TH MP (8-10 classes)</p>
<p style="text-align: center;">E.</p> <p>Research and Information Fluency ▪ <u>PLAN STRATEGIES TO GUIDE INQUIRY</u> -using online tools as resources</p>					
<p style="text-align: center;">E.(8.2)</p> <p style="text-align: center;">Computational Thinking</p> <p>▪ <u>COMPUTER PROGRAMMING</u> -Identify impact of programming -understand and use input commands -create algorithms using commands -use visual programming language</p>					
INTEGRATED COMPONENTS					
21ST CENTURY THEMES		Civic Literacy		Global Awareness	

		Financial, Economic, Business, and Entrepreneurial Literacy		Health Literacy
21ST CENTURY SKILLS	X	Creativity and Innovation	Communication and Collaboration	X Life and Career Skills
	X	Critical Thinking and Problem Solving	Information Literacy	Media Literacy
INTERDISCIPLINARY CONNECTIONS ELA: L.3.6, SL.3.1.b, SL3.1.c, SL3.1.d, SL.3.6 MATH: 3.OA.D.8, 3.OA.D.9 SCIENCE: 3-5-ETS1-2				
INTEGRATION OF TECHNOLOGY	THROUGHOUT ALL UNITS			
RESOURCES	For Teachers -computer, timer		For Students -SMART board, computer, internet, visual-based coding language resources (e.g. code.org, khan academy, Tynker, LightBot)	
DIFFERENTIATION	Modifications for Special Ed./504 students -comply with all IEPs and 504s -provide extra time		Modifications for EL students -assign "buddy" -provide extended time on activities	Modifications for Gifted students -build games and programs, using text based programming languages

SUBJECT AREA: TECHNOLOGY- STEM					
GRADE LEVEL: 4		BRIEF SUMMARY OF UNIT: Students explore and apply the more advanced structuring and design features of Google Sites to create their 4 th grade websites, which will also serve as their e-portfolios. Applying self-created themes and templates to construct the webpage layouts, students will deepen their understanding of the process of styling webpages and structuring them for content.			
UNIT 1: WORKING WITH GOOGLE SITES: STRUCTURE					
CONTENT/OBJECTIVE	STANDARDS	SKILLS – SWBAT	SUGGESTED ACTIVITIES	SUGGESTED ASSESSMENTS	TIME FRAME
A. Technology Operations & Concepts ▪ <u>SELECT AND USE APPLICATIONS</u> <i>--GAFE-SITES, Adobe Photoshop CS5</i> <i>-Use formatting to enhance work</i>	8.1.5.A.1 8.1.5.A.4 8.1.5.B.1 8.1.5.D.2-4 8.2.5.D.4 8.2.5.D.5	1. Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems. 2. Graph data using a spreadsheet, analyze and produce a report that	LESSONS 1-3 Students use Adobe Photoshop to create background designs, logos, header and other images for styling their websites. Students will use these works as themes and templates for their Google Sites Websites. (CI, LCS) LESSONS 4- 8	DIAGNOSTIC (at unit's start) -informal survey FORMATIVE -anecdotal records -discussions -questioning	SEPT.-NOV. 1st MP (8-10 classes)

<p>E. Research and Information Fluency ▪ <u>APPLY DIGITAL TOOLS TO GATHER/USE INFO</u> -evaluate and select info sources</p>		<p>explains the analysis of the data.</p> <p>3. Create original works as a means of personal or group expression.</p>	<p>Students continue to structure and design their websites to function as e portfolios. Using guidelines and check off lists of required elements, students set up webpages, navigation menus, and folder systems. Students begin to document this process on dedicated webpages of their websites. (CI)</p>	<p>-student responses -teacher observations</p>	
<p>D.(8.2) Abilities of a Technological World ▪ <u>USE/ MAINTAIN TECH PRODUCTS & SYST.</u> -monitoring human-design system -describing how resources are used in tech.</p>		<p>4. Use digital tools to research using print and non-print electronic information sources to complete a variety of tasks.</p>		<p>SUMMATIVE -completed work -performance assessments of the activities described</p>	

INTEGRATED COMPONENTS

<p>21ST CENTURY THEMES</p>	<p>Civic Literacy</p>	<p>Global Awareness</p>
	<p>Financial, Economic, Business, and Entrepreneurial Literacy</p>	<p>Health Literacy</p>

<p>21ST CENTURY SKILLS</p>	<p>X Creativity and Innovation</p>	<p>Communication and Collaboration</p>	<p>X Life and Career Skills</p>
	<p>Critical Thinking and Problem Solving</p>	<p>Information Literacy</p>	<p>Media Literacy</p>

INTERDISCIPLINARY CONNECTIONS **ELA:** SL.4.1.b, SL4.1.c, SL4.1.d, SL.4.5 **ART:** 1.3.5.D.1, 1.3.5.D.4, 1.3.5.D.5

<p>INTEGRATION OF TECHNOLOGY</p>	<p>THROUGHOUT ALL UNITS</p>		
<p>RESOURCES</p>	<p>For Teachers -computer, timer</p>	<p>For Students -SMART board, computer, Google Apps for Education, Google Sites</p>	
<p>DIFFERENTIATION</p>	<p>Modifications for Special Ed./504 students -comply with all IEPs and 504s -provide extra time</p>	<p>Modifications for EL students -assign "buddy" -provide extended time on activities</p>	<p>Modifications for Gifted students -provide opportunity to explore advanced features of GAFE</p>

SUBJECT AREA: TECHNOLOGY- STEM

GRADE LEVEL: 4		BRIEF SUMMARY OF UNIT: Students progress towards GAFE mastery while creating contents for their websites as they explore and apply the advanced features of Docs, Drawing, Sheets, Slides, on any topic of their choice.				
UNIT 2: WORKING WITH GAFE : SPREADSHEET- CONTENT						
CONTENT/OBJECTIVE	STANDARDS	SKILLS – SWBAT	SUGGESTED ACTIVITIES	SUGGESTED ASSESSMENTS	TIME FRAME	
<p>A. Technology Operations & Concepts ▪ <u>SELECT AND USE APPLICATIONS</u> --GAFE-SITES, Spreadsheet, Slides, Docs, Draw, Forms -graph data for analysis</p>	<p>8.1.5.A.1 8.1.5.A.8 8.1.5.A.6 8.1.5.B.1 8.1.5.E.1 8.2.5.B.5 8.2.5.D.5</p>	<p>1. Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems. 2. Graph data using a spreadsheet, analyze and produce a report that explains the analysis of the data. 3. Create original works as a means of personal or group expression. 4. Use digital tools to research using print and non-print electronic information sources to complete a variety of tasks.</p>	<p>LESSONS 1-3 Students research any topic of their choice and document their finding, using GAFE. Students will be required to use all the basic applications: Docs, Draw, Sheets, and Slides to complete their projects. (CTPS, LCS)</p> <p>LESSONS 4- 8 Students will continue with the projects and document the process on Google Sites. Students will also being to add relevant gadgets and widgets to supplement/ compliment the contents of their webpages. (CI, CC)</p>	<p>DIAGNOSTIC (at unit's start) -informal survey</p> <p>FORMATIVE -anecdotal records -discussions -questioning -student responses -teacher observations</p> <p>SUMMATIVE -completed work -performance assessments of the activities described</p>	<p>SEPT.-NOV. 1st MP (8-10 classes)</p>	
<p>E. Research and Information Fluency ▪ <u>APPLY DIGITAL TOOLS TO GATHER/USE INFO</u> -evaluate and select info sources</p>						
<p>D.(8.2) Abilities of a Technological World ▪ <u>USE/ MAINTAIN TECH PRODUCTS & SYST.</u> -monitoring human-design system -describing how resources are used in tech.</p>						
INTEGRATED COMPONENTS						
21ST CENTURY THEMES		Civic Literacy			Global Awareness	
		Financial, Economic, Business, and Entrepreneurial Literacy			Health Literacy	
21ST CENTURY SKILLS	X	Creativity and Innovation	X	Communication and Collaboration	X	Life and Career Skills
	X	Critical Thinking and Problem Solving		Information Literacy		Media Literacy
INTERDISCIPLINARY CONNECTIONS ELA: SL.4.1.b, SL4.1.c, SL4.1.d, SL.4.5 ART: 1.3.5.D.1, 1.3.5.D.4, 1.3.5.D.5						

INTEGRATION OF TECHNOLOGY	THROUGHOUT ALL UNITS		
RESOURCES	For Teachers -computer, timer	For Students -SMART board, computer, internet, Google Apps for Education (GAPE)	
DIFFERENTIATION	Modifications for Special Ed./504 students -comply with all IEPs and 504s -provide extra time	Modifications for EL students -assign "buddy" -provide extended time on activities	Modifications for Gifted students -provide opportunity to explore advanced features of GAPE

SUBJECT AREA: TECHNOLOGY- STEM					
GRADE LEVEL: 4		BRIEF SUMMARY OF UNIT: Students explore Level IV features (<i>animation and advanced selection tools</i>) of Adobe Photoshop CS5 and practice using the engineering design process by brainstorming new life-saving technology device and rendering the 3D prototype illustrations on Adobe Photoshop. Students will have the option to work on their prototypes for the duration of the unit or create new compositions on any topic of their choice.			
UNIT 3: ADOBE PHOTOSHOP: LEVEL IV					
CONTENT/OBJECTIVE	STANDARDS	SKILLS – SWBAT	SUGGESTED ACTIVITIES	SUGGESTED ASSESSMENTS	TIME FRAME
<p>A. Technology Operations & Concepts ▪ <u>SELECT AND USE APPLICATIONS</u> -Adobe Photoshop CS: animation</p>	<p>8.1.5.A.3 8.1.5.F.1</p> <p>8.2.5.A.3 8.2.5.A.5 8.2.5.B.1 8.2.5.B.3</p>	<p>1. Collaborate to design a solution to a problem affecting the community.</p> <p>2. Compare and contrast how technologies have changed over time due to human needs and economic, political and/or cultural influences.</p> <p>3. Collaborate with peers to illustrate components of a designed system.</p> <p>4. Identify and collect information about a problem that can be solved by technology.</p>	<p>LESSONS 1-3 Students explore level IV tools along with some special effects options to render 3D illustrations of self-designed life saving devices. (CTPS, LCS, CI)</p> <p>LESSONS 4- 8 Students continue with 3D rendering projects or use their knowledge of the program to create new illustrations/ compositions on any topic of their choice.</p> <p>EXTENSION/ ALTERNATE LESSONS: <i>Students will be asked to use at least four tools to complete their tasks. They will also be asked to explore other tools on their own, learn how to use them, and then share their knowledge with the rest of the class.</i> (CC)</p>	<p>DIAGNOSTIC (at unit's start) -informal survey</p> <p>FORMATIVE -anecdotal records -discussions -questioning -student responses -teacher observations</p> <p>SUMMATIVE -completed work -performance assessments of the activities described</p>	<p>JAN-MARCH</p> <p>3RD MP (8-10 classes)</p>
<p>A.(8.2) Creativity and Innovation ▪ <u>CONNECTIONS: TECH. AND OTHER FIELDS.</u> -compare/contrast changing technologies</p>					
<p>C.(8.2) Design ▪ <u>ATTRIBUTES OF DESIGN</u> -create a drawing of product with details</p>					

D.(8.2) Abilities of a Technological World ▪ <u>APPLY THE DESIGN PROCESS</u> <i>-identify a problem that tech. can solve</i>						
INTEGRATED COMPONENTS						
21ST CENTURY THEMES		Civic Literacy			Global Awareness	
		Financial, Economic, Business, and Entrepreneurial Literacy			Health Literacy	
21ST CENTURY SKILLS	X	Creativity and Innovation	X	Communication and Collaboration	X	Life and Career Skills
	X	Critical Thinking and Problem Solving		Information Literacy		Media Literacy
INTERDISCIPLINARY CONNECTIONS ELA: SL.4.1.b, SL4.1.c, SL4.1.d, SL4.5 ART: 1.3.5.D.1, 1.3.5.D.4, 1.3.5.D.5 SCIENCE: 3-5-ETS1-1, 3-5-ETS1-2, 3-5-ETS1-3						
INTEGRATION OF TECHNOLOGY	THROUGHOUT ALL UNITS					
RESOURCES	For Teachers -computer, timer		For Students -SMART board, computer, internet, Adobe Photoshop			
DIFFERENTIATION	Modifications for Special Ed./504 students -comply with all IEPs and 504s -provide extra time		Modifications for EL students -assign "buddy" -provide extended time on activities		Modifications for Gifted students -provide opportunity to explore advanced features in Adobe Photoshop	

SUBJECT AREA: TECHNOLOGY- STEM					
GRADE LEVEL: 4		BRIEF SUMMARY OF UNIT: Students continue to explore the core concepts of computer programming by using a visual-based language to solve problems, build programs while gaining knowledge of and applying the logic of programming. Students will create programs with loops, events, and conditionals with more complex algorithms. They will also have the opportunity to program a virtual robot (<i>robomindacademy.com</i>), using these same programming skills.			
UNIT 4: COMPUTER PROGRAMMING: LEVEL IV					
CONTENT/OBJECTIVE	STANDARDS	SKILLS – SWBAT	SUGGESTED ACTIVITIES	SUGGESTED ASSESSMENTS	TIME FRAME

<p>A. Technology Operations & Concepts ▪ <u>SELECT AND USE APPLICATIONS</u> -online application: code.org -online application: scratch.mit.edu</p>	<p>8.1.5.A.4 8.1.5.E.1 8.2.5.D.3 8.2.5.E.1 8.2.5.E.2 8.2.5.E.3 8.2.5.E.4</p>	<p>1. Identify how computer programming impacts our everyday lives.</p> <p>2. Demonstrate an understanding of how a computer takes input of data, processes and stores the data through a series of commands, and outputs information.</p>	<p>LESSONS 1-2 Using and modifying prebuilt procedures in the Artist environment, students gain familiarity with how code is written for functions.</p> <p>LESSONS 3- 5 Students write programs with conditional statements. Students work with more complex implementations of conditionals. (CTPS, LCS)</p> <p>LESSONS 6- 8 Students use the Mini-Studio environment to create their own interactive stories. (CI, CC)</p>	<p>DIAGNOSTIC (at unit's start) -informal survey</p> <p>FORMATIVE -anecdotal records -discussions -questioning -student responses -teacher observations</p> <p>SUMMATIVE -completed work -performance assessments of the activities described</p>	<p>APRIL-JUNE 4TH MP (8-10 classes)</p>
<p>E. Research and Information Fluency ▪ <u>PLAN STRATEGIES TO GUIDE INQUIRY</u> -using online tools as resources</p>		<p>3. Using a simple, visual programming language, create a program using loops, events and procedures to generate specific output.</p>			
<p>E.(8.2) Computational Thinking ▪ <u>COMPUTER PROGRAMMING</u> -Identify impact of programming -understand and use input commands -create algorithms using commands -use visual programming language</p>		<p>4. Debug an algorithm (i.e., correct an error).</p>			

INTEGRATED COMPONENTS

<p>21ST CENTURY THEMES</p>	<p>Civic Literacy</p>	<p>Global Awareness</p>
	<p>Financial, Economic, Business, and Entrepreneurial Literacy</p>	<p>Health Literacy</p>

<p>21ST CENTURY SKILLS</p>	<p>X Creativity and Innovation</p>	<p>X Communication and Collaboration</p>	<p>X Life and Career Skills</p>
	<p>X Critical Thinking and Problem Solving</p>	<p>Information Literacy</p>	<p>Media Literacy</p>

INTERDISCIPLINARY CONNECTIONS ELA: L.4.6, SL.4.1.b, SL4.1.c, SL4.1.d, SL.4.5 **MATH:** 4.NBT.B.4, 4.OA.A.3, 4.OA.C.5 **SCIENCE:** 3-5-ETS1-2

<p>INTEGRATION OF TECHNOLOGY</p>	<p>THROUGHOUT ALL UNITS</p>	
<p>RESOURCES</p>	<p>For Teachers -computer, timer</p>	<p>For Students -SMART board, computer, internet, visual-based coding language resources (e.g. code.org, khan academy, Tynker, LightBot, Scratch.org, robomindacademy)</p>

DIFFERENTIATION	Modifications for Special Ed./504 students -comply with all IEPs and 504s -provide extra time	Modifications for EL students -assign “buddy” -provide extended time on activities	Modifications for Gifted students -build games and programs, using text based programming languages
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SUBJECT AREA: TECHNOLOGY- STEM

GRADE LEVEL: 5	BRIEF SUMMARY OF UNIT: Students explore and apply the more advanced structuring and design features of Google Sites to create their 5 th grade websites, which will also serve as their e-portfolios. Applying self-created themes and templates to construct the webpage layouts, students will deepen their understanding of the process of styling webpages and structuring them for content.
UNIT 1: GOOGLE SITES: E-PORTFOLIO	

CONTENT/OBJECTIVE	STANDARDS	SKILLS – SWBAT	SUGGESTED ACTIVITIES	SUGGESTED ASSESSMENTS	TIME FRAME
<p style="text-align: center;">A.</p> <p>Technology Operations & Concepts ▪ <u>SELECT AND USE APPLICATIONS</u> --GAFE-SITES, Adobe Photoshop CS5 -Use formatting to enhance work</p>	8.1.5.A.1 8.1.5.A.4 8.1.5.B.1 8.1.5.B.5 8.2.5.B.5 8.2.5.D.5	<ol style="list-style-type: none"> Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems. Graph data using a spreadsheet, analyze and produce a report that explains the analysis of the data. Create original works as a means of personal or group expression. Use digital tools to research using print and non-print electronic information sources to complete a variety of tasks. 	<p>LESSONS 1-3 Students use Adobe Photoshop to create background designs, logos, header and other images for styling their websites. Students will use these works as themes and templates for their Google Sites Websites. (CTPS, IL)</p> <p>LESSONS 4- 8 Students continue to structure and design their websites to function as e portfolios. Using guidelines and check off lists of required elements, students set up webpages, navigation menus, and folder systems. Students begin to document this process on dedicated webpages of their websites. (CI, LCS)</p>	<p>DIAGNOSTIC (at unit’s start) -informal survey</p> <p>FORMATIVE -anecdotal records -discussions -questioning -student responses -teacher observations</p> <p>SUMMATIVE -completed work -performance assessments of the activities described</p>	SEPT.-NOV. 1st MP (8-10 classes)
<p style="text-align: center;">E.</p> <p>Research and Information Fluency ▪ <u>APPLY DIGITAL TOOLS TO GATHER/USE INFO</u> -evaluate and select info sources</p>					
<p style="text-align: center;">D.(8.2)</p> <p>Abilities of a Technological World ▪ <u>USE/ MAINTAIN TECH PRODUCTS & SYST.</u> -monitoring human-design system -describing how resources are used in tech.</p>					

INTEGRATED COMPONENTS

21ST CENTURY THEMES	Civic Literacy	Global Awareness
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		Financial, Economic, Business, and Entrepreneurial Literacy		Health Literacy
21ST CENTURY SKILLS	X	Creativity and Innovation	Communication and Collaboration	X Life and Career Skills
	X	Critical Thinking and Problem Solving	X Information Literacy	Media Literacy
INTERDISCIPLINARY CONNECTIONS ELA: SL.5.1.a, SL.5.1.b, SL5.1.c, SL5.1.d, SL.5.5 ART: 1.3.5.D.1, 1.3.5.D.4, 1.3.5.D.5				
INTEGRATION OF TECHNOLOGY	THROUGHOUT ALL UNITS			
RESOURCES	For Teachers -computer, timer		For Students -SMART board, computer, internet, Google Apps for Education, Google Sites	
DIFFERENTIATION	Modifications for Special Ed./504 students -comply with all IEPs and 504s -provide extra time		Modifications for EL students -assign "buddy" -provide extended time on activities	Modifications for Gifted students -use basic html and CSS in creating website

SUBJECT AREA: TECHNOLOGY- STEM					
GRADE LEVEL: 5		BRIEF SUMMARY OF UNIT: Students use GAFE application, Slides, and GAFE word processing application, Docs, to create presentations and documents on any topic of their choice. This will be content for their websites, e-portfolios, and the optional video productions project.			
UNIT 2: CREATING CONTENT FOR WEBSITE, E-PORTFOLIOS AND (OPTIONAL) VIDEO PRODUCTIONS					
CONTENT/OBJECTIVE	STANDARDS	SKILLS – SWBAT	SUGGESTED ACTIVITIES	SUGGESTED ASSESSMENTS	TIME FRAME
A. Technology Operations & Concepts ▪ <u>SELECT AND USE APPLICATIONS</u> <i>--GAFE-SITES, Spreadsheet, Slides, Docs, Draw, Forms</i> <i>-Use formatting to enhance work</i>	8.1.5.A.3 8.1.5.A.5 8.1.5.A.6 8.1.5.B.1 8.1.5.E.1 8.2.5.B.6 8.2.5.C.6 8.2.5.C.7	1. Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems. 2. Graph data using a spreadsheet, analyze and produce a report that explains the analysis of the data.	<u>LESSONS 1-3</u> Students research any topic of their choice and document their finding, using GAFE. Students will be required to use all the basic applications: Docs, Draw, Sheets, and Slides to complete their projects. (IL, CTPS) <u>LESSONS 4- 8</u> Students will continue with the	<u>DIAGNOSTIC</u> (at unit's start) -informal survey <u>FORMATIVE</u> -anecdotal records -discussions -questioning -student responses	SEPT.-NOV. 1st MP (8-10 classes)

<p>E. Research and Information Fluency ▪ <u>APPLY DIGITAL TOOLS TO GATHER/USE INFO</u> -evaluate and select info sources</p>		<p>3. Create original works as a means of personal or group expression.</p> <p>4. Use digital tools to research using print and non-print electronic information sources to complete a variety of tasks.</p>	<p>projects and document the process on Google Sites. Students will also be being to add relevant gadgets and widgets to supplement/ compliment the contents of their webpages.</p> <p>EXTENSION/ ALTERNATE LESSONS: <i>Students will have the option to use any of the contents created in GAFE for their e portfolios for the optional video productions project. (CI, CC, IL, LCS)</i></p>	<p>-teacher observations</p> <p>SUMMATIVE -completed work -performance assessments of the activities described</p>	
<p>D.(8.2) Abilities of a Technological World ▪ <u>USE/ MAINTAIN TECH PRODUCTS & SYST.</u> -monitoring human-design system -describing how resources are used in tech.</p>					

INTEGRATED COMPONENTS

<p>21ST CENTURY THEMES</p>	<p>Civic Literacy</p>	<p>Global Awareness</p>
	<p>Financial, Economic, Business, and Entrepreneurial Literacy</p>	<p>Health Literacy</p>

<p>21ST CENTURY SKILLS</p>	<p>X Creativity and Innovation</p>	<p>X Communication and Collaboration</p>	<p>X Life and Career Skills</p>
	<p>X Critical Thinking and Problem Solving</p>	<p>Information Literacy</p>	<p>Media Literacy</p>

INTERDISCIPLINARY CONNECTIONS ELA: SL.5.1.a, SL.5.1.b, SL5.1.c, SL5.1.d, SL.5.5 **ART:** 1.3.5.D.1, 1.3.5.D.4, 1.3.5.D.5

<p>INTEGRATION OF TECHNOLOGY</p>	<p>THROUGHOUT ALL UNITS</p>		
<p>RESOURCES</p>	<p>For Teachers -computer, timer</p>	<p>For Students -SMART board, computer, internet, Google Apps for Education, Google Sites</p>	
<p>DIFFERENTIATION</p>	<p>Modifications for Special Ed./504 students -comply with all IEPs and 504s -provide extra time</p>	<p>Modifications for EL students -assign "buddy" -provide extended time on activities</p>	<p>Modifications for Gifted students -write scripts for CAS Video Production Project</p>

SUBJECT AREA: TECHNOLOGY- STEM

GRADE LEVEL: 5		BRIEF SUMMARY OF UNIT: Students explore Level V features (<i>advanced image editing and animation</i>) of Adobe Photoshop CS5 and practice using the engineering design process by brainstorming new technology devices created from recycle materials and rendering the 3D prototype illustrations on Adobe Photoshop. Students will have the option to work on their prototypes for the duration of the unit or create new compositions on any topic of their choice.				
UNIT 3: ADOBE PHOTOSHOP: LEVEL V/ INTRODUCTION TO CAMTASIA						
CONTENT/OBJECTIVE	STANDARDS	SKILLS – SWBAT	SUGGESTED ACTIVITIES	SUGGESTED ASSESSMENTS	TIME FRAME	
<p>A. Technology Operations & Concepts ▪ <u>SELECT AND USE APPLICATIONS</u> <i>-Adobe Photoshop CS: animation</i></p>	<p>8.1.5.A.3 8.1.5.B.1 8.1.5.C.1 8.1.5.D.4 8.1.5.E.1</p>	<p>1. Collaborate to design a solution to a problem affecting the community.</p> <p>2. Compare and contrast how technologies have changed over time due to human needs and economic, political and/or cultural influences.</p> <p>3. Collaborate with peers to illustrate components of a designed system.</p> <p>4. Identify and collect information about a problem that can be solved by technology.</p>	<p>LESSONS 1-3 Students explore level V tools along with some special effects options to render 3D illustrations of self-designed life saving devices. (CI, IL, CTPS)</p> <p>LESSONS 4- 8 Students continue with 3D rendering projects or use their knowledge of the program to create new illustrations/compositions on any topic of their choice.</p> <p>EXTENSION/ ALTERNATE LESSONS: <i>Students will be given the opportunity to work on the CAS Video Productions Project. Using GAFE, Adobe Photoshop, Camtasia, and other programs, students plan, write, film, edit, and produce videos on any topic of their choice. (CC, LCS)</i></p>	<p>DIAGNOSTIC (at unit's start) -informal survey</p> <p>FORMATIVE -anecdotal records -discussions -questioning -student responses -teacher observations</p> <p>SUMMATIVE -completed work -performance assessments of the activities described</p>	<p>JAN-MARCH</p> <p>3RD MP (8-10 classes)</p>	
<p>A.(8.2) Creativity and Innovation ▪ <u>CONNECTIONS: TECH. AND OTHER FIELDS.</u> <i>-compare/contrast changing technologies</i></p>	<p>8.2.5.A.3 8.2.5.A.5 8.2.5.B.1 8.2.5.B.3</p>					
<p>C.(8.2) Design ▪ <u>ATTRIBUTES OF DESIGN</u> <i>-create a drawing of product with details</i></p>						
<p>D.(8.2) Abilities of a Technological World ▪ <u>APPLY THE DESIGN PROCESS</u> <i>-identify a problem that tech. can solve</i></p>						
INTEGRATED COMPONENTS						
21ST CENTURY THEMES		Civic Literacy			Global Awareness	
		Financial, Economic, Business, and Entrepreneurial Literacy			Health Literacy	
21ST CENTURY SKILLS	X	Creativity and Innovation	X	Communication and Collaboration	X	Life and Career Skills
	X	Critical Thinking and Problem Solving	X	Information Literacy		Media Literacy

INTERDISCIPLINARY CONNECTIONS ELA: SL.5.1.a, SL.5.1.b, SL5.1.c, SL5.1.d, SL.5.5 ART: 1.3.5.D.1, 1.3.5.D.4, 1.3.5.C.1 SCIENCE: 3-5-ETS1-1, 3-5-ETS1-2, 3-5-ETS1-3			
INTEGRATION OF TECHNOLOGY	THROUGHOUT ALL UNITS		
RESOURCES	For Teachers -computer, timer	For Students -SMART board, computer, internet, MS Word	
DIFFERENTIATION	Modifications for Special Ed./504 students -comply with all IEPs and 504s -provide extra time	Modifications for EL students -assign "buddy" -provide extended time on activities	Modifications for Gifted students -use Camtasia to create backgrounds for videos

SUBJECT AREA: TECHNOLOGY- STEM					
GRADE LEVEL: 5		BRIEF SUMMARY OF UNIT: Using visual-based and some basic text-based computer programming languages, students continue to explore the core concepts of computer programming by applying the programming process of: defining the problem, planning the solution, coding the program, testing the program, and documenting the program to create animations, interactive game and programs for sharing and collaboration. They will also have the opportunity to apply their programming skills to build IOS or Android mobile apps, using the LightBot or AppInventor online resources.			
UNIT 4: COMPUTER PROGRAMMING: LEVEL V					
CONTENT/OBJECTIVE	STANDARDS	SKILLS – SWBAT	SUGGESTED ACTIVITIES	SUGGESTED ASSESSMENTS	TIME FRAME
A. Technology Operations & Concepts ▪ <u>SELECT AND USE APPLICATIONS</u> <i>-online application: code.org</i> <i>-online application: scratch.mit.edu</i>	8.1.5.A.4 8.1.5.E.1 8.2.5.D.3 8.2.5.E.1 8.2.5.E.2 8.2.5.E.3 8.2.5.E.4	1. Identify how computer programming impacts our everyday lives. 2. Demonstrate an understanding of how a computer takes input of data, processes and stores the data through a series of commands, and outputs information. 3. Using a simple, visual programming language, create a program using loops, events and procedures to generate specific output.	LESSONS 1-5 Students will use Scratch.org to build their knowledge of visual programming. They will create interactive stories, animations, and programs. Students will also have the opportunity to use text-based program languages with scaffolding lessons in the computer programming tutorial and project pages of Khan Academy. (CTPS) LESSONS 6- 8 Using both visual and text-based languages, students have the opportunity to create their own apps, using the "Apps Building" activity/projects section of code.org. (CI)	DIAGNOSTIC (at unit's start) -informal survey FORMATIVE -anecdotal records -discussions -questioning -student responses -teacher observations SUMMATIVE -completed work -performance assessments of the activities described	APRIL.-JUNE 4TH MP (8-10 classes)
E. Research and Information Fluency ▪ <u>PLAN STRATEGIES TO GUIDE INQUIRY</u> -using online tools as resources					

<p>E.(8.2) Computational Thinking</p> <ul style="list-style-type: none"> ▪ COMPUTER PROGRAMMING -Identify impact of programming -understand and use input commands -create algorithms using commands -use visual programming language 		<p>4. Debug an algorithm (i.e., correct an error).</p>	<p>EXTENSION/ ALTERNATE LESSONS: Students will be given the opportunity to join the Scratch online community of student programmers for feedback on program that they create and post for sharing and collaboration. (GA, CC, IL)</p>		
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INTEGRATED COMPONENTS

21ST CENTURY THEMES	Civic Literacy	X	Global Awareness
	Financial, Economic, Business, and Entrepreneurial Literacy		Health Literacy

21ST CENTURY SKILLS	X	Creativity and Innovation	X	Communication and Collaboration	X	Life and Career Skills
	X	Critical Thinking and Problem Solving	X	Information Literacy		Media Literacy

INTERDISCIPLINARY CONNECTIONS **ELA:** SL.5.1.a, SL.5.1.b, SL5.1.c, SL5.1.d, L.5.6 **MATH:** 5.OA.A.1, 5.OA.B.3, 5.NBT.B.5 **SCIENCE:** 3-5-ETS1-2

INTEGRATION OF TECHNOLOGY	THROUGHOUT ALL UNITS				
RESOURCES	For Teachers -computer, timer	For Students -SMART board, computer, internet, online coding resources			
DIFFERENTIATION	Modifications for Special Ed./504 students -comply with all IEPs and 504s -provide extra time	Modifications for EL students -assign “buddy” -provide extended time on activities	Modifications for Gifted students -use Applinventor to create own mobile apps -use text-based programming languages		

SUBJECT AREA: TECHNOLOGY- STEM

GRADE LEVEL: 6	BRIEF SUMMARY OF UNIT:
UNIT 1: GOOGLE SITES: E-PORTFOLIO	Students explore and apply the more advanced structuring and design features of Google Sites to create their 6 th grade websites, which will also serve as their e-portfolios. Applying self-created themes and templates to construct the webpage layouts, students will deepen their understanding of the process of styling webpages and

		structuring them for content.				
CONTENT/OBJECTIVE	STANDARDS	SKILLS – SWBAT	SUGGESTED ACTIVITIES	SUGGESTED ASSESSMENTS	TIME FRAME	
<p>A. Technology Operations & Concepts ▪ <u>SELECT AND USE APPLICATIONS</u> <i>--GAFE-SITES, Spreadsheet, Slides, Docs, Draw, Form</i></p>	8.1.8.A.1 8.1.8.A.2 8.1.8.B.1 8.1.8.D.3 8.2.8.D.4 8.2.8.D.5	1. Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems. 2. Create a document (e.g. newsletter, reports, personalized learning plan, business letters or flyers) using one or more digital applications. 3. Create original works as a means of personal or group expression. 4. Use digital tools to research using print and non-print electronic information sources to complete a variety of tasks.	<p>LESSONS 1-3 Students use Adobe Photoshop to create background designs, logos, header and other images for styling their websites. Students will use these works as themes and templates for their Google Sites Websites. (CI)</p> <p>LESSONS 4- 8 Students continue to structure and design their websites to function as e portfolios. Using guidelines and check off lists of required elements, students set up webpages, navigation menus, and folder systems. Students begin to document this process on dedicated webpages of their websites.(CC, CI, LCS)</p>	<p>DIAGNOSTIC (at unit's start) -informal survey</p> <p>FORMATIVE -anecdotal records -discussions -questioning -student responses -teacher observations</p> <p>SUMMATIVE -completed work -performance assessments of the activities described</p>	SEPT.-NOV. 1st MP (8-10 classes)	
<p>B. Creativity and Innovation ▪ <u>SYNTHESIZE AND PUBLISH INFORMATION</u> -on local event/issues on website</p>						
<p>D.(8.2) Digital Citizenship ▪ <u>PERSONAL RESPONSIBILITY FOR LEARNING</u> -demonstrate understanding of fair use Creative Commons to intellectual property.</p>						
INTEGRATED COMPONENTS						
21ST CENTURY THEMES		Civic Literacy		Global Awareness		
		Financial, Economic, Business, and Entrepreneurial Literacy		Health Literacy		
21ST CENTURY SKILLS	X	Creativity and Innovation	X	Communication and Collaboration	X	Life and Career Skills
		Critical Thinking and Problem Solving		Information Literacy		Media Literacy
INTERDISCIPLINARY CONNECTIONS ELA: SL.6.1.a, SL.6.1.b, SL6.1.c, SL6.1.d, SL.6.5 ART: 1.3.8.D.1, 1.3.8.D.2, 1.3.8.D.6						
INTEGRATION OF TECHNOLOGY	THROUGHOUT ALL UNITS					

RESOURCES	For Teachers -computer, timer	For Students -SMART board, computer, internet, MS Word	
DIFFERENTIATION	Modifications for Special Ed./504 students -comply with all IEPs and 504s and 504s -provide extra time	Modifications for EL students -assign "buddy" -provide extended time on activities	Modifications for Gifted students -use basic html and CSS in creating website

SUBJECT AREA: TECHNOLOGY- STEM					
GRADE LEVEL: 6		BRIEF SUMMARY OF UNIT: Students use GAPE application, Slides, and GAPE word processing application, Docs, to create presentations and documents on any topic of their choice. The work produced will serve as contents for their websites, e-portfolios, and the optional video productions project.			
UNIT 2: CREATING CONTENT FOR WEBSITE, E-PORTFOLIOS AND (OPTIONAL) VIDEO PRODUCTIONS					
CONTENT/OBJECTIVE	STANDARDS	SKILLS – SWBAT	SUGGESTED ACTIVITIES	SUGGESTED ASSESSMENTS	TIME FRAME
<p>A. Technology Operations & Concepts ▪ <u>UNDERSTAND AND USE TECH. SYSTEMS</u> --GAPE-SITES, Spreadsheet, Slides, Docs, Draw, Forms</p> <p>▪ <u>SELECT AND USE APPLICATIONS</u> -Use formatting to enhance work</p>	<p>8.1.8.A.1 8.1.8.A.4 8.1.8.B.1</p> <p>8.2.8.A.1 8.2.8.B.5 8.2.8.D.1</p>	<p>1. Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.</p> <p>2. Graph data using a spreadsheet, analyze and produce a report that explains the analysis of the data.</p> <p>3. Create original works as a means of personal or group expression.</p> <p>4. Use digital tools to research using print and non-print electronic information sources to complete a variety of tasks.</p>	<p>LESSONS 1-3 Students research any topic of their choice and document their finding, using GAPE. Students will be required to use all the basic applications: Docs, Draw, Sheets, and Slides to complete their projects. (CTPS, IL)</p> <p>LESSONS 4- 8 Students will continue with the projects and document the process on Google Sites. Students will also being to add relevant gadgets and widgets to supplement/ compliment the contents of their webpages. (CC, CI, LCS)</p>	<p>DIAGNOSTIC (at unit's start) -informal survey</p> <p>FORMATIVE -anecdotal records -discussions -questioning -student responses -teacher observations</p> <p>SUMMATIVE -completed work -performance assessments of the activities described</p>	<p>SEPT.-NOV.</p> <p>1st MP (8-10 classes)</p>
<p>E. Research and Information Fluency ▪ <u>APPLY DIGITAL TOOLS TO GATHER/USE INFO</u> -evaluate and select info sources</p>					
<p>D.(8.2) Abilities of a Technological World ▪ <u>USE/ MAINTAIN TECH PRODUCTS & SYST.</u> -monitoring human-design system -describing how resources are used in tech.</p>					

INTEGRATED COMPONENTS

21ST CENTURY THEMES		Civic Literacy		Global Awareness		
		Financial, Economic, Business, and Entrepreneurial Literacy		Health Literacy		
21ST CENTURY SKILLS	X	Creativity and Innovation	X	Communication and Collaboration	X	Life and Career Skills
	X	Critical Thinking and Problem Solving	X	Information Literacy		Media Literacy
INTERDISCIPLINARY CONNECTIONS ELA: SL.6.1.a, SL.6.1.b, SL6.1.c, SL6.1.d, SL.6.5 ART: 1.3.8.D.1, 1.3.8.D.2, 1.3.8.D.6, 1.3.8.C.1, 1.3.8.C.2						
INTEGRATION OF TECHNOLOGY	THROUGHOUT ALL UNITS					
RESOURCES	For Teachers -computer, timer		For Students -SMART board, computer, internet, MS Word			
DIFFERENTIATION	Modifications for Special Ed./504 students -comply with all IEPs and 504s -provide extra time		Modifications for EL students -assign "buddy" -provide extended time on activities		Modifications for Gifted students - write scripts for CAS Video Production Project	

SUBJECT AREA: TECHNOLOGY- STEM

GRADE LEVEL: 6		BRIEF SUMMARY OF UNIT: Students explore Level VI features (<i>masking and video editing tools</i>) of Adobe Photoshop CS5 and TechSmith Camtasia software and practice using the engineering design process by brainstorming any new technology devices and rendering the 3D prototype illustrations on Adobe Photoshop. Students will have the option to work on their prototypes for the duration of the unit or create new compositions on any topic of their choice			
UNIT 3: ADOBE PHOTOSHOP: LEVEL VI/ CAMTASIA					
CONTENT/OBJECTIVE	STANDARDS	SKILLS – SWBAT	SUGGESTED ACTIVITIES	SUGGESTED ASSESSMENTS	TIME FRAME
A. Technology Operations & Concepts ▪ <u>SELECT AND USE APPLICATIONS</u>	8.1.8.C.1 8.2.5.C.1 8.2.5.E.2 8.2.5.E.3	1. Interact, collaborate, and publish with peers, experts, or others by employing a variety of digital environments and media.	LESSONS 1-3 Students explore level V tools along with some special effects options to render 3D illustrations of self-designed life saving devices. (CI,	DIAGNOSTIC (at unit's start) -informal survey FORMATIVE	JAN-MARCH 3RD MP (8-10 classes)

-Adobe Photoshop CS: animation	8.2.5.E.4	<p>2. Compare and contrast how technologies have changed over time due to human needs and economic, political and/or cultural influences.</p> <p>3. Collaborate with peers to illustrate components of a designed system.</p> <p>4. Identify and collect information about a problem that can be solved by technology.</p>	<p>CTPS)</p> <p>LESSONS 4- 8 Students continue with 3D rendering projects or use their knowledge of the program to create new illustrations/ compositions on any topic of their choice.</p> <p>EXTENSION/ ALTERNATE LESSONS: <i>Students will be given the opportunity to work on the CAS Video Productions Project. Using GAFE, Adobe Photoshop, Camtasia, and other programs, students plan, write, film, edit, and produce videos on any topic of their choice. (CC, IL, LCS)</i></p>	<p>-anecdotal records -discussions -questioning -student responses -teacher observations</p> <p>SUMMATIVE -completed work -performance assessments of the activities described</p>
<p>A.(8.2) Creativity and Innovation</p> <p>▪ <u>CONNECTIONS: TECH, AND OTHER FIELDS.</u> -compare/contrast changing technologies</p>				
<p>C.(8.2) Design</p> <p>▪ <u>ATTRIBUTES OF DESIGN</u> -create a drawing of product with details</p>				
<p>D.(8.2) Abilities of a Technological World ▪ <u>APPLY THE DESIGN PROCESS</u> -identify a problem that tech. can solve</p>				

INTEGRATED COMPONENTS

21ST CENTURY THEMES	Civic Literacy	Global Awareness
	Financial, Economic, Business, and Entrepreneurial Literacy	Health Literacy

21ST CENTURY SKILLS	X	Creativity and Innovation	X	Communication and Collaboration	X	Life and Career Skills
	X	Critical Thinking and Problem Solving	X	Information Literacy		Media Literacy

INTERDISCIPLINARY CONNECTIONS ELA: SL.6.1.a, SL.6.1.b, SL.6.1.c, SL.6.1.d, SL.6.5 **ART:** 1.3.8.D.1, 1.3.8.D.2, 1.3.8.D.6, 1.3.8.C.1, 1.3.8.C.2 **SCIENCE:** MS-ETS1-1

INTEGRATION OF TECHNOLOGY	THROUGHOUT ALL UNITS		
RESOURCES	<p>For Teachers -computer, timer</p>	<p>For Students -SMART board, computer, internet, MS Word</p>	
DIFFERENTIATION	<p>Modifications for Special Ed./504 students -comply with all IEPs and 504s -provide extra time</p>	<p>Modifications for EL students -assign “buddy” -provide extended time on activities</p>	<p>Modifications for Gifted students -practice video editing with TechSmith Camtasia software</p>

SUBJECT AREA: TECHNOLOGY- STEM

GRADE LEVEL: 6		BRIEF SUMMARY OF UNIT: Using visual-based and basic text-based computer programming languages, students explore the core concepts of computer programming by applying the programming process to create animations, interactive game and programs for sharing and collaboration. They will also have the opportunity to apply their programming skills to build IOS or Android mobile apps, using the ApplInventor online resources, practice more complex coding skills in a 3D environment with The Alice Project (alice.org), and take introductory courses in other programming languages such as Python (groklearning.com) and Ruby (kidsruby.com).			
UNIT 4: COMPUTER PROGRAMMING: LEVEL VI					
CONTENT/OBJECTIVE	STANDARDS	SKILLS – SWBAT	SUGGESTED ACTIVITIES	SUGGESTED ASSESSMENTS	TIME FRAME
<p style="text-align: center;">A.</p> <p>Technology Operations & Concepts ▪ <u>SELECT AND USE APPLICATIONS</u></p> <ul style="list-style-type: none"> -online application: code.org -online application: scratch.mit.edu -online application: madewithcode.com -online application: khanacademy.org 	8.1.8.A.4 8.1.8.D.1 8.2.8.E.1 8.2.8.E.2 8.2.8.E.3 8.2.8.E.4	1. Identify ways computers are used that have had an impact across the range of human activity and within different careers where they are used. 2. Demonstrate an understanding of the relationship between hardware and software.. 3. Develop an algorithm to solve an assigned problem using a specified set of commands and use peer review to critique the solution. 4. Use appropriate terms in conversation (e.g., programming, language, data, RAM, ROM, Boolean logic terms).	<p><u>LESSONS 1-5</u></p> Students use the Mini-Studio environment to create their own interactive games and activities. Students will also have the opportunity to use text-based program languages with scaffolding lessons in the computer programming tutorial and project pages of Khan Academy. (CTPS,IL)	<p><u>DIAGNOSTIC</u> (at unit's start) -informal survey</p> <p><u>FORMATIVE</u></p> <ul style="list-style-type: none"> -anecdotal records -discussions -questioning -student responses -teacher observations <p><u>SUMMATIVE</u></p> <ul style="list-style-type: none"> -completed work -performance assessments of the activities described 	<p>APRIL.-JUNE</p> <p>4TH MP (8-10 classes)</p>
<p style="text-align: center;">D.</p> <p style="text-align: center;">Digital Citizenship</p> <p>▪ <u>PRACTICE RESPONSIBLE USE OF INFO</u> -model appropriate online behavior</p>			<p><u>LESSONS 6- 8</u></p> Using both visual and text-based languages, students have the opportunity to create their own apps, using the “Apps Building” activity/projects section of code.org. (CI, LCS)		
<p style="text-align: center;">E.(8.2)</p> <p style="text-align: center;">Computational Thinking</p> <p>▪ <u>COMPUTER PROGRAMMING</u></p> <ul style="list-style-type: none"> -Identify impact of computers in careers -understand hardware/software -develop algorithms using commands -use appropriate terms in conversation 			<p><u>EXTENSION/ ALTERNATE LESSONS:</u></p> Students will be given the opportunity to join the Scratch online community of student programmers for feedback on program that they create and post for sharing and collaboration. (GA, CC)		
INTEGRATED COMPONENTS					
21ST CENTURY THEMES		Civic Literacy		X	Global Awareness
		Financial, Economic, Business, and Entrepreneurial Literacy			Health Literacy

21ST CENTURY SKILLS	X	Creativity and Innovation	X	Communication and Collaboration	X	Life and Career Skills
	X	Critical Thinking and Problem Solving	X	Information Literacy		Media Literacy
INTERDISCIPLINARY CONNECTIONS ELA: SL.6.1.a, SL.6.1.b, SL6.1.c, SL6.1.d MATH: 6.EE.A.2, 6.NS.5 -8, MP.1-5						
INTEGRATION OF TECHNOLOGY	THROUGHOUT ALL UNITS					
RESOURCES	For Teachers -computer, timer		For Students -SMART board, computer, internet, MS PowerPoint			
DIFFERENTIATION	Modifications for Special Ed./504 students -comply with all IEPs and 504s -provide extra time		Modifications for EL students -assign "buddy" -provide extended time on activities		Modifications for Gifted students -use text-based programming languages to build IOS or Android mobile apps	