## **Fundamentals Part 5**

### **Objects**

Objects are a *very* important part of the JavaScript language, and while for the most part you can accomplish simple and even intermediate tasks without worrying about them, any real project that you’re going to attempt is going to feature Objects. The uses of Objects in JavaScript can get deep relatively quickly, so for the moment we’re only going to cover the basics. There’ll be an in-depth dive later.

### **Learning Outcomes**

* Creating objects.
* Accessing object properties.
* Being able to use multiple object operators.
* Being able to use some powerful array functions.

1. [This JavaScript.info](http://javascript.info/object) article is the best place to get started with Objects.
2. [The MDN tutorial](https://developer.mozilla.org/en-US/docs/Learn/JavaScript/Objects/Basics) isn’t bad either, so check it out if you need another take on the subject.

### **Intermediate/Advanced Array Magic**

Besides being a quick and handy way to store data, arrays also have a set of functions for manipulating that data in very powerful ways. Once you begin to master these functions you will start to see ways to use them all over the place! There are really only a handful of these functions… but as you’ll soon see, the possibilities of what you can do with them are near endless.

1. Start out by watching [this video](https://www.youtube.com/watch?v=HB1ZC7czKRs) from Wes Bos. To follow along, use your local Javascript30 repository. If you don’t have the repo yet, clone it from [here](https://github.com/wesbos/JavaScript30).
2. Watch and code with [Part 2](https://www.youtube.com/watch?v=QNmRfyNg1lw) of Wes Bos’s array series.

### **Practice**

You have been through a *ton* of content, and it would not be surprising if you were feeling rather overwhelmed at this point. Let’s take a little time to slow down and practice this stuff with more coding exercises. I’ll warn you now: some of these get pretty difficult, but if you’ve done the lessons you should have covered everything you need to know to solve them. Don’t be afraid to go back and review if you find that you can’t remember something, that’s part of the process. If you get stuck, come join us in the chatroom!

### **Assignment**

At this point you just need a little more practice! Go back to the [JavaScript exercises](https://github.com/TheOdinProject/javascript-exercises) that we introduced in the Fundamentals 4 project and complete the following:

* calculator
* palindromes
* fibonacci
* getTheTitles
* findTheOldest
* (Solutions for these exercises can be found in the ‘solutions’ branch of that repo)

### **Knowledge Check**

This section contains questions for you to check your understanding of this lesson. If you’re having trouble answering the questions below on your own, review the material above to find the answer.

* [What is the difference between objects and arrays?](https://javascript.info/object#summary)
* [How do you access object properties?](https://developer.mozilla.org/en-US/docs/Learn/JavaScript/Objects/Basics#bracket_notation)
* [What is *Array.prototype.map()* useful for?](https://www.youtube.com/watch?v=HB1ZC7czKRs&t=233s)
* [What is *Array.prototype.reduce()* useful for?](https://youtu.be/HB1ZC7czKRs?t=467)