



jQuery Begins

Web Development Boot Camp
Lesson 2.4



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

Suggested Time:
10 minutes



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.

```
<!-- 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.

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

03

Apply jQuery methods on the selected elements.

```
$("#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`.



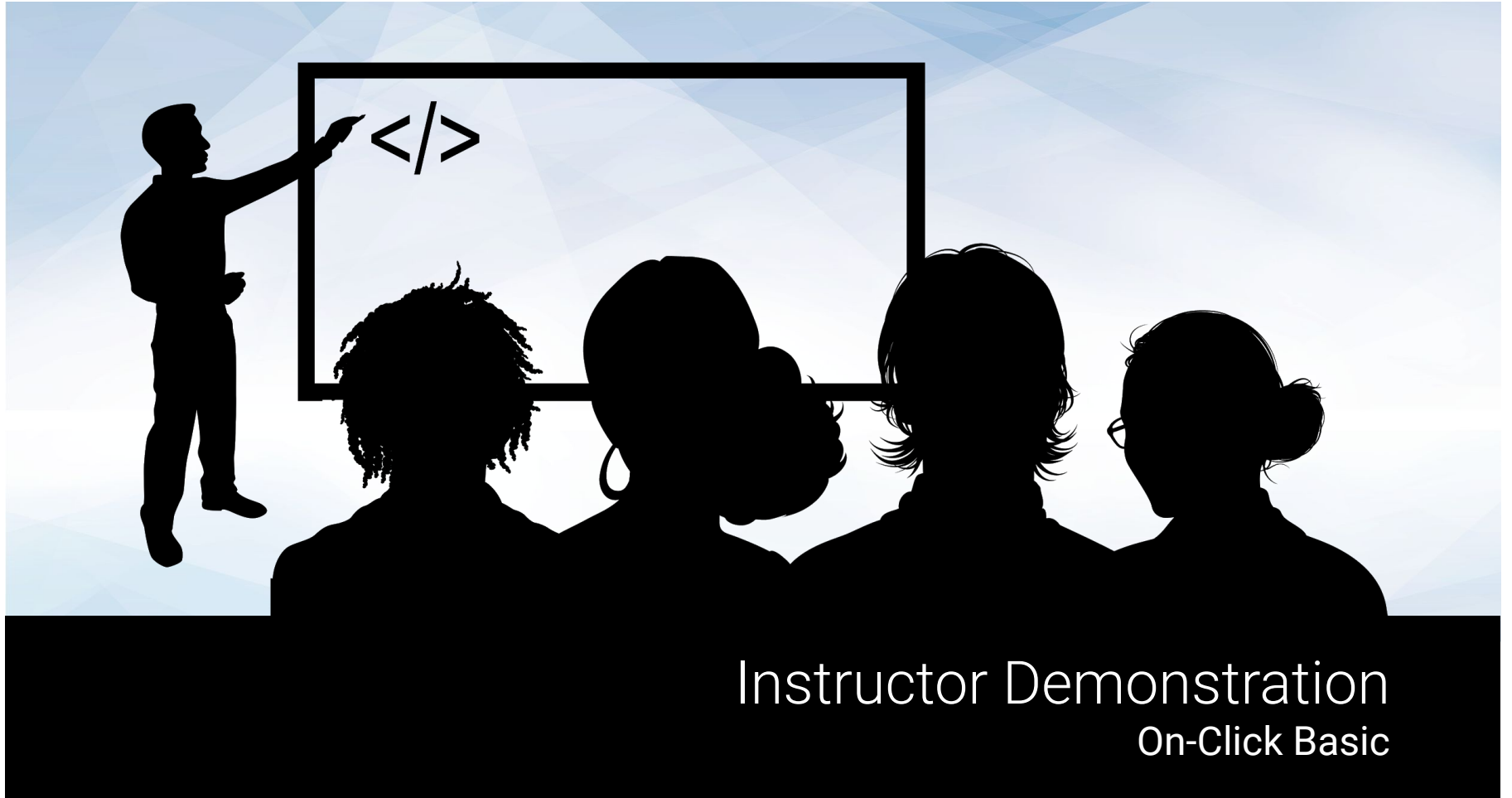
Hint: Don't forget to "incorporate" jQuery before you begin.



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.

The jQuery logo, which consists of a teal square with the word "jquery" in white lowercase letters. The logo is positioned in the bottom right corner of the slide, enclosed in a thin white border.

jquery

jQuery in a Nutshell

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

<code>\$(".classname")</code>	<code>\$("div")</code>
<code>\$("#idname")</code>	<code>\$("p")</code>

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

<code>.on("click")</code>	<code>.ready()</code>
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Finally, we modify the selected element or add or remove elements from the DOM:

<code>.animate()</code>	<code>.append()</code>	<code>.remove()</code>
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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?