

# Web development with JavaScript

## Suitable for: G7 - G10

**Prerequisite:** Introduction to Web Development with HTML and CSS

**Duration:** 34 Weeks

**Classes per Week:** 1 class (45 minutes each)

### Course Overview:

This course introduces students to JavaScript, focusing on foundational programming concepts essential for interactive web development. Students will learn about variables, data types, functions, conditionals, and event handling, allowing them to add dynamic behavior to web pages. By the end of the course, students will be able to create interactive elements and basic applications with JavaScript.

### Covered Topics

#### Unit 1: Introduction to JavaScript Basics

- Understanding JavaScript as a programming language for the web
- Using innerHTML to manipulate web content
- Working with variables to store data

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### Unit 2: Data Types and Operators

- Creating and using functions to organize code
- Implementing on-click buttons and event-driven programming
- Understanding input handling with ParseInt

### Unit 3: Functions and Events

- Building small projects to apply HTML skills
- Organizing information using unordered, ordered, and description lists
- Developing projects to reinforce list structures

### Unit 4: Conditionals and Logic Structures

- Using conditionals to make decisions in code
- Applying multiple conditionals for complex logic
- Practicing logic operators for advanced control flow

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### Unit 5: Projects and Applications

- Developing project such as a chat bot
- Combining functions, conditionals, and events in a different application
- Demonstrating JavaScript proficiency through interactive web projects

### Materials Needed:

- Access to a computer or tablet
- Internet connection
- Chrome browser

### Assessment

At the end of each lesson, learners will be assessed on their ability to apply JavaScript concepts such as variables, data types, functions, and events. Each assessment will focus on how effectively students use JavaScript to create interactive, functional web elements.

### Certification

A certificate of completion will be awarded to students who successfully complete the course, recognizing their foundational skills in JavaScript and web development.