

Positioning Background Images

In this lesson, we'll learn how to position background images on our web pages. Let's begin!

WE'LL COVER THE FOLLOWING



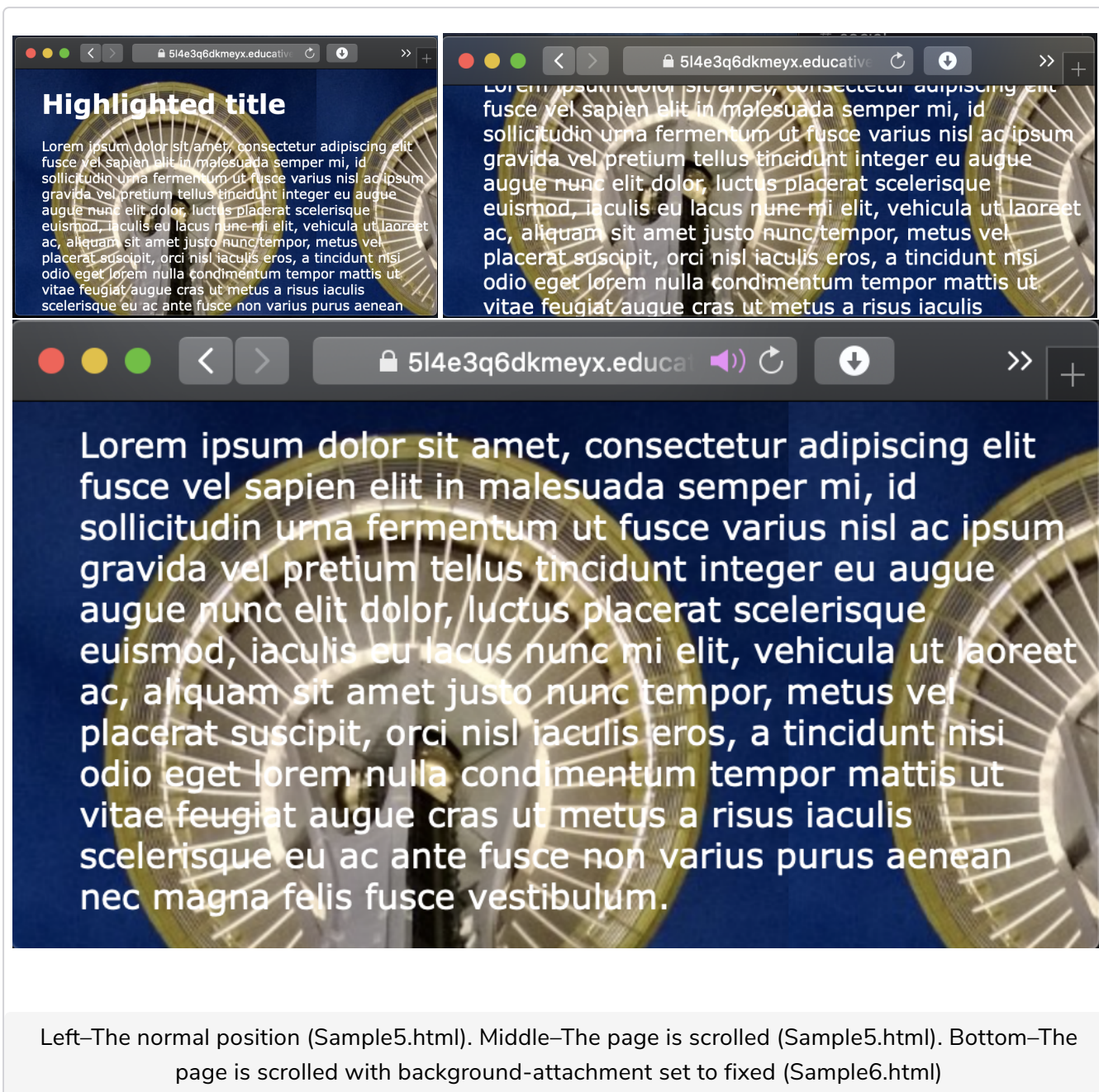
- The `background-attachment` property
- The `background-position` property
- The `background-attachment` property

By default, background images scroll together with their parent elements. So, if you have a page that can be vertically scrolled, the background image moves with the page while you scroll up and down. You can change this behavior with the `background-attachment` property.

The `background-attachment` property

This property can have one of these values: `scroll` where the background scrolls along with the element, `fixed` where the background is fixed with regard to the current browser window, and `local` where the background scrolls along with the element's contents.

The image below shows the difference between the scroll and fixed values.



Left–The normal position (Sample5.html). Middle–The page is scrolled (Sample5.html). Bottom–The page is scrolled with background-attachment set to fixed (Sample6.html)

The **background-position** property

In most webpages, you need more control over positioning background images. The **background-position** property provides you three ways to place these images.

First, you can specify horizontal and vertical alignment values.

Second, you can define exact positions. Lastly you can use percentage values. Let's see how these methods work.

You can use the horizontal alignment values (left, center, and right) in pairs with vertical alignment values (top, center, bottom) to place the background image to the specified screen position. When you want to position the

background image to the top right corner, set `background-position` like this:

```
background-position: top right;
```



You can see the result of this positioning in the image below:



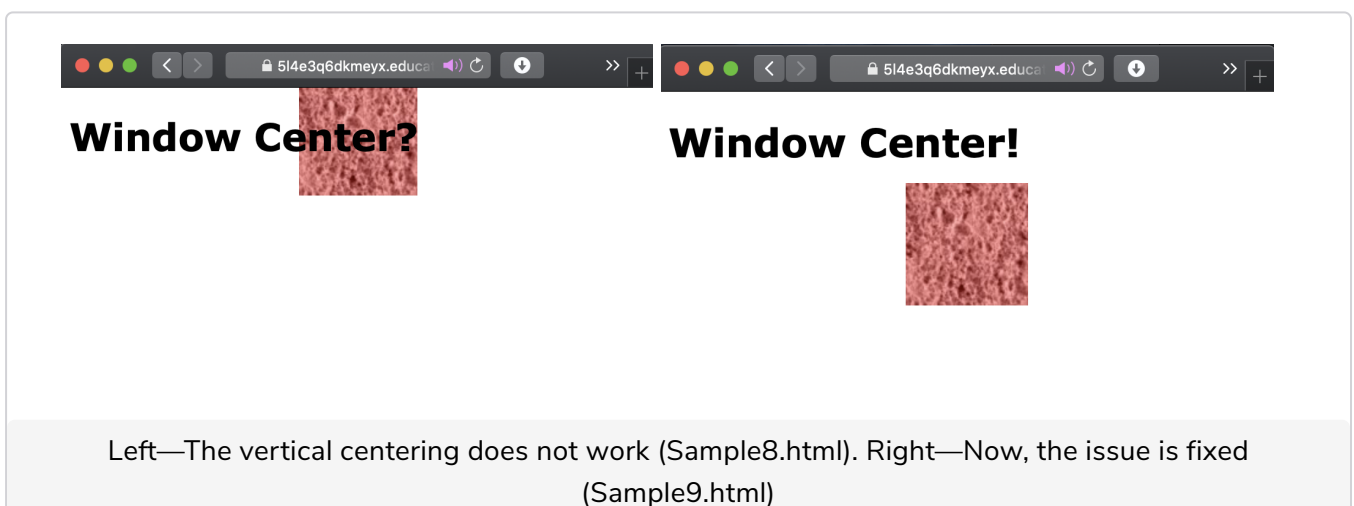
If you intend to put the image into the browser window's center, use this setting:

```
background-position: center center;
```



The `background-attachment` property

However, to be able to position the image vertically, you must set the `background-attachment` property to `fixed`; otherwise, the vertical position is set to top, even if you specify center or bottom. The image below demonstrates this situation. Both panes set `background-position` to `center center`, but the right pane uses `fixed` for `background-attachment`.

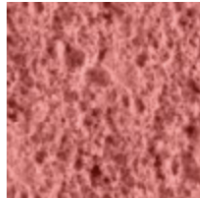


You can apply exact sizes (pixels, inches, ems, etc.) to set the left and top position of the background image's top-left pixel. For example, the Sample10.html file uses this position setting to produce the result shown in the image below:

```
background-position: 36px 56px;
```



Precise positioning



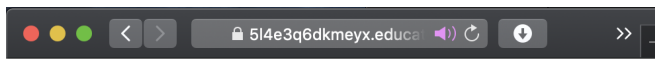
Using precise background image positions (Sample10.html)

Instead of precise positions, you can apply percentage values; for example, you can put the background image into the center of the browser window with these property settings:

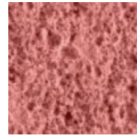
```
background-position: 50% 50%;  
background-attachment: fixed;
```



If you check how the “50% 50%” setting puts the background image into the center of the screen (image below), you will see something strange. If the “50% 50%” setting positions the top-left pixel of the screen to the center of the window, the background image is not centered. It would be only if the center pixel of the image would be positioned to the window’s center. Well, this is exactly what “50% 50%” does!



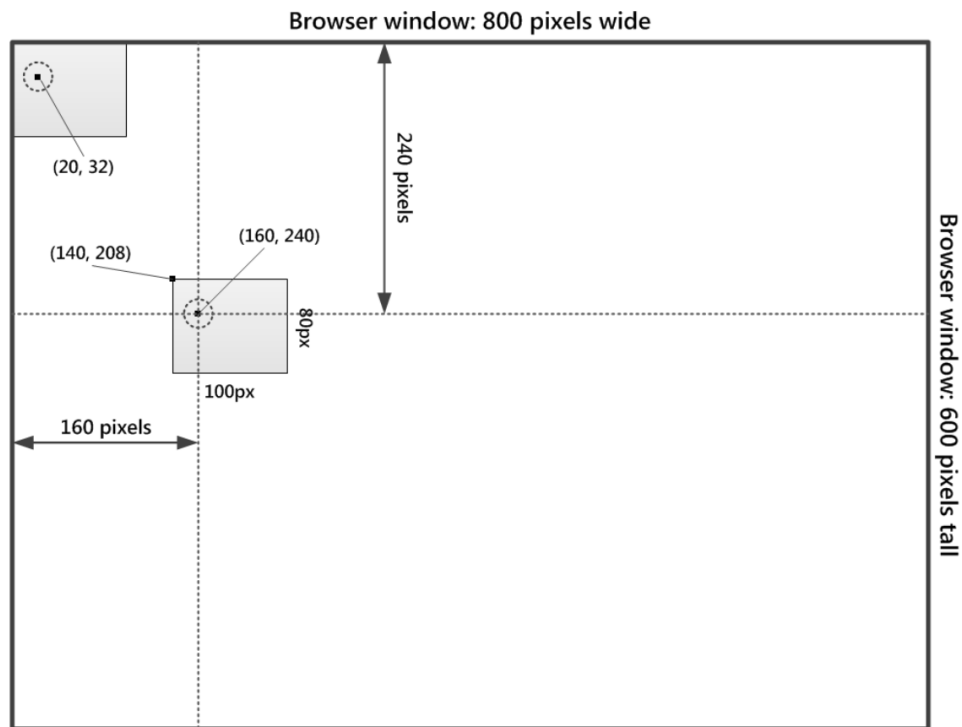
Percentage positioning



Using percentage positioning, "50% 50% (Sample11.html)"

When you use percentage values, the specified values are used to calculate two positions. First, these values are used to calculate the image's pin position; second, the pin position of the background is calculated. Then the browser moves the background image so that the image's pin position will be right above the background pin position. If you're a bit confused, the following example will help:

Let's assume that you have a background image with a size of 100 * 80 pixels (width * height). You position this image to the "20% 40%" position in the browser window, which is 800 * 600 pixels. The pin position of the image is (100, 80) * "20% 40%" = (100 * 20%, 80 * 40%) = (20, 32). The pin position of the background is (800, 600) * "20% 40%" = (800 * 20%, 600 * 40%) = (160, 240). When you move the image's pin position to the background's pin position, it means that the image's top-left corner is (160, 240) - (20, 32) = (160-20, 240-32) = (140, 208). The image below demonstrates this calculation for better understanding.



Percentage position calculation

In the next lesson, we will learn how to align background images with paddings and borders.