SUBJECT: Design and Animation	GRADE: 8
Unit Title: Creating Drawings	**Time Frame: 9 Days**
UNIT OVERVIEW	
Within this unit students will learn how to create drawings and shapes with colors and opacity.	
LRG SKILLS AND DISPOSITIONS	**PA STANDARDS**
Creativity and Innovation: Unit 1 Challenge Exercise (S3B)	**1A-AP-14:** Debug (identify and fix) errors in an algorithm or program that includes sequences and simple loops. **2-AP-13:** Decompose problems and subproblems into parts to facilitate the design, implementation, and review of programs. **2-AP-17:** Systematically test and refine programs using a range of test cases.
COMPETENCIES	**LEARNING TARGETS**
I can code a program to express an idea or solve a problem.	• I can understand the purpose and outcome of a program. (K1CSA1I2)
I can navigate various digital devices as a tool.	• I can gather and use data (K1CSA3I1)
I can approach a challenge with computational thinking.	• I can change and improve code that already exists. (K1CSA2I3) • I can use the iterative process to solve a problem. (K1CSA2I1)

SUBJECT: Design and Animation	GRADE: 8
Unit Title: Functions, Mouse Events, and Properties	**Time Frame: 7 Days**
UNIT OVERVIEW	
Within this unit students will learn how to use functions, onMousePress and onMouseRelease events and other shape properties.	
LRG SKILLS AND DISPOSITIONS	**PA STANDARDS**
Critical Thinking and Problem-Solving: Bouncing Ball (S4B)	**1A-AP-14:** Debug (identify and fix) errors in an algorithm or program that includes sequences and simple loops. **1B-AP-08:** Compare and refine multiple algorithms for the same task and determine which is the most appropriate. **1B-AP-10:** Create programs that include sequences, events, loops, and conditionals. **2A-AP-13:** Decompose problems and subproblems into parts to facilitate the design, implementation, and review of programs. **2-AP-17:** Systematically test and refine programs using a range of test cases. **3A-AP-16:** Design and iteratively develop computational artifacts for practical intent, personal expression, or to address a societal issue by using events to initiate instructions. **3A-AP-21:** Evaluate and refine computational artifacts to make them more usable and accessible.
COMPETENCIES	**LEARNING TARGETS**

I can navigate various digital devices as a tool.	• I can gather and use data (K1CSA3I1)
I can code a program to express an idea or solve a problem	• I can use a variety of variables to store and recall different values. (K1CSA1I3)
I can approach a challenge with computational thinking.	• I can use the iterative process to solve a problem. (K1CSA2I1)

SUBJECT: Design and Animation	**GRADE: 8**
Unit Title: Mouse Motion Events, Conditionals, and Helper Functions	**Time Frame: 8 Days**
UNIT OVERVIEW	
Within this unit students will learn how to use onMouseMove and onMouse Drag events, conditionals, and helper functions.	
LRG SKILLS AND DISPOSITIONS	**PA STANDARDS**
Critical Thinking and Problem-Solving: Breakfast (S4B)	**1A-AP-14:** Debug (identify and fix) errors in an algorithm or program that includes sequences and simple loops. **1B-AP-08:** Compare and refine multiple algorithms for the same task and determine which is the most appropriate. **1B-AP-10:** Create programs that include sequences, events, loops, and conditionals. **2-AP-12:** Design and iteratively develop programs that combine control structures, including nested loops and compound conditionals. **2-AP-13:** Decompose problems and subproblems into parts to facilitate the design, implementation, and review of programs. **2-AP-17:** Systematically test and refine programs using a range of test cases. **3A-AP-16:** Design and iteratively develop computational artifacts for practical intent, personal expression, or to address a societal issue by using events to initiate instructions. **3A-AP-21:** Evaluate and refine computational artifacts to make them more usable and accessible. **3A-AP-23:** Document design decisions using text, graphics, presentations, and/or demonstrations in the development of complex programs.
COMPETENCIES	**LEARNING TARGETS**
I can code a program to express an idea or solve a problem.	• I can understand the purpose and outcome of a program. (K1CSA1I2)
I can navigate various digital devices as a tool.	• I can design and develop a mobile application. (K1CSA3I2)
I can approach a challenge with computational thinking.	• I can use the iterative process to solve a problem. (K1CSA2I1)

SUBJECT: Design and Animation	**GRADE: 8**
Unit Title: More Conditionals, Key Events, and Methods	**Time Frame: 8 Days**
UNIT OVERVIEW	
Within this unit students will learn how to use elif statements, onKeyPress and onKeyRelease events, and shape methods.	

LRG SKILLS AND DISPOSITIONS	PA STANDARDS
Critical Thinking and Problem-Solving: Fishing (S4B)	**1A-AP-14:** Debug (identify and fix) errors in an algorithm or program that includes sequences and simple loops. **1B-AP-08:** Compare and refine multiple algorithms for the same task and determine which is the most appropriate. **1B-AP-10:** Create programs that include sequences, events, loops, and conditionals. **2-AP-12:** Design and iteratively develop programs that combine control structures, including nested loops and compound conditionals. **2-AP-13:** Decompose problems and subproblems into parts to facilitate the design, implementation, and review of programs. **2-AP-17:** Systematically test and refine programs using a range of test cases. **3A-AP-16:** Design and iteratively develop computational artifacts for practical intent, personal expression, or to address a societal issue by using events to initiate instructions. **3A-AP-21:** Evaluate and refine computational artifacts to make them more usable and accessible. **3A-AP-23:** Document design decisions using text, graphics, presentations, and/or demonstrations in the development of complex programs.
COMPETENCIES	**LEARNING TARGETS**
I can code a program to express an idea or solve a problem.	● I can use a variety of variables to store and recall different values. (K1CSA1I3)
I can navigate various digital devices as a tool.	● I can design and develop a mobile application. (K1CSA3I2)
I can approach a challenge with computational thinking.	● I can create programs by creating and testing code in an incremental approach. (K1CSA2I2) ● I can use the iterative process to solve a problem. (K1CSA2I1)

SUBJECT: Design and Animation	**GRADE: 8**
Unit Title: Complex Conditionals, and More Key Events	**Time Frame: 6 Days**
UNIT OVERVIEW	
Within this unit students will learn how to use compound and nested conditionals, and onKeyHold events.	
LRG SKILLS AND DISPOSITIONS	**PA STANDARDS**
Continual Learning and Growth Mindset:Flapping Bird (D2B)	**1A-AP-14:** Debug (identify and fix) errors in an algorithm or program that includes sequences and simple loops. **1B-AP-08:** Compare and refine multiple algorithms for the same task and determine which is the most appropriate. **1B-AP-10:** Create programs that include sequences, events, loops, and conditionals. **2-AP-12:** Design and iteratively develop programs that combine control structures, including nested loops and compound conditionals. **2-AP-13:** Decompose problems and subproblems into parts to facilitate the design, implementation, and review of programs. **2-AP-17:** Systematically test and refine programs using a range of test cases.

	3A-AP-16: Design and iteratively develop computational artifacts for practical intent, personal expression, or to address a societal issue by using events to initiate instructions. **3A-AP-21:** Evaluate and refine computational artifacts to make them more usable and accessible. **3A-AP-23:** Document design decisions using text, graphics, presentations, and/or demonstrations in the development of complex programs.
COMPETENCIES	**LEARNING TARGETS**
I can code a program to express an idea or solve a problem.	● I can use and apply abstraction. (K1CSA1I1)
I can navigate various digital devices as a tool.	● I can design and develop a mobile application. (K1CSA3I2)
I can approach a challenge with computational thinking.	● I can use the iterative process to solve a problem. (K1CSA2I1)

SUBJECT: Design and Animation	**GRADE: 8**
Unit Title: Groups, Step Events, and Motion	**Time Frame: 8 Days**
UNIT OVERVIEW	
Within this unit students will use groups, onStep events, and motion.	
LRG SKILLS AND DISPOSITIONS	**PA STANDARDS**
Critical Thinking and Problem-Solving: Tron (S4B)	**1A-AP-14:** Debug (identify and fix) errors in an algorithm or program that includes sequences and simple loops. **1B-AP-08:** Compare and refine multiple algorithms for the same task and determine which is the most appropriate. **1B-AP-10:** Create programs that include sequences, events, loops, and conditionals. **2-AP-12:** Design and iteratively develop programs that combine control structures, including nested loops and compound conditionals. **2-AP-13:** Decompose problems and subproblems into parts to facilitate the design, implementation, and review of programs. **2-AP-17:** Systematically test and refine programs using a range of test cases. **3A-AP-16:** Design and iteratively develop computational artifacts for practical intent, personal expression, or to address a societal issue by using events to initiate instructions. **3A-AP-21:** Evaluate and refine computational artifacts to make them more usable and accessible. **3A-AP-23:** Document design decisions using text, graphics, presentations, and/or demonstrations in the development of complex programs.
COMPETENCIES	**LEARNING TARGETS**
I can code a program to express an idea or solve a problem.	● I can use and apply abstraction. (K1CSA1I1)

I can navigate various digital devices as a tool.	• I can design and develop a mobile application. (K1CSA3I2)
I can approach a challenge with computational thinking.	• I can use computational thinking to solve problems. (K1CSA2I4)