



Computer Science Foundations

1st grade

Programming Language:

ScratchJr

Software used in Course:

ScratchJr

Supported Devices

iPad
Android Tablet
Amazon Fire Tablet
Chromebook

Instructional Models:

Direct Instruction
Instructional Scolding
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

Build foundational computer science skills. Acquire an expanded set of coding skills through free play and criteria driven exploration using ScratchJr, an introductory block coding language. Review loops, triggering blocks, and debugging. Unplugged and Digital Citizenship lessons introduce self-monitoring screen time, giving peer feedback, and different types of STEM careers. At the end of this course, students will have developed a strong foundation of computer science skills and will be prepared to apply computer science concepts to independent projects.

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:

- Differentiate between different types of technology.
- Create programs including loops and triggering blocks.
- Demonstrate how to debug an algorithm that does not complete the desired task.
- Demonstrate ways to give positive and constructive feedback.
- Express the importance of maintaining a healthy media balance.
- Create code for a program following a set of criteria.