JQUERY

LEARNING OBJECTIVES

- Differentiate between the jQuery library and the JavaScript language, and describe benefits of using each.
- Add jQuery to a project.
- Recognize jQuery syntax.
- Use jQuery to select and update elements in the DOM.
- Write jQuery code to detect and react to events in the DOM.

REVIEW

SYNTAX - CALLING A FUNCTION

```
function pickADescriptiveName () {
    // Code to run
}


pickADescriptiveName();
```

ACTIVITY

KEY OBJECTIVE

- Review functions

LOCATION

- Starter Code > jQuery Code Along

AS A CLASS

5 min

1. Follow the instructions in main.js

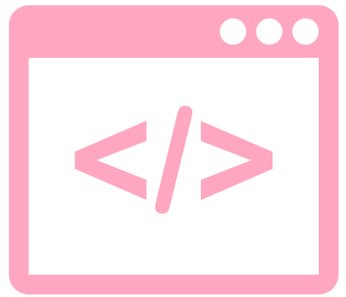
INTRO TO JQUERY

YOUR RESPONSIBILITIES

Don't feel like you have to sit down and memorize the syntax!

Focus on understanding the key concepts

Be resourceful. Google is your best friend



Practice, practice, practice

WHAT JAVASCRIPT CAN DO!

WHAT JAVASCRIPT CAN DO — ACCESS AND MODIFY CONTENT

We can use JavaScript to access and modify content on the page.

Note: we will usually do this in response to something the user does on the page, instead of when the page loads. But we'll get there!

ACCESSING CONTENT:

- Find out what the user typed into the password field.
- Check to see whether the "remember me" checkbox is checked or not.

MODIFYING CONTENT:

- Slide the nav out from the side of a page.
- Fade in a paragraph
- Fade in an image
- Add a red border to the password field

WHAT JAVASCRIPT CAN DO — REACT TO EVENTS

JavaScript is referred to as an event-driven language.

We can wait, or listen, for the user to do something and then respond to that action.

We can write a series of instructions that will happen when an event occurs.

EVENT	ELEMENT	STEPS TO TAKE
click	button	***Slide in the*** nav ***from the side of the page***
mouseover	anchor	***Fade in a paragraph***
scroll	window	***If the user has scrolled 500px or more, fade in an image***
keyup	input	***Check to see if the input has enough characters and add a red border to the field if not***

PSEUDO CODE — EVENTS

```
// WHEN the user _____ the _______
    // steps to take when that event occurs
    // all steps should be indented
```

```
// WHEN the user clicks the button
   // fade in the image
   // display a message that says "You win!"
```

PSEUDO CODE — ALL TOGETHER NOW!

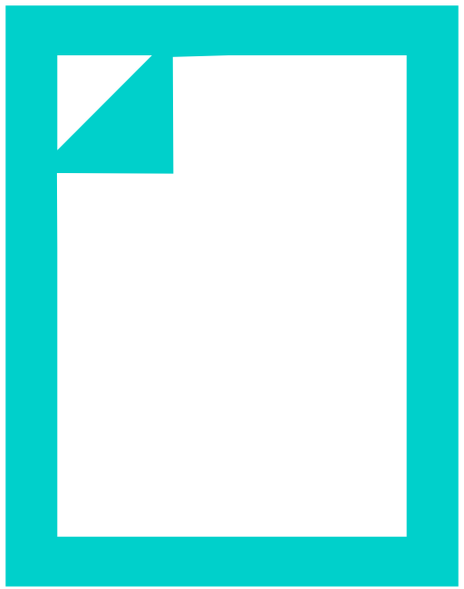
```
// WHEN the user _____ the _______
    // if _____
        // Steps to take if condition is true
    // else
        // Steps to take if condition is false
```

```
// WHEN the user scrolls in the browser window
   // if the user has scrolled more than 500px
        // Fade in the image
   // else
        // Fade out the image
```

THE BASICS

INTRO TO JQUERY — YOUR NEW BEST FRIEND!

jQuery is a JavaScript file you include in your pages.



WHAT CAN WE USE JQUERY FOR?

We can use jQuery to:

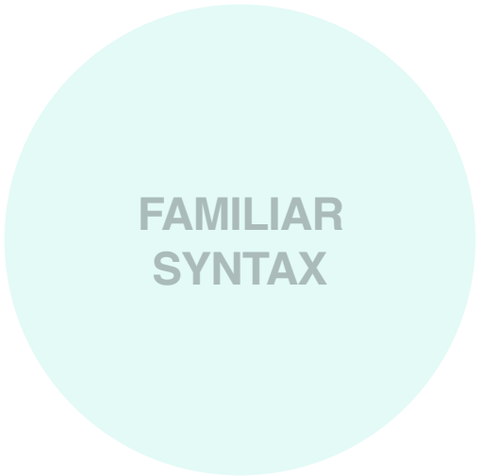
- Access and manipulate content on the page
- Listen for events.

For example:

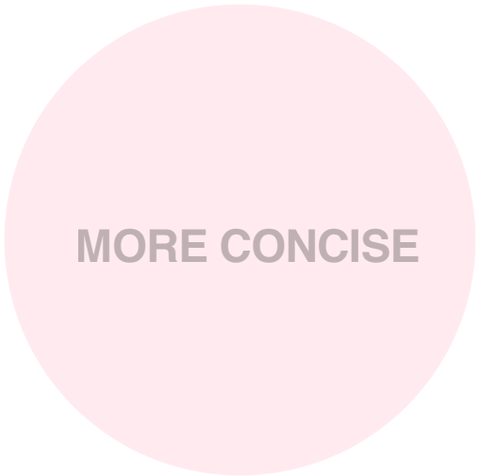
- Listen for when the user clicks the button (event)
- Listen for when the user types into an input field (event)
- Listen for when the user scrolls in the browser window (event)
- Fade in an image
- Slide down a nav menu
- Add an error message to the page
- Add a red border to an input field

INTRO TO JQUERY — YOUR NEW BEST FRIEND!

Works the same in
all browsers



Use more familiar,
CSS-style syntax



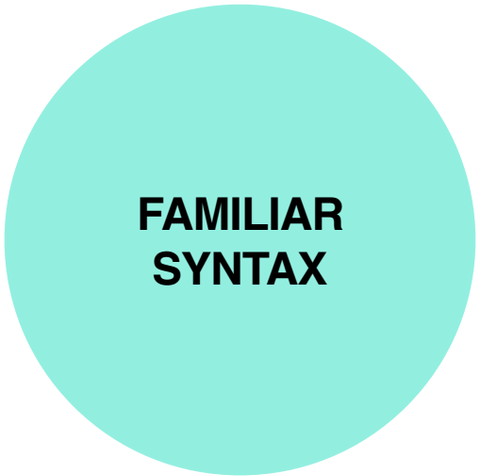
Write way less code to
achieve the same tasks

JQUERY VS. JAVASCRIPT

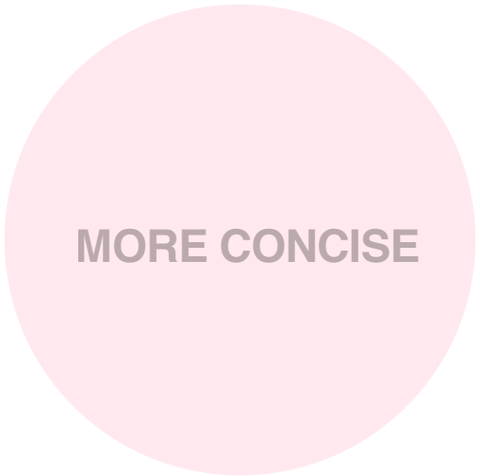
jQuery will ensure that our code works the same in different browsers.

INTRO TO JQUERY — YOUR NEW BEST FRIEND!

Works the same in
all browsers



Use more familiar,
CSS-style syntax

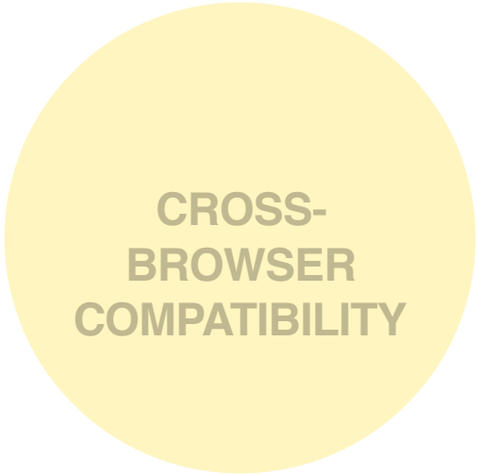


Write way less code to
achieve the same tasks

JQUERY VS. PLAIN VANILLA JAVASCRIPT

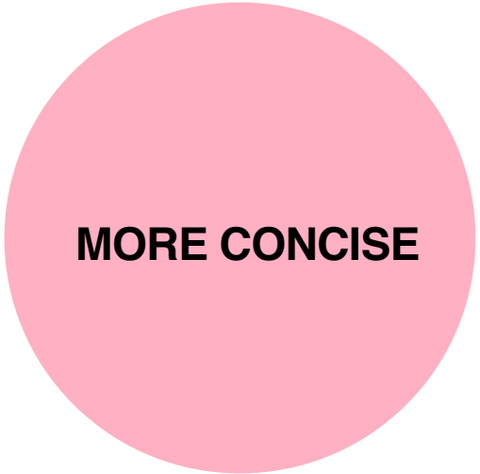
jQuery allows us to use the CSS-style selectors that we know and love! Yay!

INTRO TO JQUERY — YOUR NEW BEST FRIEND!



Works the same in
all browsers

Use more familiar,
CSS-style syntax



Write way less code to
achieve the same tasks

JQUERY VS. PLAIN VANILLA JAVASCRIPT

JS:

```
document.getElementById('heading').textContent = "Your Name";
```

JQUERY:

```
$('#heading').text('Your Name');
```

You could do everything jQuery does with plain-old vanilla Javascript

JQUERY VS. PLAIN VANILLA JAVASCRIPT — A COMPARISON OF BENEFITS

JQUERY

- Write way less code to achieve the same tasks
- Cross-browser compatibility
- Use more familiar, CSS-style syntax

PURE JAVASCRIPT

- Better performance
- Faster

ACTIVITY

KEY OBJECTIVE

- Summarize the difference between the jQuery library and the JavaScript language, and describe benefits of using pure JavaScript vs. jQuery.

EXERCISE

1 min Answer the above question.

ADDING JQUERY TO YOUR PROJECT

ADD JQUERY TO YOUR WEBSITE

1. Download the jQuery script (version 3.x, compressed).
2. Add a js folder to your project
3. Move the jQuery file you downloaded to the js folder
4. Use a script tag to include the jQuery file after your HTML content and before any other JavaScript files that use it.

```
<body>
  <!-- HTML content here -->
  <script src="js/jquery-3.2.min.js"></script>
  <script src="js/main.js"></script>
</body>
```

USING JQUERY

PART 1 — SELECT AN ELEMENT

USING JQUERY TO MANIPULATE THE DOM

1

Select an element/elements

2

Work with those elements

JQUERY SELECTORS

When using jQuery, the first step will always be to select, or choose, an element to work with on the page.

For example:

- Which element do we want to listen for an event on?
- Which element do we want to update the text or styles for?
- Which element do we want to hide?
- Which element do we want to fade in?

JQUERY — SELECTING ELEMENTS

```
$('li')
```

JQUERY OBJECTS — FINDING ELEMENTS: SOME EXAMPLES

	CSS	JQUERY
ELEMENT	`a { color: blue; }`	`$('a')`
ID	`#special { color: blue; }`	`$('#special')`
CLASS	`.info { color: blue; }`	`$('.info')`
NESTED SELECTOR	`div span { color: blue; }`	`$('div span')`

CLASSES AND IDS — REVIEW

```
<button id="form-submit">Submit</button>

<li class="circle">One</li>

<h1>Color Scheme Switcher</h1>
```

```
$('#info')  =  jQuery('#info')
```

PART 2 — ADD A METHOD

USING JQUERY TO MANIPULATE THE DOM

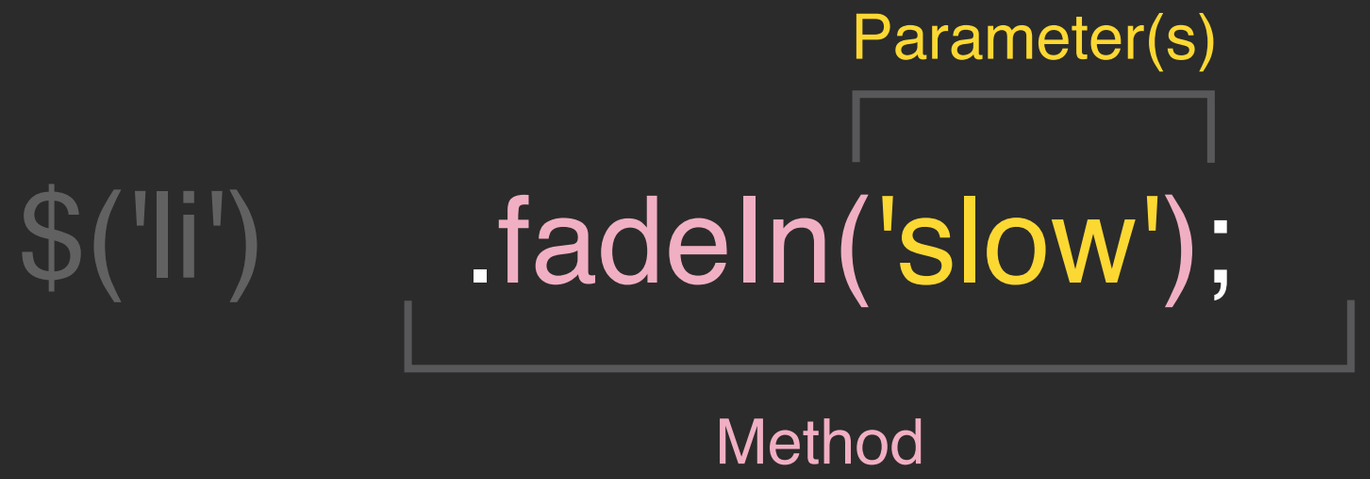
1

Select an element/elements

2

Work with those elements

JQUERY — WORKING WITH THOSE ELEMENTS



JQUERY METHODS — WORKING WITH THOSE ELEMENTS

After we've selected elements, we can use jQuery methods to:

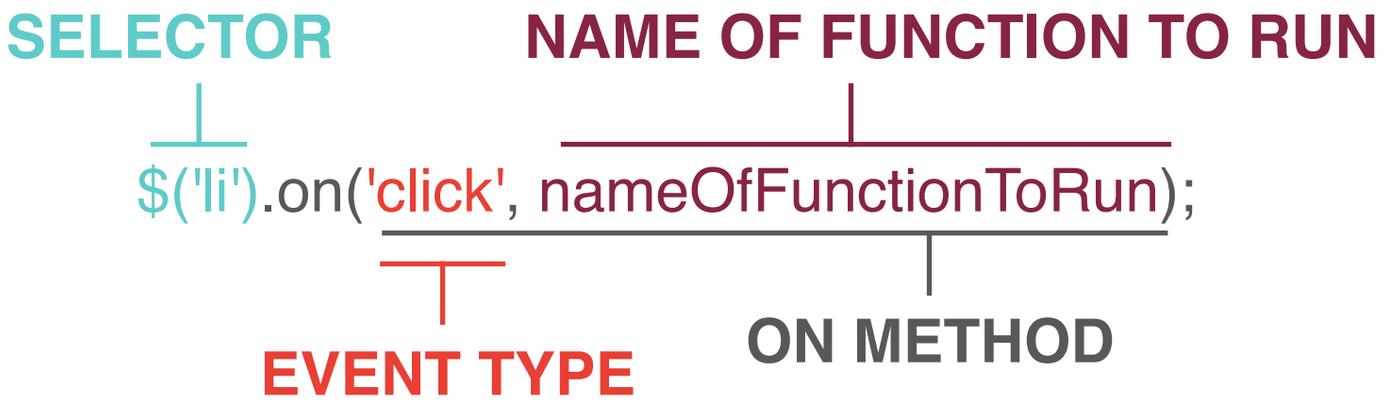
JQUERY METHODS — EVENTS!

We can use the on() method to handle all events in jQuery.

JQUERY METHODS — EVENTS!

```
$('li').on('click', nameOfFunctionToRun);
```

JQUERY METHODS — EVENTS!




```
function nameOfFunctionToRun () {
    // Type code related to event here! :)
}
```

EVENTS — ANONYMOUS FUNCTION

```
$('li').on('click', function () {
    // Type code related to event here! :)

});
```

```
$('li').on('eventGoesHere', nameOfFunctionToRun);
```

MOUSE

- click
- dblclick
- mouseenter
- mouseleave

KEYBOARD

- keypress
- keydown
- keyup

FORM

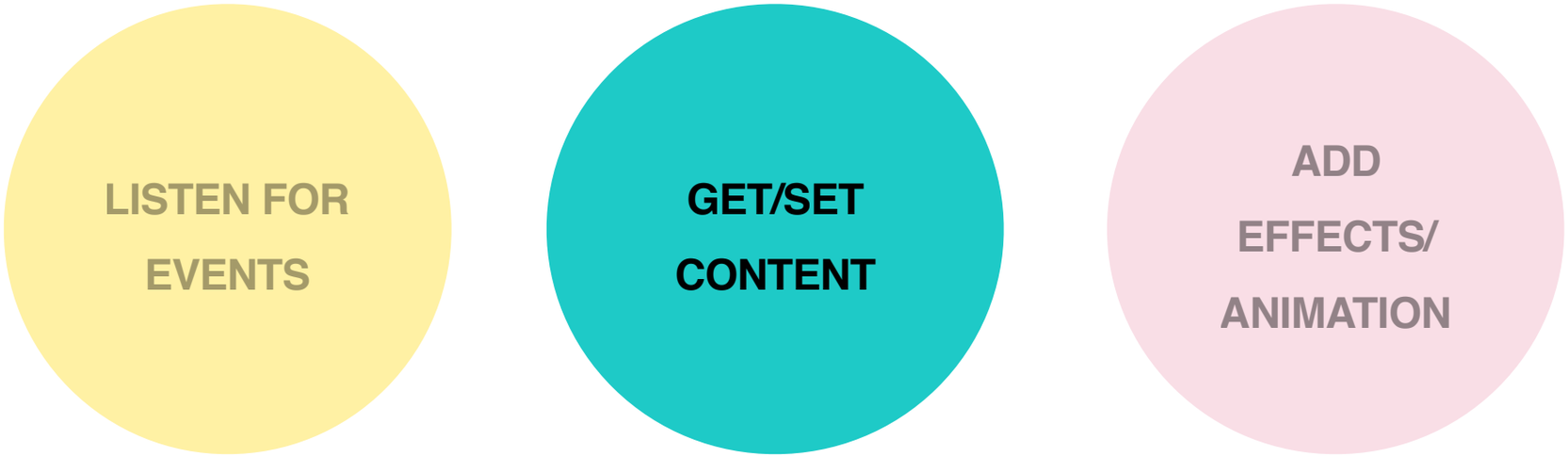
- submit
- change
- focus
- blur

DOCUMENT

- resize
- scroll

JQUERY METHODS — WORKING WITH THOSE ELEMENTS

After we've selected elements, we can use jQuery methods to:



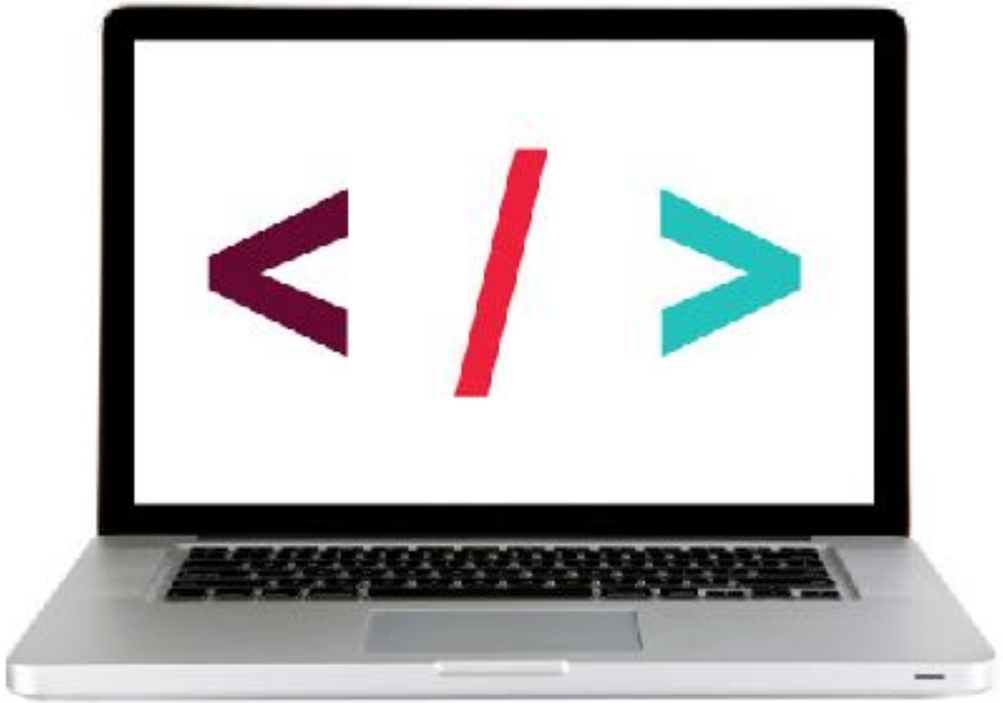
GETTING/SETTING CONTENT — PART 1

Get/change content of elements and attributes

METHODS	EXAMPLES
`.text()`	`$('h1').text('Content to insert goes here');`
`.attr()`	`$('img').attr('src', 'images/bike.png');`
`.css()`	`$('#box1').css('color', 'red');`

What goes in the parentheses?
The html or styles you want to change.

LET'S TAKE A CLOSER LOOK



GETTING/SETTING CONTENT — PART 2

Get/change content of elements and attributes

METHODS	EXAMPLES
`.addClass()`	`$('p').addClass('success');`
`.removeClass()`	`$('p').removeClass('my-class-here');`
`.toggleClass()`	`$('p').toggleClass('special');`

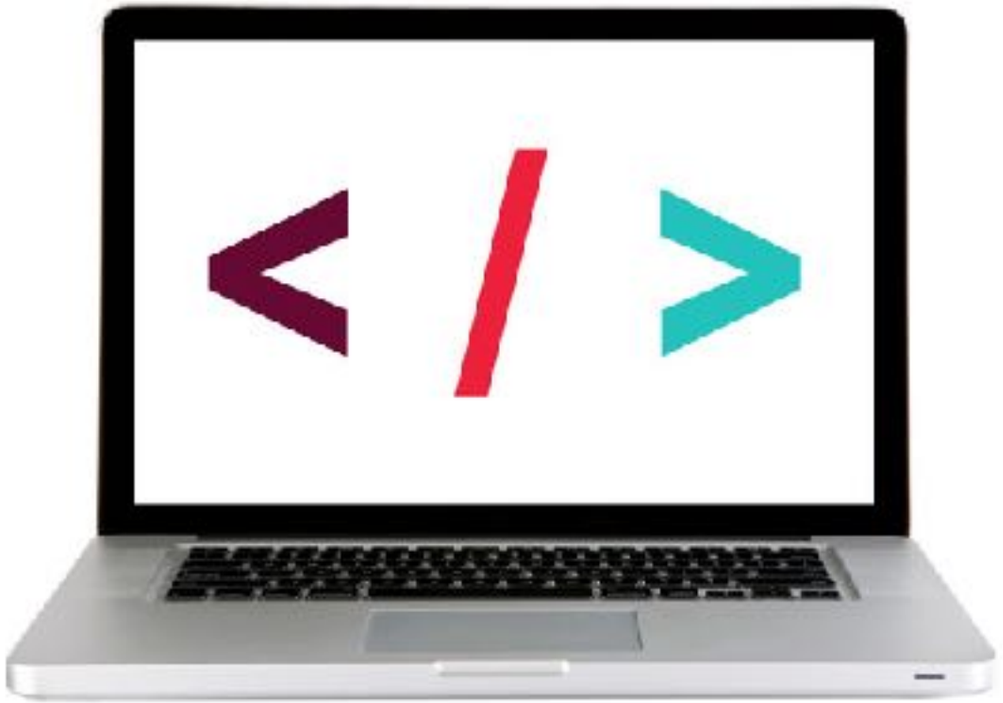
What goes in the parentheses?
The classes you want to change.

JQUERY METHODS — GETTING/SETTING CONTENT

```
$('li').addClass('selected');
```

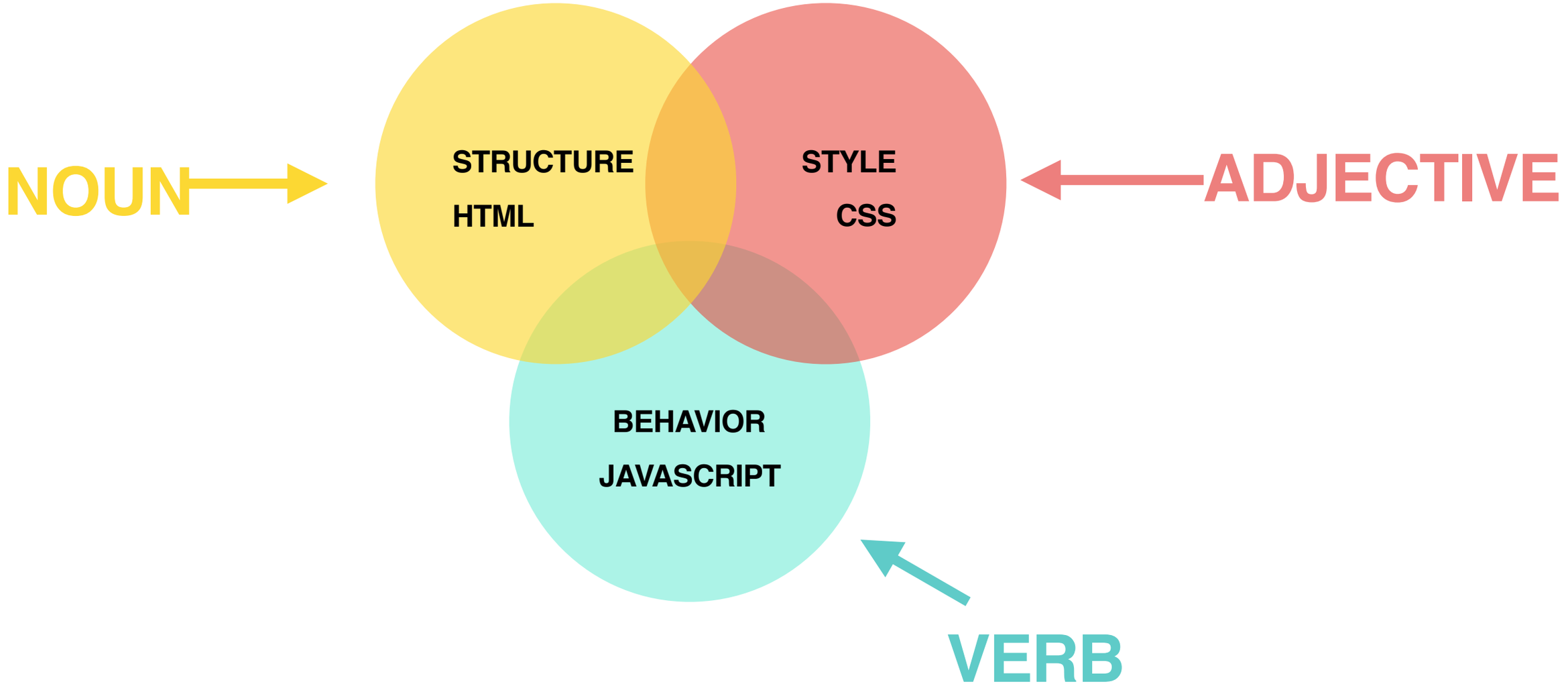
NO PERIOD!!!

LET'S TAKE A CLOSER LOOK



SEPARATION OF CONCERNS

THE THREE AMIGOS: STRUCTURE, STYLE, BEHAVIOR



JQUERY METHODS — WORKING WITH THOSE ELEMENTS

After we've selected elements, we can use jQuery methods to:

JQUERY METHODS — EFFECTS/ANIMATION

Add effects and animation to parts of the page

METHODS	EXAMPLES
`.show()`	`$('h1').show();`
`.hide()`	`$('ul').hide();`

JQUERY METHODS — EFFECTS/ANIMATION

Add effects and animation to parts of the page

METHODS	EXAMPLES
`.fadeIn()`	`$('h1').fadeIn(300);`
`.fadeOut()`	`$('.special').fadeOut('fast');`
`.fadeToggle()`	`$('h1').fadeToggle(350);`

What goes in the parenthesis?
An animation speed

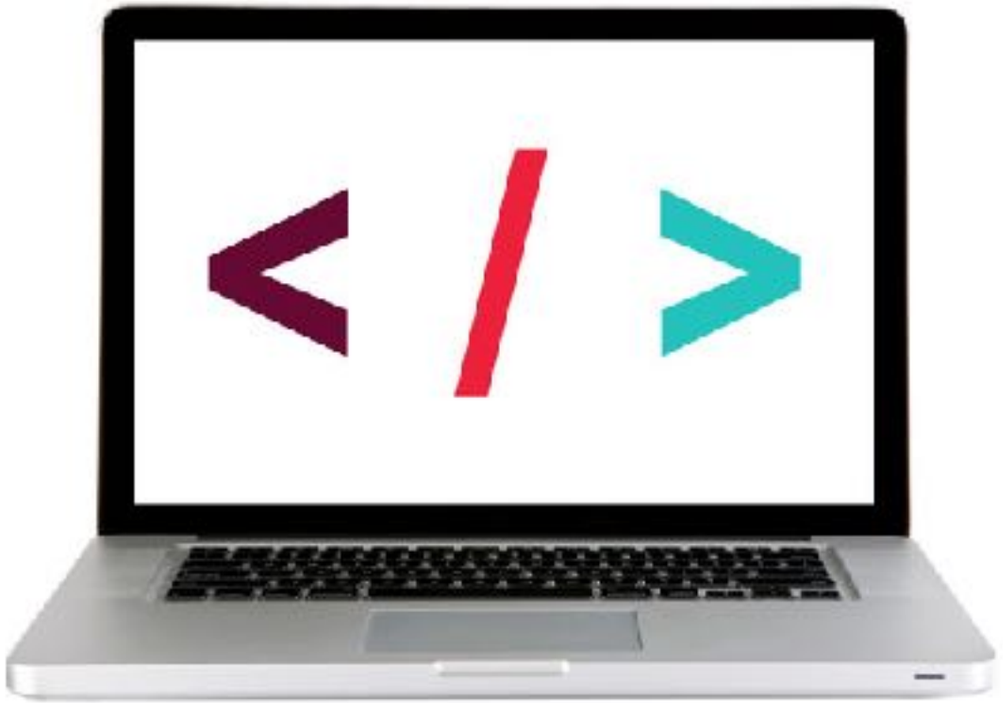
JQUERY METHODS — EFFECTS/ANIMATION

Add effects and animation to parts of the page

METHODS	EXAMPLES
`.slideUp()`	`$('div').slideUp();`
`.slideDown()`	`$('#box1').slideDown('slow');`
`.slideToggle()`	`$('p').slideToggle(300);`

What goes in the parenthesis?
An animation speed

LET'S TAKE A CLOSER LOOK



ACTIVITY

KEY OBJECTIVE

- Practice listening for an event and updating the page when that event happens.

TYPE OF EXERCISE

- Starter Code > jquery_mini_lab

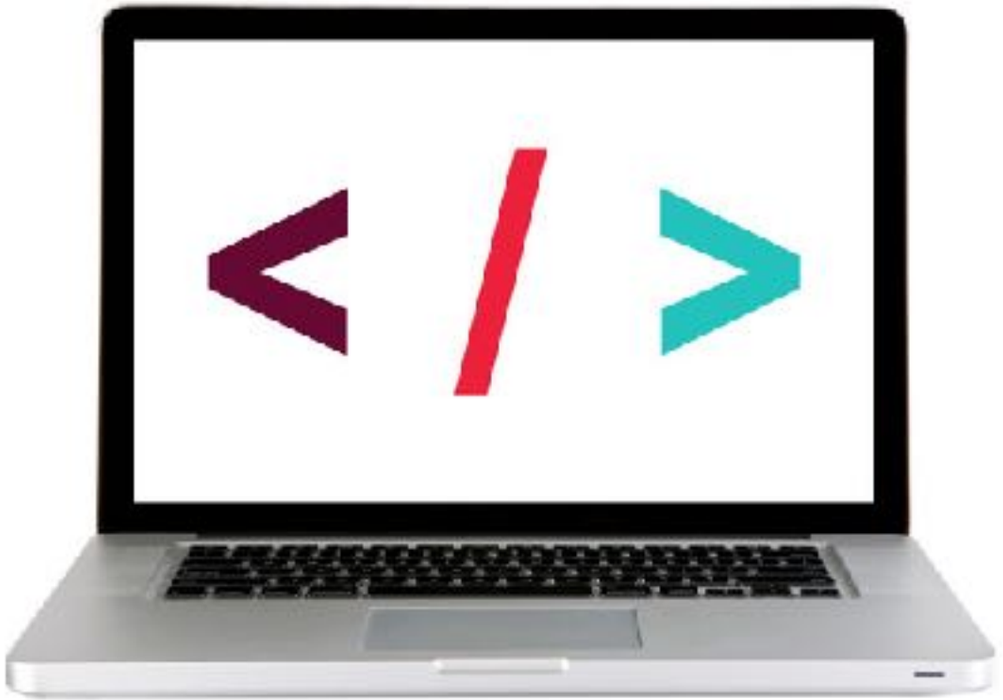
EXERCISE

8 min

1. Follow the instructions in main.js
2. Use cheat sheet as a guide

METHOD CHAINING

ACTIVITY — METHOD CHAINING



METHOD CHAINING!!!

JQUERY METHODS — METHOD CHAINING

```
$( )
.slideUp( )
```

```
'li'
'slow'
```

JQUERY METHODS — METHOD CHAINING

```
$('li')
.slideUp('slow')
```

JQUERY METHODS — METHOD CHAINING

```
$('li').slideUp('slow');
```

JQUERY METHODS — METHOD CHAINING

```
$( )
.addClass( )
```

```
'li'
'.complete'
'complete'
```

JQUERY METHODS — METHOD CHAINING

```
$('li')
.addClass('complete')
```

JQUERY METHODS — METHOD CHAINING

```
$('li').addClass('complete');
```

JQUERY METHODS — METHOD CHAINING

```
$( )
.slideUp( )
```

```
'.item'
300
```

JQUERY METHODS — METHOD CHAINING

```
$('.item')
.slideUp(300)
```

JQUERY METHODS — METHOD CHAINING

```
$('.item').slideUp(300);
```

DEBUGGING

DEBUGGING

WHY ISN’T IT WORKING?

DEBUGGING — WHERE TO START

Always start by defining the problem.

THE IMAGE IS NOT MOVING

NONE OF MY CODE WORKS

DEBUGGING — WHERE TO START

This will tell you where to start your hunt.

THE IMAGE IS NOT MOVING

Find the code that makes
the image move

NONE OF MY CODE WORKS

* Syntax error, check console

DEBUGGING

To access debugging console:

PC: CTRL+SHIFT+J

Mac: COMMAND+OPTION+J

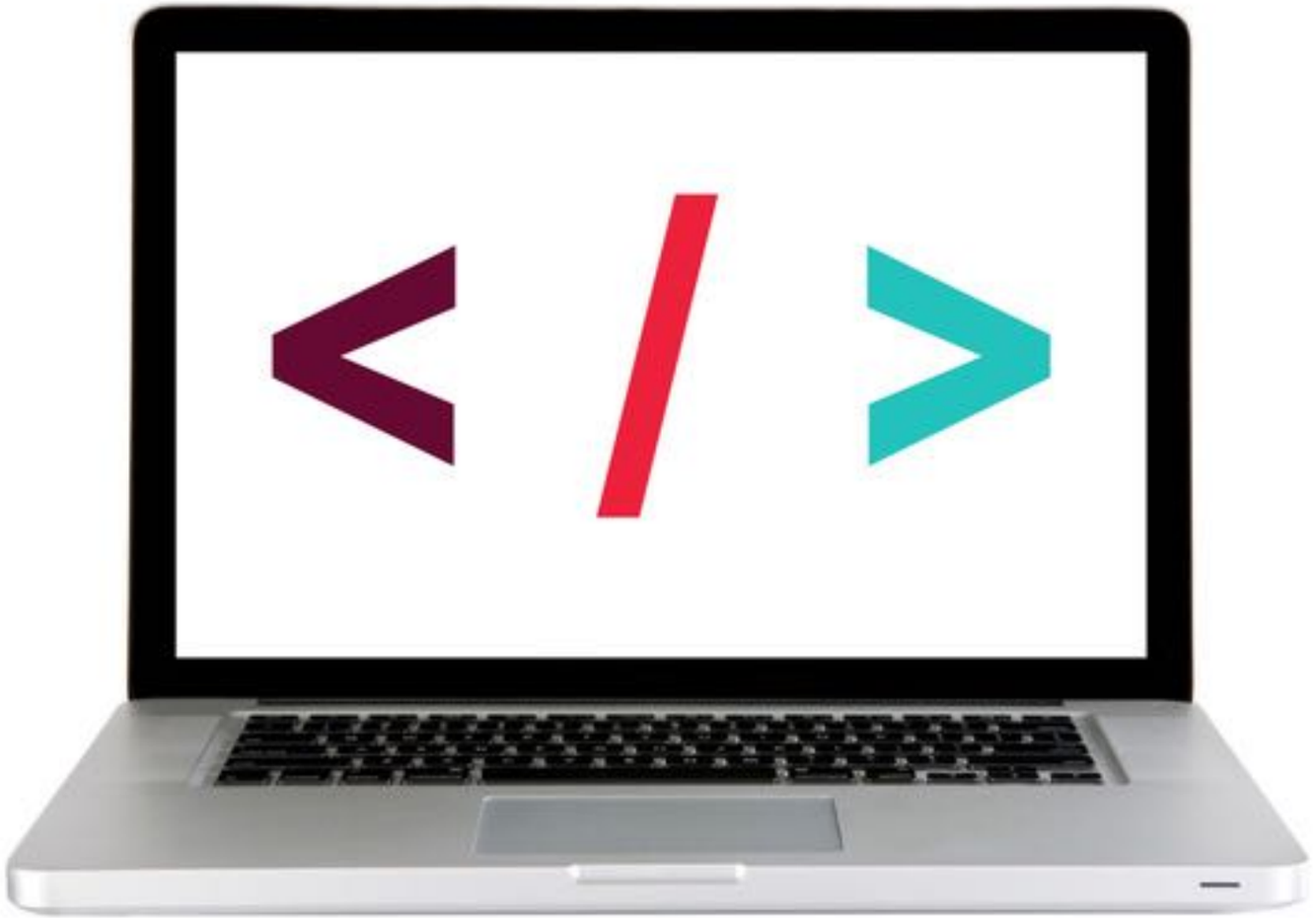
Click the error

DEBUGGING — LEVEL 1

Check for errors in console

- The location may not be correct but is a good place to start.
- Ex: Unbalanced brackets or parentheses

DEBUGGING — FIND THE BUG



DEBUGGING — LEVEL 2

Do some Googling!

- Try Googling it
- Be ready to clearly articulate the problem (Write out what your problem is)

DEBUGGING — LEVEL 3

Get help!

If you still can’t find a solution, ask your instructors.

Help us help you!

1. Slack your instructors
2. Be descriptive about the problem.
3. Tell us what you've already done to try to figure it out.
4. Attach a .zip file

JQUERY DOCUMENTATION

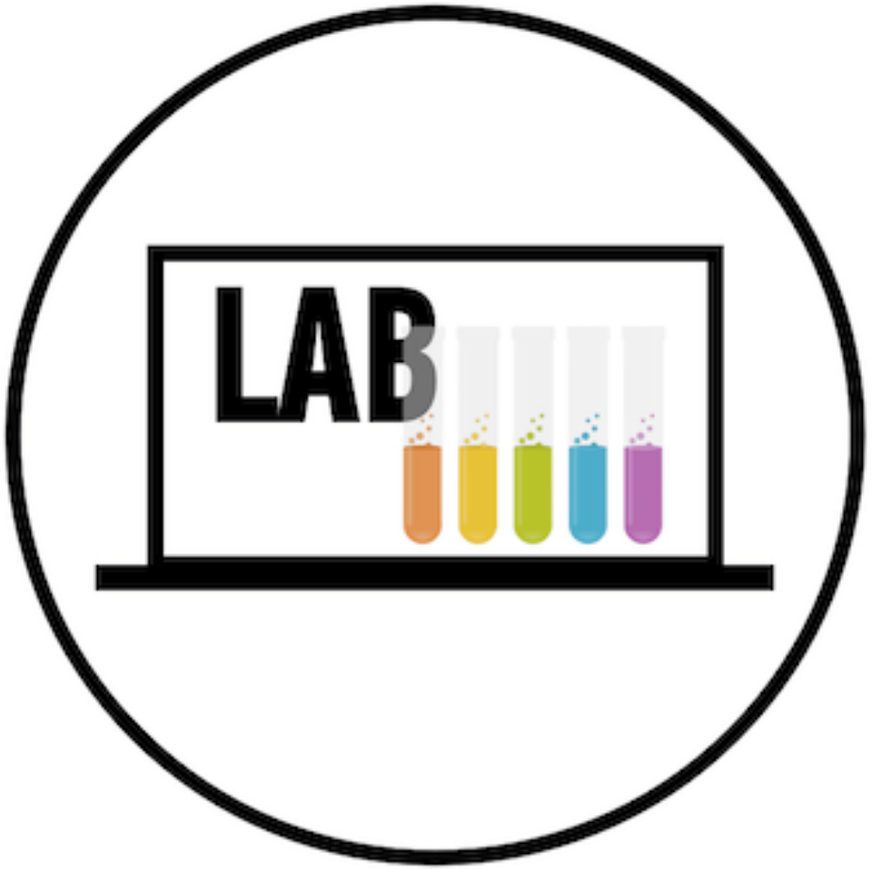
JQUERY DOCUMENTATION - IT'S YOUR FRIEND!

Help! There's too much to learn! I feel overwhelmed!

A good developer is one that can look things up!!!

1. The jQuery Examples page has an example for almost every method!
2. jQuery documentation — Look things up

LAB



ACTIVITY

KEY OBJECTIVE

- Use jQuery to select and update elements in the DOM.
- Write jQuery code to detect and react to events in the DOM.

TYPE OF EXERCISE

- Individual / Groups

AS A CLASS

30 mins

Lab is in starter code > select_fun

1. Follow the instructions in main.js
2. Use cheat sheet as a guide for syntax and look up any methods you're not familiar with in the jQuery documentation.
3. Bonus: Complete part 2 of the lab for more practice (Starter Code> select_fun_bonus)

LEARNING OBJECTIVES

- Differentiate between the jQuery library and the JavaScript language, and describe benefits of using each.
- Add jQuery to a project.
- Recognize jQuery syntax.
- Use jQuery to select and update elements in the DOM.
- Write jQuery code to detect and react to events in the DOM.

EXIT TICKETS