

JavaScript Game Design Tower Defense

Difficulty: This course assumes previous coding experience in JavaScript or completion of our JavaScript Game Design Platform course. Recommended for students ages 13+.

Objective: To further teach students new JavaScript techniques and build on their knowledge of JavaScript. Help students understand the relationship of math and physics utilizes in game programming.

Assessments: There are quizzes at the end of each lesson consisting of 5 random questions. There are two timed tests.

Uploads: Students will upload multiple projects as they complete new levels and make their own games.

Length: This course is designed to be one semester worth of content assuming around 2 - 3 hours / week engagement.

Lesson Plan:

Lesson 1: Setup workspace and begin game with needed functions and game setup.

Lesson 2: Create enemies and game play with side scrolling screen, using currency for purchase.

Lesson 3: Using outside objects surround players to trigger events.

Lesson 4: Clearing a level, creating full game with game over and win screens.

Lesson 5: Using slope to find distance between objects for homing missiles.

Lesson 6: Passing arguments between functions to create on demand objects like bosses.

Lesson 7: Randomizing speed, locations and amount of new objects created.

Lesson 8: Using the double click feature to allow in game upgrades to objects.

Lesson 9: Using for loops to create multiple events appearing to happen simultaneously.

Lesson 10: Final Project mimicking existing game to recreate in JavaScript.