SUBJECT: CS/STEAM	**GRADE:** 1
Unit Title: Introduction to Sequencing and Algorithms	**Time Frame:** Cycles 1-9

UNIT OVERVIEW

- Students learning about sequencing & algorithms
- Students using Code.org to learn about coding algorithms

LRG SKILLS AND DISPOSITIONS	**PA STANDARDS**
- Critical Thinking and Problem Solving: Completion of coding puzzles and tasks. (S4A)	1A.AP.08 - Model daily processes by creating and following algorithms (sets of step-by-step instructions) to complete tasks. 1A.IC.18 - Keep login information private, and log off of devices appropriately 1.AP.14 - Debug (identify and fix) errors in an algorithm or program that includes sequences and simple loops

COMPETENCIES	**LEARNING TARGETS**
Competency: I can code a program to express an idea or solve a problem.	● I can understand and create simple algorithms. (K1CSA1B1)
Competency: I can navigate various digital devices as a tool.	● I can log in and out of a programming system. (K1CSA3B1)
Competency: I can code a program to express an idea or solve a problem.	● I can identify errors in an algorithm or program. (K1CSA1B2)

SUBJECT: CS/STEAM	**GRADE:** 1
Unit Title: Introduction to Loops and Events	**Time Frame:** Cycles 9-14

UNIT OVERVIEW

- Students learning about incorporating loops in algorithms and events in a program
- Students using Code.org to practice coding skills
- Students using ScratchJr to practice creating algorithms

LRG SKILLS AND DISPOSITIONS	**PA STANDARDS**
- Critical Thinking and Problem Solving: Completion of coding puzzles and tasks. (S4A)	1A.AP.08 - Model daily processes by creating and following algorithms (sets of step-by-step instructions) to complete tasks. 1A.AP.12 - Develop plans that describe a program's sequence of events, goals, and expected outcomes. 1A.AP.10 - Develop programs with sequences and simple loops, to express ideas or address a problem.

COMPETENCIES	**LEARNING TARGETS**
Competency: I can code a program to express an idea or solve a problem	● I can create algorithms with simple loops (K1CSA1B3)
	● I can use inputs, outputs, and events to create an interactive program (K1CSA1B5)

SUBJECT: CS/STEAM	**GRADE:** 1
Unit Title: Computational Thinking	**Time Frame:** Cycles 15-20

UNIT OVERVIEW

- Students using ScratchJr to practice creating algorithms
- Students learning about sequencing using Squeakers
- Students learning about thinking in sequential steps to get Squeakers through their maps

LRG SKILLS AND DISPOSITIONS	**PA STANDARDS**
- Critical Thinking and Problem Solving: Completion of coding puzzles and tasks. (S4A) - Honesty, Integrity and Responsibility: Using tools and manipulatives appropriately. (D3A)	1A.AP.11 - Decompose (break down) the steps needed to solve a problem into a precise sequence of instructions.

COMPETENCIES	**LEARNING TARGETS**
Competency: I can approach a challenge with computational thinking	● I can break down steps needed to solve a problem. (K1CSA2B2)

SUBJECT: CS/STEAM	**GRADE:** 1
Unit Title: Sequencing and Loops with Manipulatives	**Time Frame:** Cycles 21-28

UNIT OVERVIEW
- Students applying their knowledge of sequencing using Dash - Students incorporating loops in their codes

LRG SKILLS AND DISPOSITIONS	**PA STANDARDS**
- Collaboration and Teamwork: Work with a partner using manipulatives. (S1A)	1A.AP.12 - Develop plans that describe a program's sequence of events, goals, and expected outcomes. 1A.AP.08 - Model daily processes by creating and following algorithms (sets of step-by-step instructions) to complete tasks. 1A.AP.10 - Develop programs with sequences and simple loops, to express ideas or address a problem.

COMPETENCIES	**LEARNING TARGETS**
Competency: I can code a program to express an idea or solve a problem.	● I can identify patterns in a program. (K1CSA1B4)
Competency: I can approach a challenge with computational thinking.	● I can think in sequential steps. (K1CSA2B1)
Competency: I can navigate various digital devices as a tool.	● I can connect to devices via bluetooth. (K1CSA3B2)