

# Beginning Javascript

## Class 3

### Welcome!

Girl Develop It is here to provide affordable and accessible programs to learn software through mentorship and hands-on instruction.

Some "rules"

- We are here for you!
- Every question is important
- Help each other
- Have fun

### What is a library?

- Software libraries hold functions (not books!)
- When you include a library, you can use all the functions in that library
- That means: you get to take advantage of other people's experience!
- And... Save time!

### What is jQuery?

jQuery is a library of JavaScript functions.

It contains many functions to help simplify your programming, including:

- HTML element selection & manipulation
- CSS manipulation
- HTML events
- JavaScript effects and animations

### Why use jQuery?

- The most popular JavaScript library
- jQuery empowers you to "write less, do more."
- Great [documentation and tutorials](#)
- Used by nearly 20 million(!) websites

### Including jQuery

Two ways to include jQuery on your page:

Download the library, store it locally:

```
<head>  
    <script type="text/javascript" src="jquery.js"></script> </head>
```

Include the the live library:

```
<head>  
    <script type="text/javascript" src="http://code.jquery.com/jquery-1.8.3.min.js">  
    </script>  
</head>
```

Note: live code can change! It's always best to [download](#)

## jQuery Selectors

Remember `document.getElementsByTagName()`?

(used to get a list of all the tag elements)

JavaScript code:

```
var divs = document.getElementsByTagName("div");
```

The same line, translated into jQuery!

```
var divs = $("div");
```

## jQuery Selectors

Remember `document.getElementById()`?

(used to get a list of all the elements by ID)

JavaScript code:

```
var myHeader = document.getElementById("myHeader");
```

The same line, translated into jQuery!

```
var myHeader = $("#myHeader");
```

## jQuery Selectors

Class name (`.result`, `.picture`)

```
var images = $(".picture"); //All images with class picture  
make sure you include the dot, before the classname
```

## What is an API?

- Application Programming Interface
- Specifies how software components should interact with each other
- Data structure and rules for accessing a web-based application

## jQuery Actions

jQuery has hundreds of actions that can be performed on any element

All the actions are methods, specified in the jQuery API

As methods they are called with dot notation

Action format

```
$(selector).action();
```

## Document Ready

Webpages take time to load

Almost always, you don't want the JavaScript to be called until the page is loaded

Document ready is a method called when the page is loaded

```
$(document).ready(function(){  
  
});
```

Note: The function() inside is an "anonymous function". It has no name, but still performs like a function.

## HTML events

Events occur on a webpage via user interaction

Common Events:

- mouseenter -- mouse goes inside an element
- mouseleave -- mouse leaves an element
- click -- mouse clicks an element
- [Other events](#)

## Handling events

```
$(selector).click(function(){ //code when the selector is clicked });  
$('.myElement').click(function(){ $(this).hide(); });
```

The \$(this) selector in jQuery refers to the element on whom the action was called.

Here \$(this) is the \$('.myElement') that we clicked.

## Handling event examples

```
$('.myElement').mouseenter(function(){
    $(this).css('background-color', 'purple')
});
$('.myElement').mouseleave(function(){
    $(this).css('background-color', 'orange')
});
$('.myElement').click(function(){
    $(this).css('background-color', 'green')
})
```

## Combining events

If you want multiple events to happen on the same element, you should use the bind method

```
$('.myElement').bind({
    click: function() {
        $(this).css('background-color', 'green') },
    mouseenter: function() {
        $(this).css('background-color', 'purple') },
    mouseleave: function(){
        $(this).css('background-color', 'orange') }
});
```

## Let's Develop it!

Start with this HTML

```
<!doctype html>
<html>
  <head>
    <meta charset="utf-8" />
    <title>Demo</title>
  </head>
  <body>
    <p>this is a PARAGRAPH</p>
    <div id="myId">This is a DIV with id "myId"!</div>
    <div class="myClass">This is a DIV with class "myClass"!</div>
    <a href="http://jquery.com/" id="myLink">jQuery</a>
    <script src="jquery.js"></script>
    <script>
      // Your code goes here.
    </script>
  </body>
</html>
```

## Let's develop it!

- When you click on the paragraph, hide it
- When you click on div myId, hide it
- When you click on div myClass, hide it
  
- To hide an element, use the .hide() method
- Remember to use \$(this) to locate the element that is receiving the action
- If you get ahead, add a button to your HTML that uses the .slideToggle() method to show or hide the jquery link from the HTML
- Remember you can research more about a method in [the jQuery API](#)

## Updating attributes and css

```

```

Attribute get and set

```
var img = $('#mainpicture');  
img.attr('src');  
img.attr('src', 'http://girldevelopit.com/assets/pink-logo.png');
```

CSS property get and set

```
var img = $('#mainpicture');  
img.css('width');  
img.css('width', '200px');
```

## Updating values and html

```
<div id = "results">Boo!</div>
```

Get and set html value

```
var div = $('#results');  
div.html();  
div.html('New html!');
```

## Append and Prepend

```
<div id = "results">Boo!</div>
```

Append html

```
var div = $('#results');  
div.append('Additional html');
```

Prepend html

```
var div = $('#results');  
div.prepend('Additional html (on top)');
```

## Creating new element

```
var newDiv = $('<div></div>');
```

## Let's Develop It!

Try to convert last week's DOM interaction into jQuery.  
Don't forget to include jQuery in your html head!

## Let's Develop It

- Add a div to your html that is 100px by 200px
- Bind events to the div in your javascript file
- Don't forget to surround your events with document ready
- Try to change size, color, or even the html inside the div
- Bonus: change all the onclick events to jQuery click events

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