The JavaScripting English Major Cheat Sheet

https://the-javascripting-english-major.org/cheat-sheet, by Moacir P. de Sá Pereira

Files & Basic Syntax (ch 2)

Write JavaScript in your `script.js` file, HTML in your `index.html`, and CSS (styles) in your `styles.css`. You can use different file names, but the JavaScript files should always end in `.js`.

End every statement (typically a line of code) with a `;`. Comment text out with `//`. All of the subsequent code on that line will not be executed.

Define variables using `let variableName;` and then assign it with `variableName = "some string";`, for example.

Data Types (ch 2)

string	Regular text, surrounded by `""`.
number	A number. Not surrounded by `""`.
boolean	`true` or `false`.
array	A list, surrounded by `[…]`.
object	Always surrounded by `{…}`.

Arrays (chs 5, 6, & 11)

Arrays are a list of things (strings, objects, arrays).

```
let myArray, zerothArrayItem, newArray,
    newArrayLength;
myArray = ["a", 1, "string", 23];
zerothArrayItem = myArray[0];
// zerothArrayItem is now "a"
// .map() takes an array and creates a new array:
newArray = myArray.map(function(value) {
  return value + 1;
});
// newArray is ["a1", 2, "string1", 24]
newArrayLength = newArray.length;
// newArrayLength is now 4
```

Objects (chs 5, 6, & 11)

Objects are generic types and have properties.

```
let myObject, myName;
myObject = {
  name: "JavaScript",
};
// Access a property:
myName = myObject.name;
// myName is now "JavaScript";
// Properties can be any data type, even functions.
```

Functions (ch 4 & 6)

JavaScript provides the verbs of the web. If a page does something because of you, that's JavaScript. The verbs of JavaScript, however, are functions. Functions receive parameters and `return` a value:

```
let myFunction, myReturnValue;
myFunction = function(param1, param2){
  return param1 + " " + param2;
};
myReturnValue = myFunction("JavaScript", "is OK!");
// myReturnValue is now "JavaScript is OK!"
```

Parameter names are arbitrary and exist only inside the function. Methods like `.forEach()` are functions:

```
myArray.forEach(function(value, i){
  console.log("index: " + i + ", value: " + value);
});
// "index: 0 value: a"
// "index: 1 value: 1"
// "index: 2 value: string"
// "index: 3 value: 23"
```

jQuery (chs 8, 9, 11, & 14)

jQuery lets you select parts of the webpage with `$("selector")` and manipulate them:

```
$("#response").html("New <i>HTML</i> text.");
// Changes the value of <div id="response"></div>
let pHtml, theParagraph;
pHtml = $("p").html();
// pHtml is the contents of the first <p></p>.
theParagraph = $(".a-class").html();
// theParagraph is the contents of
// <p class="a-class"></p>
```

`.html()` is a method, but there are other useful ones in JQuery:

```
$("p").click(function(){
  // do something when you click on <p></p>.
});
$.getJSON("http://some.com/file.json", function(obj){
  // obj is the JSON object & you can manipulate it:
  $("p").html(obj.someProperty);
  // change the value of the first <p></p> to the
  // value of someProperty
});
```

Leaflet (chs 10, 11, & 14)

```
let map, tileLayer, marker, line;
let lat, lng;
// initialize a map inside <div id="map"></div>:
map = L.map("map");
// set the tileLayer to a tile url:
tileLayer = L.tileLayer("some.tilelayer.url", {
    attribution: "&copy; rights holders",
    subdomains: "abcd",
    maxZoom: 18
});
lat: 40;
lng: -72;
// draw a circleMarker at [40, -72]:
marker = L.circleMarker([lat, lng], {
  radius: 5,
  fillColor: "#00aa00"
}).addTo(map);
// draw a line between the circleMarker and a
// new point at [42, -74]:
L.polyline([[lat, lng], [42, -74]], {
  color: "#aa0000"
}).addTo(map);
// change the radius and fillcolor of marker:
marker.setStyle({radius: 20, fillColor: "#aa0000"});
```

Other Resources

These basics of JavaScript should lead you much of the way towards being able to look up other methods and looking up questions online. Here are some useful references:

1. https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference — MDN JavaScript reference

2. http://api.jquery.com — jQuery documentation

3. http://leafletjs.com — Leaflet homepage

4. https://stackoverflow.com/questions/tagged/javascript — Stack Overflow JavaScript questions. Priceless resource

5. https://www.w3schools.com/TAGs/ — HTML reference

6. https://www.w3schools.com/cssref/ — CSS reference