



Computer Science Applications JavaScript

7th 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 Scaffolding
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

Apply knowledge of JavaScript concepts. Exercise web design best practices to formulate solutions for real-world problems. Build upon foundational concepts such as functions, conditionals, and arrays, while exploring advanced programming techniques, like flowcharting and pseudocode. Unplugged and Digital Citizenship lessons discuss collaboration techniques and a variety of STEM careers. At the end of this course, students will be able to demonstrate advanced programming and problem-solving skills.

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 JavaScript concepts to develop a website that fulfills an objective.
- Apply flowcharts and pseudocode to organize a sequence of steps to address a complex problem.
- Work collaboratively to evaluate a website and incorporate feedback.
- Identify, evaluate, and address errors through testing and debugging a website.
- Implement accessibility techniques to make a website more accessible for diverse users.
- Remix existing code to add features and give attribution to the original creators.