# Learn JavaScript

## 1. Basics Syntaxes:

* There are three essential data types in JavaScript: strings, numbers, and booleans.
* Can write out anything to the console with “console.log”.
* Can do math with operators like **+**, **-**, **\***, and **/**.
* Can find the remainder after dividing two numbers with a modulus: **%**.
* Can generate a random number with “**Math.random**” and make it a whole number with “**Math.floor**”.
* Write a single line comment with **//** and a multi-line comment with **/\*** and **\*/**.
* Create variables.
* Change a variable's value.
* Interpolate, or insert, a variable into a string.

## 2. Control Flow:

* “**If/else**” statements.
* “**Else if**” conditions.
* “**Switch**” statements
* Comparison operators: **<**, **>**, **<=**, and **>=**.
* Logical Operators: **&&**, **||**, **!==**, and **!**. (“**!**” changes a variable that is true to false, and vice versa).

## 3.Functions and Scope:

* Build Functions.
* Call Function.
* Global Scope refers to variables that are accessible to every part of the program.
* Functional Scope refers to variables created inside functions, which are not accessible outside of its block.

## 4. Arrays and Loops:

* Access one item in an array using it's numbered position, with syntax like “**myArray[0]**”.
* “**Length**” allows you to see how many items are in an array.
* “**Push**” and “**pop**”, which add and subtract items from an array, respectively.
* “**For/while**” Loops.

## 5. JavaScript and jQuery:

* Link a JavaScript file to an HTML file using a **<script>** tag.
* jQuery is a library to help JavaScript interact with HTML elements.
* Can make sure our page is ready to go with “**$(document).ready()**”. (can pass in a function to ready that will execute when the page is loaded).
* jQuery uses the same selector names as CSS.
* Can hide elements with “**hide**” and show them with “**show**”.
* Can make elements appear with “**fadeIn**”.
* “**on('click')**” functions allow us to make HTML elements clickable. When an element is clicked, the click function will execute the function we provide.
* “**toggle**” will toggle an element on and off the page. (“**toggleClass**” can toggle a class on and off, it is a function that will toggle a CSS class on the jQuery selector it's connected to).
* “**$(this)**” will select the specific element that was clicked if placed inside a click function.
* Can select elements next to each other with “**next**”.
* “**Text**” will replace a DOM element's text with text we set.
* “**slideToggle**” will make an element slide into and out of the page with an animation.