Unit 4: Coding/Computer Science/Engineering

Content Area: **Technology**
Course(s):
Time Period: **December**
Length: **6-8 weeks**
Status: **Published**

Enduring Understandings

Creativity and Innovation:

Digital tools provide enhanced opportunities to design innovative solutions and express ideas creatively.

Communication and Collaboration:

Digital tools allow for communication and collaboration, any time/any place worldwide.

Essential Questions

How can digital tools be used for creating original and innovative works, ideas and solutions?

Content

Creativity and Innovation

Problem Solving

Skills

Understanding programming concepts

Resources

www.madewithcode.com

www.code.org

I-pad App: Hopsctoch

Standards

CRP.K-12.CRP2	Apply appropriate academic and technical skills.
CRP.K-12.CRP6	Demonstrate creativity and innovation.
CRP.K-12.CRP10	Plan education and career paths aligned to personal goals.
TECH.8.1.5	Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.
TECH.8.1.5.A	Technology Operations and Concepts: Students demonstrate a sound understanding of technology concepts, systems and operations.
TECH.8.1.5.A.1	Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.
TECH.8.1.5.E	Research and Information Fluency: Students apply digital tools to gather, evaluate, and use information.
TECH.8.1.5.E.1	Use digital tools to research and evaluate the accuracy of, relevance to, and appropriateness of using print and non-print electronic information sources to complete a variety of tasks.
TECH.8.2.5	Technology Education, Engineering, Design, and Computational Thinking - Programming: All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment.
TECH.8.2.5.A	The Nature of Technology: Creativity and Innovation: Technology systems impact every aspect of the world in which we live.
TECH.8.2.5.A.2	Investigate and present factors that influence the development and function of a product and a system.
TECH.8.2.5.D	Abilities for a Technological World: The designed world is the product of a design process that provides the means to convert resources into products and systems.
TECH.8.2.5.D.3	Follow step by step directions to assemble a product or solve a problem.
TECH.8.2.5.E	Computational Thinking: Programming: Computational thinking builds and enhances problem solving, allowing students to move beyond using knowledge to creating knowledge.
TECH.8.2.5.E.1	Identify how computer programming impacts our everyday lives.
TECH.8.2.5.E.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.
TECH.8.2.5.E.3	Using a simple, visual programming language, create a program using loops, events and procedures to generate specific output.
TECH.8.2.5.E.4	Use appropriate terms in conversation (e.g., algorithm, program, debug, loop, events, procedures, memory, storage, processing, software, coding, procedure, and data).