Introduction to Computer Science Applications

6th grade

Programming Language:
JavaScript
HTML
CSS

Software used in Course:
Brackets
Google Chrome
Repl.it

Supported Devices
Mac
Windows
Chromebook

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

Examine fundamental computer science concepts with JavaScript. Build and design websites using JavaScript, HTML, and CSS. Integrate conditionals, loops, and arrays in functions to enable user actions like clicking a button or card on a website. Unplugged and Digital Citizenship lessons explore ethical behavior online and STEM careers. At the end of this course, students will have the ability to choose website design components and the computer science skills to build them.

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:

- Demonstrate mastery of basic HTML skills by independently building the framework of a webpage.
- Apply the functionality of various CSS properties and values.
- Plan and code JavaScript functions to promote user interaction within a website.
- Work collaboratively to evaluate the merits of their projects and solve any errors that appear in their websites.
- Differentiate between the capabilities of HTML, CSS, and JavaScript.
- Describe negative health effects that can emerge from common technology practices.