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 Sca!olding
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

Explore computer science skills and concepts. Participate in project-based activities like researching, planning, and programming interactive games using ScratchJr, an introductory block-coding language. Learn programming concepts like algorithms, loops, and debugging. Unplugged and Digital Citizenship lessons introduce a variety of skills, including internet safety, growth mindset, respecting differences, and STEM careers. At the end of this course, students will be prepared to use foundational computer science skills and concepts to create 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.
- Write an algorithm using arrows.
- Demonstrate how to debug an algorithm that does not complete the desired task.
- 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.