SUBJECT: Scratch 7	GRADE: 7
Unit Title: File Management and Digital Etiquette	**Time Frame: 3 Days**

UNIT OVERVIEW

Within this unit students will learn how to manage their files and use proper digital etiquette. By the end of this unit students will have managed their files and shown an understanding of email etiquette.

LRG SKILLS AND DISPOSITIONS	PA STANDARDS
Honesty, Integrity and Responsibility (D3B)	**15.4.8A:** Analyze the influence of emerging technologies on daily life. **15.4.8B:** Interpret and apply appropriate social, legal, ethical, and safe behaviors of digital citizenship. **15.4.8F:** Identify network communication technologies. **15.4.8M:** Explore and describe how emerging technologies are used across different career paths.

COMPETENCIES	LEARNING TARGETS
I can demonstrate an understanding of many digital devices	● I can gather and use data
I can use best practices while programming	● I can manage my files ● I can use correct terminology

SUBJECT: Scratch 7	GRADE: 7
Unit Title: Animation and Dialogue	**Time Frame: 9 Days**

UNIT OVERVIEW

Within this unit students will learn how to use the Scratch environment to create projects. By the end of this unit students will have completed projects using dialogue and animation.

LRG SKILLS AND DISPOSITIONS	PA STANDARDS
Communication and Empathy (S2B)	**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-10: Use flowcharts and/or pseudocode to address complex problems as algorithms.
COMPETENCIES	**LEARNING TARGETS**
I can code a program to express an idea or solve a problem	• I can edit existing code to solve a new problem
I can approach a challenge with computational thinking.	• I can think in sequential steps. • I can debug a program using a variety of methods
I can demonstrate an understanding of many digital devices.	• I can understand that computers process information quickly.
I can use best practices while programming	• I can test code frequently to assure that it is working correctly. • I can understand and explain the importance of protecting personal information

SUBJECT: Scratch 7	**GRADE: 7**
Unit Title: Sprite Creation, Events and Broadcasting	**Time Frame: 15 Days**
UNIT OVERVIEW	
Within this unit students will learn how to create characters and communicate between characters in Scratch. By the end of this unit students will have completed projects using characters they create and events to communicate between characters.	
LRG SKILLS AND DISPOSITIONS	**PA STANDARDS**
Creativity and Innovation (S3B)	**1B-AP-10:** Create programs that include sequences, events, loops, and conditionals. **2-AP-10:** Use flowcharts and/or pseudocode to address complex problems as algorithms. **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.
COMPETENCIES	**LEARNING TARGETS**
I can code a program to express an idea or solve a problem.	• I can use inputs, outputs and events to create an interactive program.

	• I can identify events that will occur when the program is running and write the code to respond to those events.
I can approach a challenge with computational thinking.	• I can break a problem down into smaller steps. • I can understand and explain the code in the program. • I can debug a program using a variety of methods. • I can create a program using different planning techniques such as pseudocode or flowcharts.
I can demonstrate an understanding of many digital devices.	• I can understand that computers process information quickly. • I can identify and describe user-interface, data values, event handlers, and procedures.
I can use best practices while programming.	• I can test code frequently to assure that it is working correctly. • I can use good programming practices to make code more readable. • I can create and follow a plan to solve a problem, using short-term and long-term goals.

SUBJECT: Scratch 7	**GRADE: 7**
Unit Title: Variables, Conditionals, and Randoms	**Time Frame: 10 Days**
UNIT OVERVIEW	
Within this unit students will learn how to create and use variables, and to use conditionals and randoms to change the outcome of a project. By the end of this unit students will have completed projects using variables and conditionals.	
LRG SKILLS AND DISPOSITIONS	**PA STANDARDS**
Critical Thinking and Problem Solving (S4B)	**1B-AP-08:** Compare and refine multiple algorithms for the same task and determine which is the most appropriate. **1B-AP-09:** Create programs that use variables to store and modify data. **1B-AP-10:** Create programs that include sequences, events, loops, and conditionals. **1B-AP-15:** Test and debug (identify and fix errors) a program or algorithm to ensure it runs as intended. **2-AP-10:** Use flowcharts and/or pseudocode to address complex problems as algorithms. **2-AP-11:** Create clearly named variables that represent different data types and perform operations on their values.

	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-14:** Create procedures with parameters to organize code and make it easier to reuse. **2-AP-15:** Seek and incorporate feedback from team members and users to refine a solution that meets user needs. **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 create and edit variables. ● I can create algorithms to complete repetitive tasks. ● I can use a variety of variables to store and recall different values. ● I can create algorithms using variables, conditionals, operators and logic.
I can approach a challenge with computational thinking.	● I can think in sequential steps. ● I can use the iterative process to solve a problem. ● I can use computational thinking to solve the problem.
I can demonstrate an understanding of many digital devices.	● I can create and use different types of data. ● I can understand that computers process information quickly. ● I can collect and interpret data to understand different problems.
I can use best practices while programming.	● I can use correct terminology. ● I can recognize that identifying and defining problems and proposing a solution can be challenging.

SUBJECT: Scratch 7	**GRADE: 7**
Unit Title: Creativity, Planning and Creating	**Time Frame: 8 Days**
UNIT OVERVIEW	
Within this unit students will use what they have learned to create their own project. By the end of this unit students will have completed their own project using what they have learned in the course.	
LRG SKILLS AND DISPOSITIONS	**PA STANDARDS**

Creativity and Innovation (S3B) Critical Thinking and Problem Solving (S4B)	**1B-AP-08:** Compare and refine multiple algorithms for the same task and determine which is the most appropriate. **1B-AP-09:** Create programs that use variables to store and modify data. **1B-AP-10:** Create programs that include sequences, events, loops, and conditionals. **1B-AP-15:** Test and debug (identify and fix errors) a program or algorithm to ensure it runs as intended. **1B-IC-21:** Use public domain or creative commons media, and refrain from copying or using material created by others without permission. **2-AP-10:** Use flowcharts and/or pseudocode to address complex problems as algorithms. **2-AP-11:** Create clearly named variables that represent different data types and perform operations on their values. **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-14:** Create procedures with parameters to organize code and make it easier to reuse. **2-AP-15:** Seek and incorporate feedback from team members and users to refine a solution that meets user needs. **2-AP-16:** Incorporate existing code, media, and libraries into original programs, and give attribution. **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 create and use procedures that use abstraction to solve problems. ● I can use inputs, outputs and events to create an interactive program. ● I can create my own ideas and build upon other projects ● I can use appropriate code to solve problems ● I can create and edit variables. ● I can create algorithms to complete repetitive tasks ● I can use a variety of variables to store and recall different values. ● I can determine the value of variables at all points of the program ● I can create algorithms using variables, conditionals, operators and logic. ● I can identify events that will occur when the program is running and write the code to respond to those events.
I can approach a challenge with computational thinking.	● I can identify patterns when working through challenges ● I can think in sequential steps.

	• I can break problems down into smaller steps • I can plan and create a project by breaking it into smaller parts using procedures. • I can explain an algorithm • I can understand and explain the code in the program • I can debug a program using a variety of methods • I can use the iterative process to solve a problem • I can create programs by creating and testing code in an incremental approach • I can change and improve code that already exists • I can use computational thinking to solve problems. • I can describe the purpose of a section of code. • I can create a program using different planning techniques such as pseudocode or flowcharts
I can demonstrate an understanding of many digital devices.	• I can identify and use inputs and outputs as tools. • I can create and use different types of data • I can understand that computers process information quickly • I can collect and interpret data to understand different problems • I can identify and describe user-interface, data values, event handlers and procedures