

## **3D Game Design**

**Difficulty:** This course assumes no coding experience in JavaScript and HTML but moves quickly to engage older students ages 12+.

**Objective:** To let Students explore 3D models and programming using HTML and JavaScript with the Babylon library. Students will create a racing adventure game in 3D. They'll know how to create their own 3D Models and export them to use in their game. How to code a full 3D racing game and \ keep track of lap times.

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

**Uploads:** Students will upload their project at the beginning of the lesson and update it throughout the course.

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

### **Lesson Plan:**

Lesson 1: Babylon Library, Creating Shapes

Lesson 2: Adding platforms, applying physics and using the keyboard to control objects

Lesson 3: Creating your custom race track and understanding the T value

Lesson 4: Adding ramps and walls, controlling the camera angle

Lesson 5: Using objects to boost your car, controlling a timer, drawing your own 3D shapes