



Javascript Tower Defense *Syllabus*

Course Overview

This course is a hands-on, project-based journey into building a Tower Defense game using JavaScript. Students will learn game development principles, programming fundamentals, and advanced techniques to create engaging gameplay.

This course is recommended for ages 11 and up, with an intermediate level of learning. It contains over 35 hours of entertaining and satisfying Javascript lessons.

Course Objectives

By the end of this course, students will:

- Understand the basics of JavaScript and its application in game development.
- Build a fully functional Tower Defense game from scratch.
- Develop and manage game elements such as players, enemies, levels, and power-ups.
- Implement collision detection, animations, and interactivity using JavaScript.
- Debug, test, and deploy a JavaScript-based game.

Course Outline

Lesson 1: Introduction

- 1.1 - Overview
- 1.2 - Workspace
- 1.3 - Text Editor
- 1.4 - Functions
- 1.5 - Level 1
- 1.6 - Background
- 1.7 - Player View
- Quiz 1

Lesson 2: Enemy Basics

- 2.1 - Enemies Abroad
- 2.2 - Here They Come
- 2.3 - Stand Guard
- 2.4 - Hire Me
- 2.5 - Land Ho
- 2.6 - Bolts
- 2.7 - Blocker onHit
- Quiz 2

Lesson 3: Offensive Strategies

- 3.1 - Gunman
- 3.2 - Hire Me
- 3.3 - Fire Box
- 3.4 - Fire
- Quiz 3

Lesson 4: Game Flow

- 4.1 - Clear
- 4.2 - Gameover
- 4.3 - Menu
- 4.4 - Winner
- Upload Level 1
- Quiz 4

Lesson 5: Advanced Levels

- 5.1 - Level 2
- 5.2 - Flyguy
- 5.3 - Flyguy Range
- 5.4 - Homing Missiles
- Test 1

Lesson 6: Boss Fights

- 6.1 - Boss
- 6.2 - Awake the Giant
- 6.3 - Boss Projectiles
- 6.4 - onHits
- 6.5 - Winners & Losers
- Level 2
- Quiz 6

Lesson 7: Expanding Gameplay

- 7.1 - Level 3
- 7.2 - Flying Enemy
- Quiz 7

Lesson 8: Player Customization

- 8.1 - Double Click
- 8.2 - Upgrade
- 8.3 - More Upgrades
- Level 3 Upload
- Quiz 8

Lesson 9: Final Boss Challenges

- 9.1 - Level 4
- 9.2 - Mega Boss
- 9.3 - Mega Attack - for loops
- 9.4 - 3 Spread Attack
- 9.5 - Mega Boss onHits
- Quiz 9

Lesson 10: Final Project

- 10.1 Final Project
- Racing Game Upload
- Test 2

Resources

- **Required:** Text Editor (e.g., VS Code, Sublime Text)
- Web Browser (e.g., Chrome, Firefox)
- Access to JavaScript Documentation