

JavaScript COURSE DESCRIPTION



This JavaScript course covers a typical JavaScript curriculum. It covers the JavaScript fundamentals, which includes the basic data types such as booleans, numbers, and Strings as well as the integral concepts such as conditional statements, loops, jQuery and functions. This is a prerequisite to the AP Computer Science Principles course. The course will consist of lectures and programming assignments.

Whether you are getting ahead of the curriculum, aiming for better grades, or preparing for the AP Computer Science Principles exam, this class will give you the solid foundation needed to succeed. Fundamental and important concepts will be taught in great detail leaving students with a deeper understanding of the concepts. This course is designed for sixth grade and up. It will equip students with the JavaScript skills necessary to excel in any computer science course, including AP Computer Science Principles.

Homework/Assignments: Written homework or programming will be assigned.

Tests: JavaScript Exam and Final Website will be graded at end of the course.

Lesson 1 - Introduction to JavaScript

Chrome and JavaScript Console
Structure of JavaScript Program
Syntax and Comments
Assignment: Cats.js

Lesson 2 - Data Types and Variables

Numbers and Operators
Variables and Math
Booleans and Logical Operators
Undefined and Null
Assignment: MovieTheater.js

Lesson 3 - Arrays

Creating Arrays
Accessing an Array's Elements
Setting or Changing Elements in an Array
Assignment: Dinosaurs.js

Lesson 4 - Objects

Creating Objects
Adding Values to Objects
Combining Arrays and Objects
Exploring Objects in the Console
Assignment: Banks.js

Lesson 5 - The Basics of HTML

Text Editors
Syntax Highlighting
Tags and Elements
HTML Hierarchy
Assignment: links.html

Lesson 6 - Conditionals and Loops

Embedding JavaScript in HTML
Conditionals
Loops
Assignment: Random String Generator

Lesson 7 - Game Development

Prompts and Player Input
Alerts and Confirmations
Pseudocode and Game Loops
Assignment: hangman.html

Lesson 8 - Functions Part 1

Anatomy of a Function
Creating and Calling Functions
Passing Arguments and Return
Using Function Calls as Values
Shorthand
Assignment: Random Compliment Generator

Lesson 9 - The DOM and jQuery

Selecting DOM Elements
Elements and id
Loading and Using jQuery
Assignment: Flashing Headings

Lesson 10 - Website Development

Introduction to CSS
Designing Your Webpage