

Exercise 3: Core JavaScript

The aims of this lab are:

- Start laying out your project web page
- Get to know JavaScript
 - Use some basic JS to make a webpage interactive
 - Use JS and HTML Forms to get information from a user

Start working on your Project layout

Decide on the key pages of your site, design the layout and navigation flow. You can lay this out on a piece of paper first and feel free to consult with your lab facilitator.

JavaScript

Getting started with JavaScript

Work through the [W3Schools Javascript tutorial](#). There is a lot there, and you can skip some sections, but you should do most of the exercises up to the [Forms](#) topic. You should also come back to this tutorial as we go through the semester as the later sections will help with some of our more advanced material.

You can experiment with basic JS functions and commands in either the console of a webpage (see [Lab 0: Dev Environment; Get to know your browsers](#)), or by running a [NodeJS](#) server.

Making a Wordle clone

Write a JavaScript function `wordle(target, guess)` with the following specification: The function should take two five letter words and report which of the letters in `guess` appear in the word in the correct location, which later appear in the word in a different location, and which letters do not appear in the word. It should print an error message if both words do not have five letters, or are otherwise the incorrect type.

For example: `wordle(scope, scoop)` should produce the output:

The first letter is in the correct position, the second letter is in the correct position, the third letter is in the correct position, the fourth letter does not appear in the word *twice*, the fifth letter appears in the word, but in a different position. Note the twice for the fourth letter is optional, but this reflects the nature of the feedback given by Wordle.

Make your webpage interactive using JS and Forms

There are many ways to use JS to make a webpage interactive, for example: you could use forms to take information from a user and provide an output to the user; or you could have a user click on a button to make CSS or content changes. See [this W3Schools page](#) for some information on how to take data from a form.

Make your webpage interactive by adding a JS function. Some example functions:

- Take in two numbers, and return the [Lowest-Common-Multiple](#)
- Take in a year, and determine if it is a [leap year](#)
- Take in a hex code (#xxxxxx), and change the background of the page to that [colour](#)
- Have a button that changes the background colour to a random colour