



# level 4

## Web Development 2

The best websites and apps are ones that are dynamic - integrating APIs, widgets, personalization, and animations. In our Web Development 2 course, students advance their programming skills with a greater focus on JavaScript, the foundation of most dynamic websites. Students gain knowledge about incorporating user-input into a website, the keys of mobile development, and how to design web applications.

By the end of the course, students will have built upon the skills they gained in Web Development I to create their own unique mobile-responsive sites and web applications using advanced HTML, CSS, and JavaScript. With their newfound programming skills, students will be ready to move on to more complex languages like Java and Android.

### objectives

- ✓ Code web applications in JavaScript to create interactive sites
- ✓ Learn and apply mobile web development concepts to create interactive and dynamic websites
- ✓ Add buttons, maps, and other advanced functions to websites using HTML and CSS

### key projects

- ✓ Creating a program using JavaScript that asks the user for input
- ✓ Coding a program with JavaScript that animates a story the student has written
- ✓ Designing a mobile-friendly site
- ✓ Designing a website that uses the Google Maps API
- ✓ Designing an advanced website that is mobile friendly and includes advanced JavaScript

# units

## Unit 1 | Fundamentals of JavaScript

The foundational concepts of programming in JavaScript

## Unit 2 | Conditionals and Debugging

Learning how to have code run when an event, such as clicking a button, happens, and learning how to search for errors

## Unit 3 | While Loops and For Loops

Making code repeat itself using loops

## Unit 4 | Methods

Using methods to have code, like playing a video, occur when a play button is pressed

## Unit 5 | Classes

Expanding the student's own website by creating linked files that load new webpages when clicked

## Unit 6 | Designing For Mobile

Updating a student's own site to make it mobile friendly

## Unit 7 | Using API's

Adding Google Maps into a web application of the student's own design

## Unit 8 | Final Project

Using advanced HTML, CSS, and JavaScript to create a web application that is mobile friendly