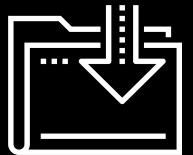# jQuery Begins

Web Development Boot Camp

Lesson 3.1

Admin Items

Death by PowerPoint:
Not the Way to Learn Coding

True Way to Learn Coding

Be prepared to have classes that are increasingly "just code."

(You will appreciate it in the long run.)

Today's Class

Agenda

In today's class we'll be covering:

DOM manipulation using plain JavaScript

DOM manipulation using jQuery

Responding to click events

DOM Manipulation

Understanding the DOM

Basic Example: todomvc.com/examples/jquery/#/all

Every HTML page begins as static content.

However, with Javascript/jQuery, we can **modify the DOM** and change this static content in real time.

This allows us to build dynamic sites.

Instructor Demonstration
DOM Manipulation with Plain JavaScript

Activity:
Generating HTML with
Plain JavaScript

Activity: Generating HTML with Plain JavaScript

Using the file sent to you as a starting point, add the missing code so that your JavaScript generates HTML content that displays all drink options.

Hint: You will need a for loop. Inside the for loop, you will need to use each of the following methods: `createElement`, `innerHTML`, and `appendChild`.

Suggested Time: 10 minutes

Intro to jQuery

Intro to jQuery

jquery.com

jQuery is a cross-platform **JavaScript library** designed to simplify client-side HTML scripting.

Query Helper Library

jQuery can be useful for tasks such as:

Dynamically inserting, updating, or removing HTML

Registering click or other change events

Animating HTML elements

Downloading data from databases

And much more!

Working with jQuery

01 Include a CDN (Content Delivery Network) link to the jQuery script.

```html
<!-- Added Link to the jQuery Library -->
<script src="https://code.jquery.com/jquery-2.2.3.js" integrity="sha256-laXWtGydpwqJ8JA+X9x2miwmaiKhn8tVmOVEigRNtP4=" crossorigin="anonymous"></script>
```

02 Utilize the jQuery specific `($)` selector.

```javascript
$("#clickMe")
```

03 Apply jQuery methods on the selected elements.

```javascript
$("#clickMe").on("click", function(){

    // Trigger an alert.
    alert("I've been clicked!");
})
```

Instructor Demonstration
DOM Manipulation with jQuery

Activity:
Generating HTML with jQuery

Suggested Time:
10 minutes

Activity: Generating HTML with jQuery

Refactor (rewrite) your previous drinkList code from earlier, but this time use jQuery to complete all of the same tasks.

Your final code should NOT have any of the following methods: `createElement`, `innerHTML`, or `appendChild`.

Hint: Don't forget to "incorporate" jQuery before you begin.

Bonus: Instead of using a for loop, look up how to use the jQuery `.each` method.

Suggested Time: 10 minutes

Instructor Demonstration
On-Click Basic

Partner Activity:
Sandwich Clicking

Suggested Time:
20 minutes

Partner Activity: Sandwich Clicking

Add the missing code so that clicking any of the sandwiches causes:

An alert message that says something snarky about the sandwich type.

An alert message that displays how many of a specific sandwich the user has eaten.

Hint: You will need counter variables.

Bonus: Add an image to the `image-div` on the click event.

Suggested Time: 20 minutes

Partner Activity:
Trigger Random

Suggested Time:
12 minutes

Partner Activity: Trigger Random

Add the missing code so that clicking the big blue button triggers a random number (between 1 and 1,000) to be selected and prominently displayed in the `randomNumber` div.

Suggested Time: 12 minutes

Partner Activity:
Lottery Generator

Suggested Time:
20 minutes

Partner Activity: Lottery Generator

Use the code from the previous random number generator to create a lottery generator.

The lottery generator should select 9 random numbers (and always 9 numbers).
Example: 886563264

Display this number in the `randomNumber` div.

When the user clicks again, create a new row with the most recent number at the top.

Suggested Time: 20 minutes

Captain Planet: The Game!

Captain Planet: The Game!

Superpowers: Change Sizes!

| Normal | Grow | Shrink |

Superpowers: Invisibility

| Visible | Invisible |

Move Controls

⬆️

⬅️ ⬇️ ➡️

Go Planet!

Instructor Demonstration
Captain Planet: The Game!

Group Activity:
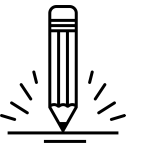Pseudocode Captain Planet

Suggested Time:
7 minutes

Group Activity: Pseudocode Captain Planet

Examine the code for the Captain Planet game. Then, describe how this code works in five steps.

1.

2.

3.

4.

5.

Suggested Time: 7 minutes

Pseudocoding Captain Planet

Solution:

01	Create an initial HTML layout using Bootstrap.
02	Add a reference to jQuery.
03	Assign unique class names to key buttons and images.
04	Use jQuery to capture when the corresponding buttons are clicked, using the $() identifier with the class name inside.
05	Create code that changes the CSS of target classes in response to click events.

Activity:
Create a Captain Planet Superpower

Suggested Time:
12 minutes

Activity: Create a Captain Planet Superpower

Review the jQuery API documentation (api.jquery.com). Then, add a button of your own that gives Captain Planet a new power.

Examples:
Click to…stretch Captain Planet.
Click to…trigger a maniacal laugh.
Click to…create clones of Captain Planet.
Click to…create a shield **(hint: border)**.
Click to…create fire or water **(hint: images)**.

Suggested Time: 12 minutes

jQuery Recap

jQuery in a Nutshell

01 Find some HTML.

02 Attach to an event.

03 Do something in response.

jquery

jQuery in a Nutshell

We use the jQuery $( ) identifier to capture HTML elements:

`$(".classname")`	`$("div")`
`$("#idname")`	`$("p")`

Then, we tie the element to a jQuery method of our choice to capture events:

`.on("click")`	`.ready()`

Finally, we modify the selected element or add or remove elements from the DOM:

`.animate()`	`.append()`	`.remove()`

jQuery: A Common Example

```
$(".growButton").on("click", function() {
    $(".captainplanet").animate({ height: "500px" });
});
```

01 Click the Grow button.

02 Make Captain Planet grow.

Superpowers: Change Sizes!

| Normal | Grow | Shrink |

Use Documentation When Needed:
api.jquery.com

Questions?