

# Game Development With JavaScript

## Suitable for: G10 - G12

**Prerequisite:** Web Development with JavaScript

**Duration:** 30 Weeks

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

### Course Overview:

This course introduces students to game development using JavaScript, covering fundamental concepts in web development and building interactive games. Students will learn to apply JavaScript, HTML, and CSS to create engaging, browser-based games with dynamic features and user interactions. By the end of the course, students will have developed a portfolio of simple games and acquired foundational game programming skills.

### Covered Topics

#### Unit 1: Introduction to Web Development for Games

- Basics of web development and JavaScript for gaming
- Introduction to HTML and CSS in game design
- Setting up a development environment for game creation

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### Unit 2: Fundamentals of JavaScript for Games

- Understanding JavaScript alerts and basic interactivity
- Creating simple actions and event handling
- Exploring click actions and interactive buttons

### Unit 3: Game Mechanics and Loops

- Using loops to control gameplay mechanics
- Building simple animations and interactions
- Developing projects like calculators and interactive buttons

### Unit 4: Game Projects and Interactivity

- Creating basic games such as Pop Dog and Roller Game
- Introducing conditional logic in games
- Developing games like Rock Paper Scissors and Luck Game

### Unit 5: Advanced Game Projects

- Combining elements to create complex games like Space Shooter and Memory Game
- Implementing scoring systems and timing with JavaScript

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### 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 programming concepts, including loops, conditionals, event handling, and interactivity, in game development. Assessments will focus on creativity, functionality, and the use of programming skills to develop playable games.

### Certification

A certificate of completion will be awarded to students who successfully complete the course, recognizing their proficiency in introductory game development with JavaScript.