There are three essential data types to know:

1. *String*: Any grouping of words or numbers surrounded by single quotes: ' ... ' or double quotes " ... ".
2. *Number*: Any number, including numbers with decimals, without quotes: 4, 8, 1516, 23.42.
3. *Boolean*: This is always one of two words. Either true or false, with no quotations.

var myString = "Iris";

var myNumber = 129;

var myBoolean = true;

console.log("Name: " + myString);

console.log("Lucky Number: " + myNumber);

console.log("Good joke? " + myBoolean);

We can ask JavaScript to print words to the console with this line of code:

console.log('Your message here.');

We can do math with operators like +, -, \*, and /. We can find the remainder after dividing two numbers with a modulus: %.

Math.floor(Math.random() \* 50);

In this case:

1. Math.random will generate a random number between 0 and 1.
2. We then multiplied that number by 50, so now we have a number between 0 and 50.
3. Then, Math.floor will round the number down to the nearest whole number.

We write a single line comment with // and a multi-line comment with /\* and \*/.

Here is how you declare a variable:

var myName = 'Arya'; console.log(myName); // Output: Arya

You can almost read it aloud: "Variable myName is equal to Arya."

Let's dissect that statement and look at its parts:

1. var, short for variable, is the JavaScript *keyword*that will create a new variable for us.
2. myName is chosen by a developer (that's you!). Notice that the word has no spaces, and each new word is capitalized. This is a common convention in JavaScript, and is called *camelCase*.

After the variable is declared, we can print the variable with: console.log(myName). This will print 'Arya'to the console.

We can use the + operator from earlier to interpolate (insert) a variable into a string, like this:

var myPet = 'armadillo'; console.log('I own a pet ' + myPet + '.'); // Output: 'I own a pet armadillo.'

In programming, making decisions with code is called *control flow*.

Note: Why is there a \ in 'I lead a muggle\'s life.'? Since the string is surrounded by single quotes, we can use a back slash to add a single quote within the string. This is called *escaping* a character.

1. To check if two things equal each other, we can use === (three equals in a row).
2. *Logical Operators*, like &&, ||, !==, and !, can compare two variables to see if a certain condition exists

switch statements look like this:

var groceryItem = 'papaya'; switch (groceryItem) { case 'tomato': console.log('Tomatoes are $0.49'); break; case 'lime': console.log('Limes are $1.49'); break; case 'papaya': console.log('Papayas are $1.29'); break; default: console.log('Invalid item'); break; }

Take a look at this code:

var calculatorOn = false; function pressPowerButton() { if (calculatorOn) { console.log('Calculator turning off.'); calculatorOn = false; } else { console.log('Calculator turning on.'); calculatorOn = true; } } pressPowerButton(); // Output: Calculator turning on. pressPowerButton(); // Output: Calculator turning off.

Parameters are variables that we can set when we call the function. For example:

function multiplyByThirteen(inputNumber) { console.log(inputNumber \* 13); } multiplyByThirteen(9); // Output: 117

