Computer Science Foundations

Kindergarten

Programming Language:
ScratchJr

Software used in Course:
ScratchJr

Supported Devices
iPad
Android Tablet
Amazon Fire Tablet
Chromebook

Instructional Models:
Direct Instruction
Instructional Scaffolding
Use of Learning Objectives
Relevant Vocabulary
Bloom's Taxonomy of 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

In this course, students learn computer science and programming basics using ScratchJr, a block coding language. During Unplugged and Coding lessons, students plan and create interactive projects while learning programming concepts like loops. Digital Citizenship and STEM Career lessons introduce a variety of topics, including internet safety, responsible technology use, and career opportunities. By the end of this course, students will be able to design and sequence algorithms that solve real-world problems.

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.
- Write an algorithm using arrows.
- Demonstrate how to debug an algorithm when a desired task has not be completed.
- Create a loop within an algorithm.
- Express the importance of protecting personal information while online.
- Express the importance of being kind to others while online.