Computer Science Fundamentals
5th grade

Programming Language:
Scratch

Software used in Course:
Scratch

Supported Devices
Mac
Windows
Chromebook
iPad (no audio)

Instructional Models:
Direct Instruction
Instructional Sca!olding
Use of Learning Objectives
Relevant Vocabulary
Bloom's Taxonomy or Questions
Inquiry-Based Instruction
Project-Based Instruction
Cooperative Learning
Independent Study

Supported Learning Models:
Classroom
Blended
Hybrid
Synchronous
Asynchronous

Standards Aligned:
National and State
Computer Science
Standards

Reinforces:
Math
ELA
Social-Emotional Learning

Course Description

Reinforce fundamental computer science skills. Review programming structures and experiment with advanced concepts using Scratch, a block coding language. Implement conditionals, arrays, and loops while exploring booleans. Unplugged and Digital Citizenship evaluate online activity, assess the impacts of computing on society, and consider a variety of STEM careers. At the end of this course, students will be prepared to explore and experiment with advanced coding concepts.

Learning Objectives

Each lesson plan is designed to enable students to achieve specific learning outcomes related to course aligned computer science competencies. For example, at the end of this course students will be able to:

- Implement conditionals, arrays, and loops in code.
- Demonstrate knowledge of loops and arrays and predict the output of functions.
- Independently use the iterative nature of the design process to build a project meeting specified criteria.
- Summarize how boolean expressions control loops to create intended outputs.
- Judge healthy and unhealthy online behaviors and provide alternatives to negative behaviors.
- Describe the skills and duties of a robotics technician and summarize how emerging technologies may affect the field.