Units of Measurement

Absolute vs. Relative

Absolute units of measurements are fixed and appear as exactly that size. A common absolute unit of measurement is px or pixels.

Relative units of measurement specify a size relative to another property size. Relative units are better for responsive pages, or in other words, the elements size relative to what device the user is rendering the page on. Common relative units of measurement include em and % (percentages).

Example 1

In this example, we will be adding values and units of measurement to your CSS.

Let's copy the following code into an HTML file. (If you've completed other learning modules you may already have these files. You can just add to them.)

```
<!DOCTYPE html>
<html>
<head>
    <title>BYUI</title>
    <link rel="stylesheet" href="styles/styles.css">
</head>
<body>
    <header>
        <nav>
            <a id="active" href="byui.html">Home</a>
            <a href="https://www.churchofjesuschrist.org">Church of Jesus
            <a href="https://www.churchofjesuschrist.org/temples">Temples
            <a href="https://www.churchofjesuschrist.org/study/scriptures
        </nav>
    </header>
    <main>
        <h1>Brigham Young University Idaho</h1>
        <img src="https://web.byui.edu/policylibrary/assets/images/home.j
```

```
        <p>BYU-Idaho is a comfortable place to learn and grow as a discip
      </main>
      <footer>
          <p>My Web Page 20XX &copy</p>
      </footer>
  </body>
  </html>
```

Let's create a CSS file. Create a folder at the same level as our HTML file and call it styles. Within that folder, let's create a styles.css file. Open that styles.css in the editor. (Again, if you already have this CSS file you can just add to it.)

Remember if you already have CSS rules targeting an element that you will be asked to give a new rule to, it's best to replace or combine your declarations with the rule you already have in CSS. This makes our code clean and efficient.

Right now the image of BYUI is rendering on our page in whatever size it was when it was created. If our page is narrow, like on a phone the image will get cut off and only the left edge will show. If our monitor is very large there might be a lot of space after the image to the right. If we give the image a pixel size like width: 800px it will always be 800px wide again, regardless of the width of the device.

Let's make it more responsive by giving it a percentage unit of measurement. Always put units of measurement in CSS not in HTML.

Depending on other practice modules you've completed may already have that width measurement for img in your CSS.

```
img {
    width: 80%;
}
```

Notice as you resize the page the image always remains at 80% of the page. Play around with other percentages to see how it looks.

You can also give the paragraph 80% width as well.

```
p {
    width: 80%;
}
```

Example 2

Let's use the em unit of measurement to change the font size of our navigation links. Since we haven't changed the font size of our default body, we know that 16px is our starting point. If we want our font size to be one and a half times as big (16 + 8 = 24px), we can use 1.5em.

Add this to what may already be in the 'a' rule set.

```
a {
    font-size: 1.5em;
}
```

Now the text size of our links are bigger and easier to read.

Centering elements, and giving them breathing room with margins and paddings also uses units of measurement, but those will be covered in other learning modules ('Block vs. Inline' and 'Box Model').