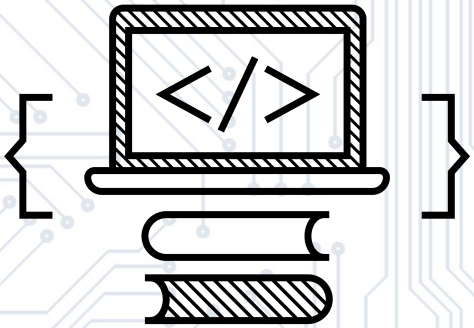


The Joys of JavaScript

Web Development

Lesson 3.1

Today’s Class

Class Objectives

In today's class, we will introduce:

- JavaScript Definitions
- JavaScript Basics:
  - Variables
  - Logging, alerting, prompting
  - Arrays
  - If/else statements

JavaScript

Prepare to become true coders!

How to Learn JavaScript

Your Brain on JavaScript

Time to Take Notes!


And Stay Organized!

Learning JavaScript

Follow these general tips:

Review classwork immediately.

Redo class activities at home.

Come to office hours and keep asking questions.

Do not fear—you will get this!

Activity:
Code Dissection

A big part of being a developer is learning on the fly!

Suggested Time:
7 minutes

Pairing Activity: Code Dissection

01 Open `03-JavaScript/01-Activities/01-CodeDissection`

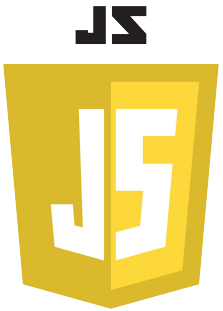
02 Open the html file in Chrome and observe what happens.

03 Try to explain how the code connects to the events that happen on the page.

What Is JavaScript?

JavaScript Definition

JavaScript is one of the three fundamental programming languages of the modern web (the others are HTML and CSS).

HTML	CSS	JavaScript
Used to write content. 	Used to format content. 	Used to create dynamic web applications that take in user inputs, change what's displayed to users, animate elements, and much more. 

Variables

Variables

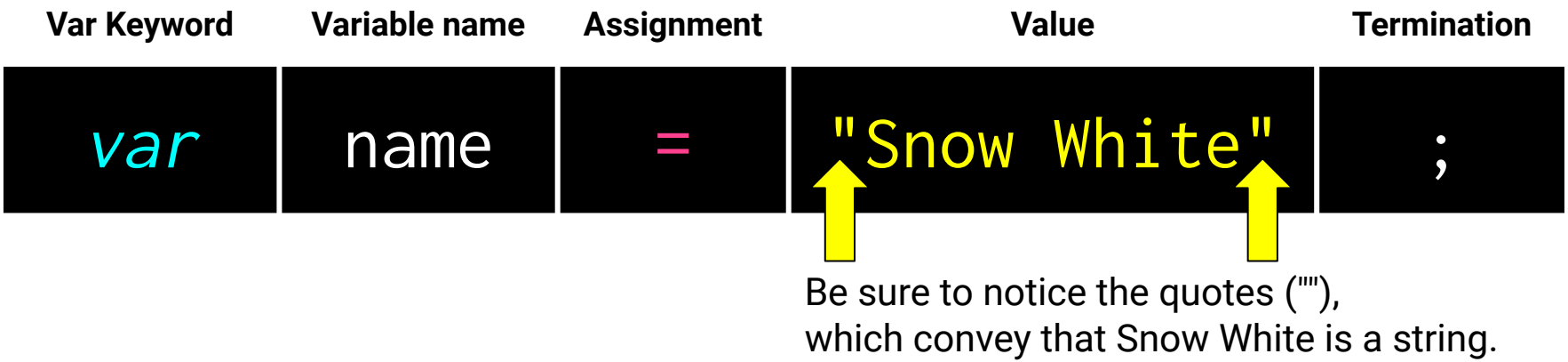
- The *nouns* of programming
- Numbers, strings, Booleans, etc.
- Made up of a **name** and a **value**

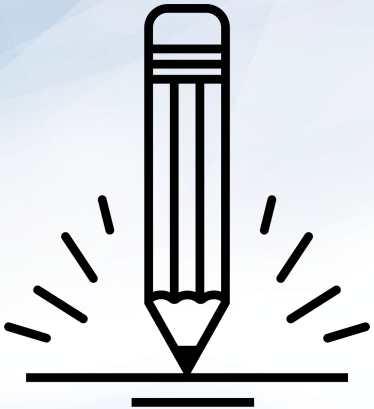
```
var name = "Snow White";
var dwarfCount = 7;
var isSleeping = true;
```

Variable Basics: Syntax

Var keyword	Variable name	Assignment	Value	Termination
`var`	`name`	`=`	`"Snow White"`	`;`

Variable Basics: Syntax





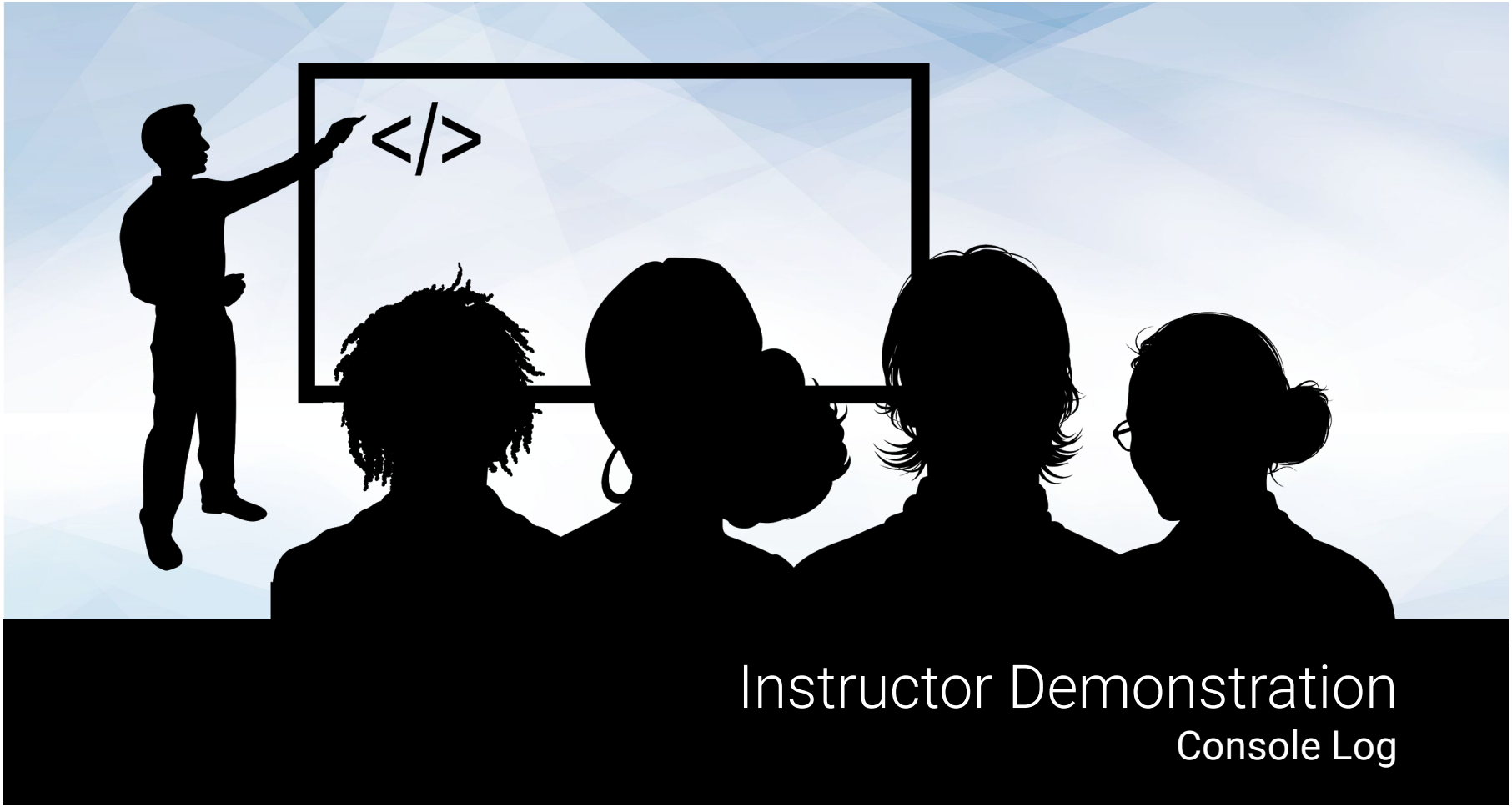
Code-Along Activity: Variables

In this activity, we will fill in the missing JavaScript code to create variables.

`03-JavaScript/01-Activities/03-PizzaVariables`

Suggested Time:

Console Log



Instructor Demonstration

Console Log

Console.log

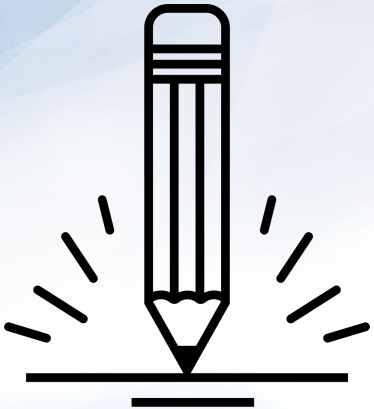
`console.log` is a quick expression that prints content to the debugger—very useful during development and debugging!

```
var quick = "Fox";
var slow = "Turtle";
var numbers = 121;

// The console.log() method is used to display data in the the browser's console.
// We can log strings, variables, and even equations.

console.log("Teacher");
console.log(quick);
console.log(slow);
console.log(numbers + 15);
```

How do you comfort a **JavaScript bug**?

How do you comfort a **JavaScript bug**?

You `"console"` it!

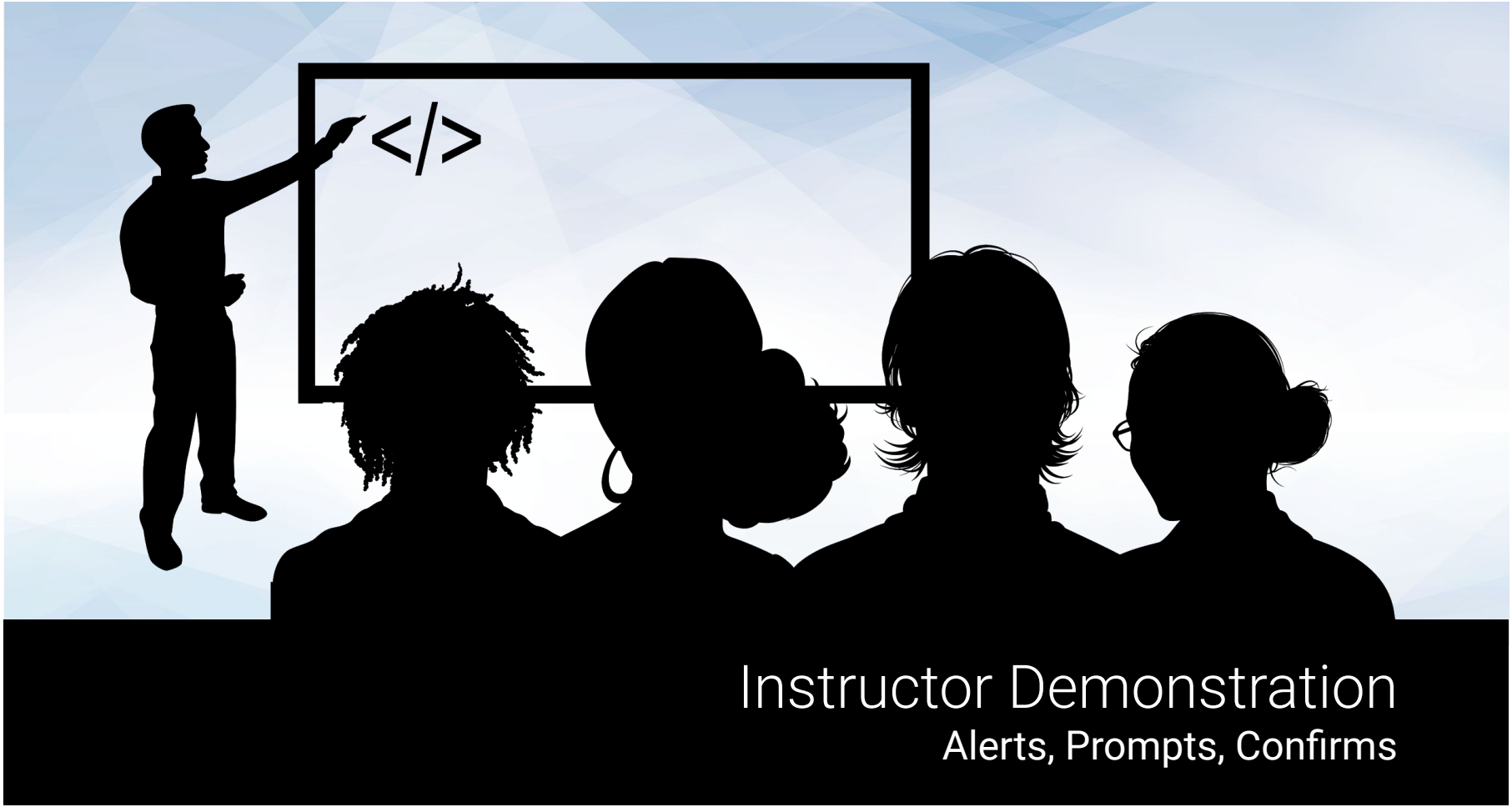


Code-Along Activity: Console Log

`03-JavaScript/01-Activities/05-PizzaConsole`

Suggested Time:

Alerts, Prompts, Confirms



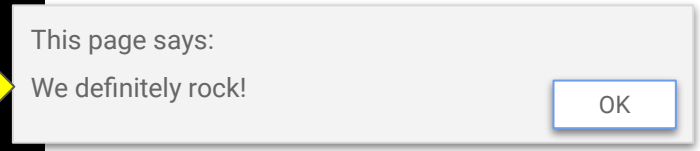
Instructor Demonstration

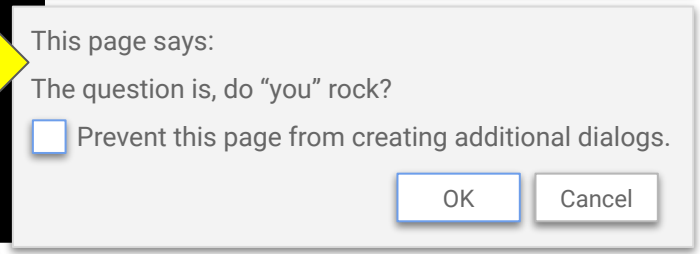
Alerts, Prompts, Confirms

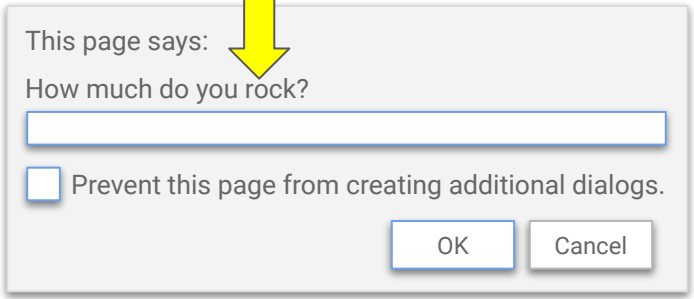
Alerts, Prompts, Confirms

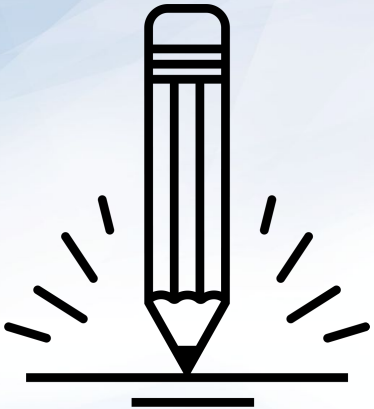
Alerts, prompts, and confirms create a popup in the browser when run.
These are also useful for development and debugging.

```
// Alert
alert("We definitely rock!");

// Confirm
var doYouRock = confirm("The question is, do *you* rock?");

// Prompt
var howMuchRock = prompt("How much do you rock?");
```









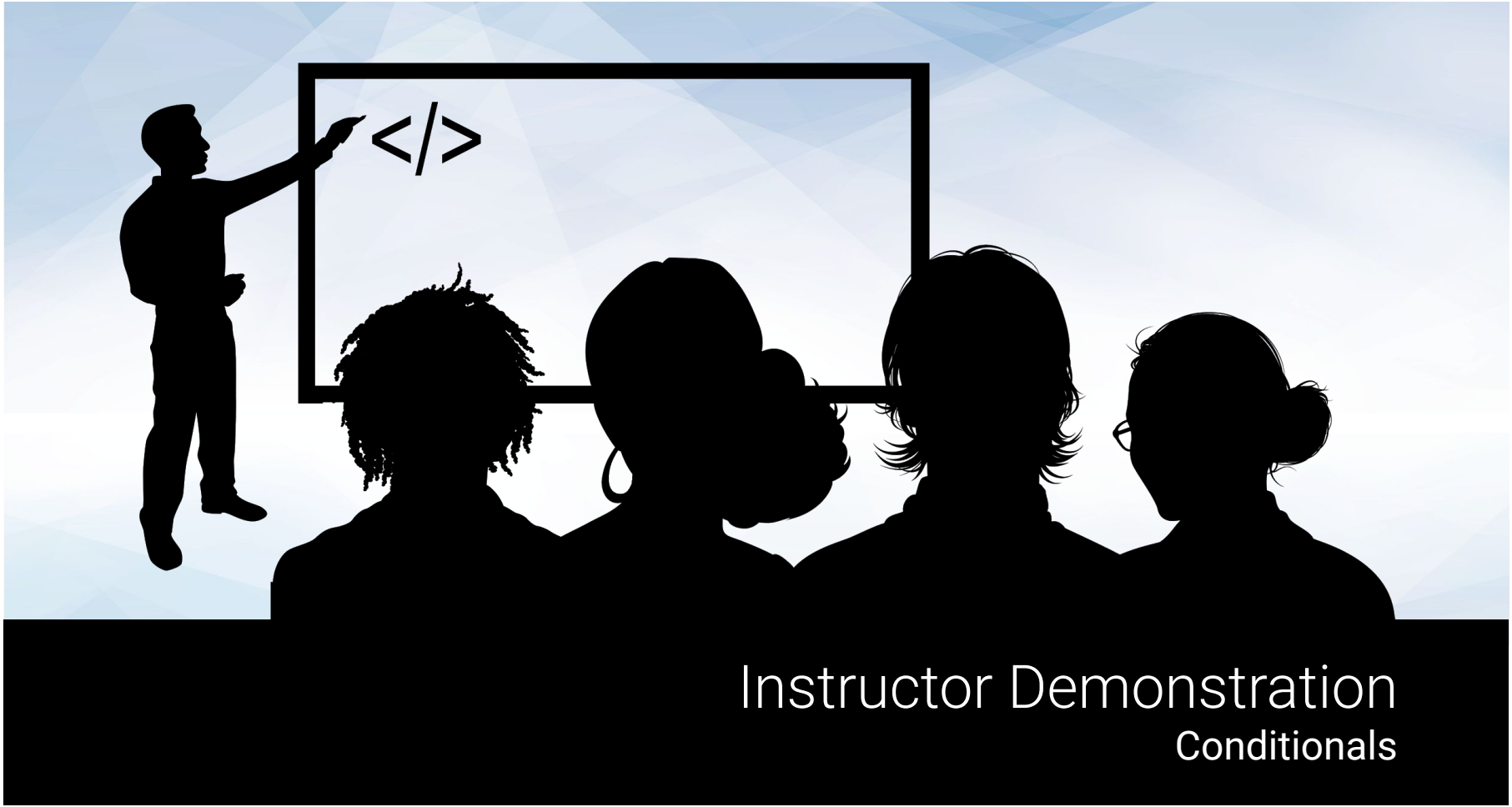
Code-Along Activity: Alerts

`03-JavaScript/01-Activities/07-PromptSushi`

Suggested Time:


Break

If/Else Statements



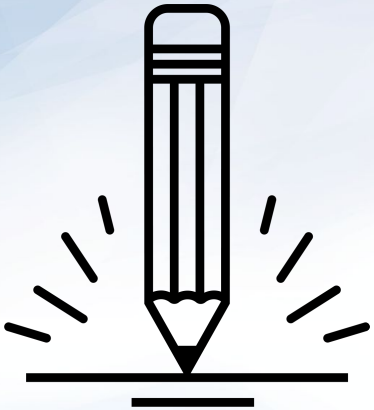
Instructor Demonstration

Conditionals

If/Else Statements Are Critical

Each statement is composed of an if, else-if, or else (keyword), a condition, and the resulting code in curly brackets { }.

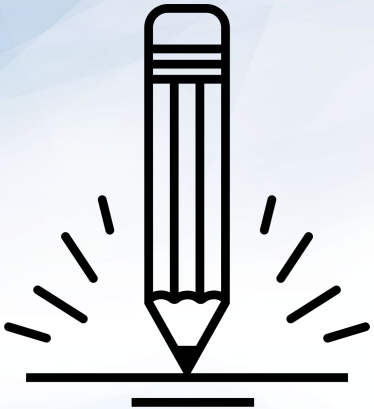
```
// If the user likes sushi (confirmSushi === true), we run the following block of code.
if (confirmSushi) {
  alert("You like " + sushiType + "!");
}
// If the user likes ginger tea (confirmGingerTea === true), we run the following block of code.
else if (confirmGingerTea) {
  alert("You like ginger tea!!");
}
// If neither of the previous condition were true, we run the following block of code.
else {
  alert("You don’t like sushi or ginger tea.");
}
```



Code-Along Activity: If/Else Part 1

`03-JavaScript/01-Activities/09-ConditionalActivity`

Suggested Time:
10 minutes



Code-Along Activity: If/Else Part 2

`03-JavaScript/01-Activities/10-ConditionalActivity2`

Suggested Time:
10 minutes

Arrays

The Zoo Pen

Array Name: zooAnimals

Index 0 **Index 1** **Index 2** **Index 3**

The Zoo Pen: Coded

Array Name: zooAnimals

Coded in JavaScript using an array:

```
// Our array of zoo animals.
var zooAnimals = ["Zebra", "Rhino", "Giraffe", "Owl"];
```

Arrays

Arrays are a type of variable that are *collections*.

These collections can be made up of strings, numbers, Booleans, other arrays, objects … anything.

Each element of the array is marked by an index. Indexes always start with `0`.

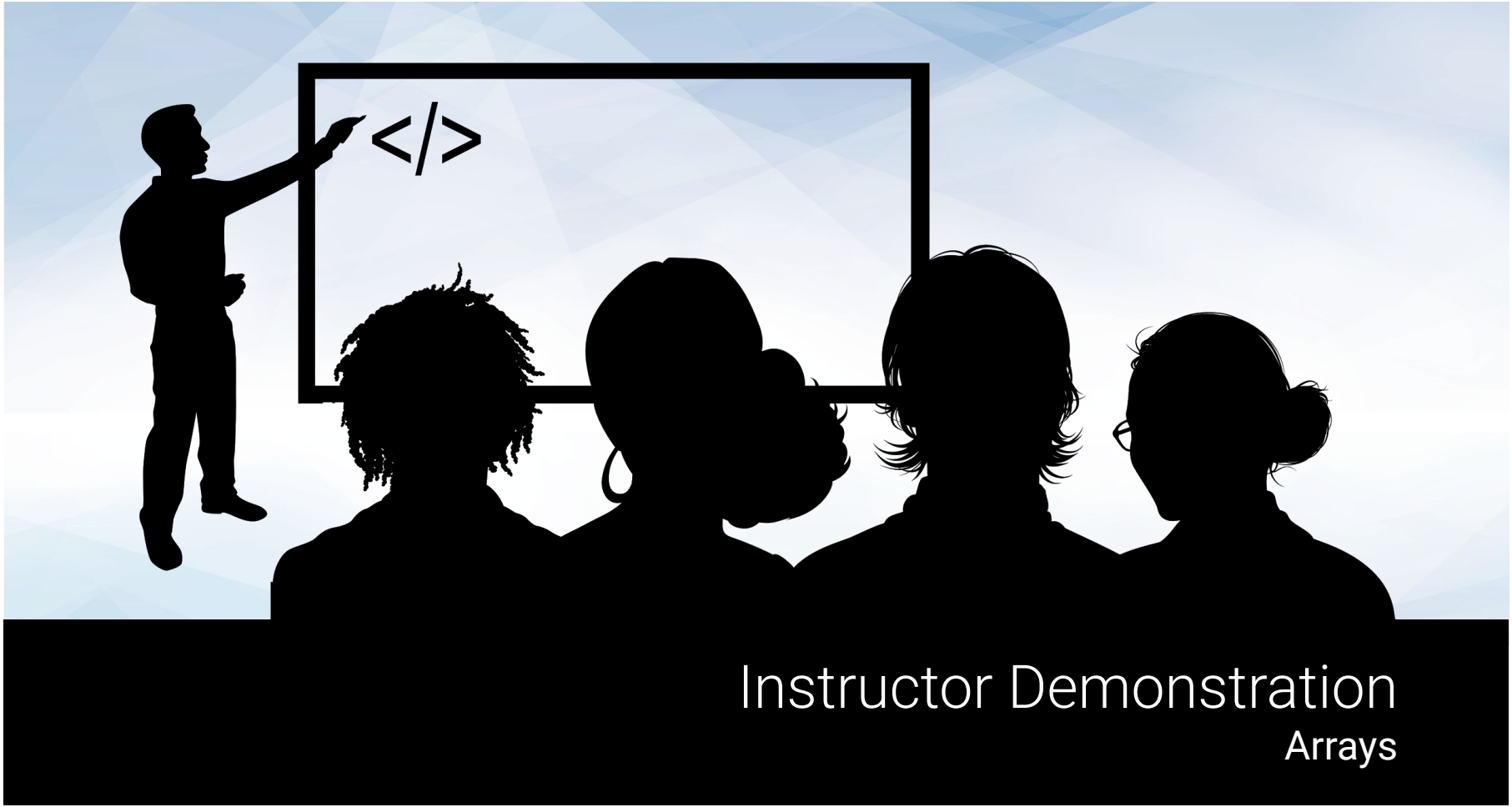
```
var nickCharacters = ["Tommy", "Doug", "Oblina"];

var diceNumbers = [1, 2, 3, 4, 5, 6,];

var mixedArray = ["Zoo", 12, "Carrot", 3];
```

Arrays: Indices

To recover the value at any specific index, include the name of the array with a square bracket `[ ]` and inside the bracket is the element's index.

You can easily grab the number of elements in the array using the method `array.length`.

```
// Our array of zoo animals.
var zooAnimals = ["Zebra", "Rhino", "Giraffe", "Owl"];

// Prints 4 to the console because there are 4 items in our zooAnimals array.
console.log(zooAnimals.length);

// Prints Rhino to the console. Remember, the first item in an array has an index position of 0!
console.log(zooAnimals[1]);

// Prints undefined...because the last index ("Owl") is 3.
console.log(zooAnimals[4]);
```



Instructor Demonstration

Arrays

Pairing Activity: Code Dissection

In your breakout room, take a few moments to look over `03-JavaScript/01-Activities/12-ArraysActivity`.

Above each `console.log()` write a comment predicting what you think the output will be. Then open the code in your browser and see if you are correct! Talk through your expectations that matched and the ones that didn't and see if you can figure out why.

Questions?

Repo Activities Covering Today's Content

- 03-JavaScript/01-Activities/03-PizzaVariables
- 03-JavaScript/01-Activities/05-PizzaConsole
- 03-JavaScript/01-Activities/07-PromptSushi
- 03-JavaScript/01-Activities/09-ConditionalActivity
- 03-JavaScript/01-Activities/10-ConditionalActivity2
- 03-JavaScript/01-Activities/12-ArraysActivity
- 03-JavaScript/01-Activities/13-Bands