WEB DEVELOPMENT WORKSHEET
DAY 5 (Friday)

Part I: Reminders

So far, we've learned the basics of HTML and CSS, and how to use JavaScript in the console to make changes to a web page. If you need a refresher, or want to refer to information in a previous worksheet, here are the links:

Day 1 worksheet

Day 2 worksheet

Day 3 worksheet

Day 4 worksheet

Part II: querySelector and style

So far, we've used a few JavaScript functions. Some of them only change data in the console, and others create effects that we can see on the website itself. Today, we're going to focus on changing the website with the querySelector and style functions.

Here are some examples of how we've used querySelector and style, so far:

Original HTML	`<h1 id="1"> Hi! </h1>`
Original appearance on page	# Hi!
JavaScript	`var one = document.querySelector("#1")` `one.style.color = "orange"`
Appearance after JavaScript	Hi!

Original HTML	`<p class="ybg">`
	`    Hello, I am a paragraph of text with a`
	`class attribute of "ybg".`
	`</p>`

Original appearance on page	Hello, I am a paragraph of text with a class attribute of "ybg".
JavaScript	```var p = document.querySelector(".ybg")``` ```p.style.background = "yellow"```
Appearance after JavaScript	<mark> Hello, I am a paragraph of text with a class attribute of "ybg".</mark>

Original HTML	``` ```
	``` Content is here```
	``` ```

Original appearance on page	Content is here
JavaScript	```var d = document.querySelector("div")``` ```p.style.fontSize = "30px"```
Appearance after JavaScript	# Content is here

We can control almost any aspect of an element's appearance using this syntax!

Part III: Let's see what happens

In this section, you'll copy some JavaScript code into the console of your browser while on our [class site](#). After you copy the code and hit enter, respond to the question in your journal, as usual.

Remember, you can reload the page at any time to undo the changes that your JavaScript code has made.

First, let's mess around with the "fill" of some elements. Fill is another way of saying "background," and it only works on elements inside svg tags.

Code	```var a = document.querySelector("#shirt")``` ```a.style.fill = "red"```
Question	**Q: What happens when you copy the code into the console on our class site and hit enter?**

Code	`var b = document.querySelector("#collar")` `b.style.fill = "blue"`
Question	**Q: What happens when you copy the code into the console on our class site and hit enter?** **Q: What is the value of the class attribute of the element you stored in the variable b?** (Remember that you can see the element stored in a variable in your console by simply typing the variable name and hitting enter)

Now, let's add a border to some things. There are three pieces of information that you define for a border: the thickness of the border, the style of the border, and the color of the border.

Code	`var c = document.querySelector("main")` `c.style.border = "10px solid purple"`
Questions	**Q: What happens when you copy the code into the console on our class site and hit enter?** **Q: What happens if you enter the code again, but change the word "solid" to "dashed"?**

Transform is a very powerful part of style. With transform, you can make all sorts of changes to the size, shape, and position of HTML elements.

Code	`var d = document.querySelector("#site-header")` `d.style.transform = "translateY(90vh)"`
Questions	**Q: What happens when you copy the code into the console on our class site and hit enter?** **Q: What would you write inside the parentheses of querySelector if you wanted to select the same element, but using a class selector instead of an ID selector?**

Code	`var e = document.querySelector("#svg--figgy")` `e.style.transform = "scale(5)"`
Question	**Q: What happens when you copy the code into the console on our class site and hit enter?**

Part IV: Your turn

Now that we've had some practice, it's your turn to write some JavaScript! Remember that you can refer to the code above, as well as all of your previous worksheets, articles, and videos, for help.

Q: Write JavaScript code to change the color of the bearded man's pants.

Q: Pick any one HTML element that you want on the class site. Write JavaScript code to add a border to that element.

Q: Pick any one HTML element that you want on the class site. Write JavaScript code to make that element bigger.
(You can use fontSize or transform.)

If you want to see more examples of what you can do with JavaScript in the console, check out this article:
https://www.thinkful.com/blog/learn-javascript-fast-by-hacking-your-favorite-websites/

Part V: Congratulations!

You've made it through our week of web development! I know that there was a lot of information thrown at you this week, and learning online can be challenging. I want to say thank you for your effort, and for your continued effort in Upper School and Beyond, as well as your other classes.

It's impossible to learn web development in a week -- even learning the basics of HTML, CSS, and JavaScript takes months, and getting really good at them takes years of learning and practice. I hope that you've enjoyed this small taste of web development, and programming in general.

If you find programming and computer science interesting, I'd love to have you in Introduction to Computer Science next year -- it's a great course where we learn the Python programming language (it's similar to JavaScript), and use it to solve problems and build all kinds of neat tools.