

JavaScript Objects



WEB 1.0

- Learning Outcomes
- Warm-Up: `document.querySelector`
- What is an Object?
- **BREAK**
- Activity: Practice using Objects
- Lab Time

By the end of today, you should be able to...

1. Describe the structure of JavaScript objects.
2. Create & update objects for a specific set of data.

Warm-Up

Warm Up (15 minutes)

With a partner, complete the TODOs in [this Repl.it](#) to make the h1 tag change color!

What is an object?

What is an object?

So far, we've learned how to store data in variables: Each variable has a variable name and a value.

```
color = "blue"
```

```
num_pets = 3
```

```
test_scores =  
[83, 97, 65, 89]
```

```
weather = "sunny"
```

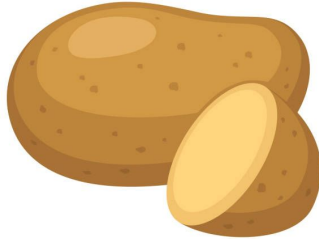
What is an object?

But sometimes, we have multiple data points that all go together to describe the same thing. We can store these in an **object**.



name = "lemon"
category = "fruit"
price = 0.99

Object



name = "potato"
category = "starch"
price = 0.59

Object



name = "kale"
category = "vegetable"
price = 1.29

Object

An object in JavaScript is made up of **properties**, each of which has a **key** and a **value**. It's kind of like having many variables grouped into one, so that we can easily categorize them.

Here is an example of an object in JavaScript. What do you notice about its syntax?

```
const kale = {  
  name: 'Kale',  
  category: 'Vegetable',  
  price: 1.29,  
  slogan: 'Kale Yeah!'  
}
```

We need a way to access our object's properties! We can do that by using **dot notation**.

```
const kale = { /* ... */ }  
  
console.log(kale.name) // Kale  
  
console.log(kale.category) // Vegetable  
  
console.log(kale.slogan) // Kale Yeah!
```

We can also *modify* or *set* properties with dot notation.

```
const kale = { /* ... */ }  
  
kale.is_available = true  
  
kale.slogan = "It's a kale-storm!"  
  
console.log(kale.slogan) // It's a kale-storm!
```

In addition to dot notation, we can also use **square bracket notation**. This is similar to list syntax. Instead of a list index, we use the property's key to look up the corresponding value.

```
const kale = { /* ... */ }  
  
kale['is_available'] = true  
  
kale['slogan'] = "It's a kale-storm!"  
  
console.log(kale['slogan']) // It's a  
kale-storm!
```

Sometimes, we already have variables saved and we just want to bundle them together into an object. That would look like:

```
let name = 'Kale'
let category = 'Vegetable'
let slogan = 'Kale Yeah!'

const kale = {
  name: name,
  category: category,
  slogan: slogan
}
```

We can use a shorthand here to avoid repetition:

```
let name = 'Kale'  
let category = 'Vegetable'  
let slogan = 'Kale Yeah!'  
  
const kale = { name, category, slogan }
```



name: name

Break - 10 min

“Take a 10 minute break and wrap a tag around everything you see.”

Activity (25 minutes)

Work with a partner to complete the JS Objects exercises:

<https://repl.it/classroom/invite/xvTIC1P>

Lab Time

This week's assignments:

- Tip Calculator - due today
- [Mood Shop Tutorial](#) - Parts 7-12 due next Tuesday

Stay in the main Zoom room if you'd like to stay for more Q&A, homework help, etc.

Go to your individual breakout room if you'd prefer to work with a partner or have quiet time!