

Introduction to CSS Training

Colors and Backgrounds

Lesson 1, Activity 2: About Color Values

Colors values can be specified using several ways.

Color Names

There are 17 keyword color names that are specified in CSS2. The official W3C color keywords list can be found at www.w3.org. Modern browsers support many additional color names - everything from *papayawhip* to *darkorchid*.

```
<div style="color: red">color: red</div>
```

Hexadecimal Color Values

Hexadecimal color values take the format `#rrggbb`, where `rr` is the amount of red in the color, `gg` is the amount of green in the color, and `bb` is the amount of blue in the color.

```
<div style="color: #ff0000">color: #ff0000</div>
```

Short Hexadecimal Color Values

Hexadecimal color values can be abbreviated when a color is represented by three *pairs* of hexadecimal characters. For example, with `#ff6600`, you can remove one character from each pair. The shorthand color values take the format `#rgb`, where `r` is the amount of red, `g` is the amount of green in the color, and `b` is the amount of blue. For example, `#f60` is the same as `#ff6600`.

Syntax

```
selector {
  color: #f60;
}
```

Functional Notation

Functional notation takes the format `rgb(n, n, n)`, where `n` is a number between 0 and 255 or percentage between 0% and 100%.

```
<div style="color: rgb(255,0,0)">color: rgb(255,0,0)</div>
<div style="color: rgb(100%,0%,0%)">color: rgb(100%,0%,0%)</div>
```

Recommendation

Our recommendation is to use three-digit hexadecimal notation (i.e, #rgb) when you can get the color you want and to use the six-digit hexadecimal notation (i.e, #rrggbb) when you need to define the color more granularly.

Lesson 1, Activity 3: About Color Values

Colors values can be specified using several ways.

Color Names

There are 17 keyword color names that are specified in CSS2. The official W3C color keywords list can be found at www.w3.org. Modern browsers support many additional color names - everything from *papayawhip* to *darkorchid*.

```
<div style="color: red">This will be red.</div>
```

Hexadecimal Color Values

Hexadecimal color values take the format `#rrggbb`, where `rr` is the amount of red in the color, `gg` is the amount of green in the color, and `bb` is the amount of blue in the color.

```
<div style="color: #ff0000">This will also be red.</div>
```

Short Hexadecimal Color Values

Hexadecimal color values can be abbreviated when a color is represented by three *pairs* of hexadecimal characters. For example, with `#ff6600`, you can remove one character from each pair. The shorthand color values take the format `#rgb`, where *r* is the amount of red, *g* is the amount of green in the color, and *b* is the amount of blue. For example, `#f60` is the same as `#ff6600`.

Syntax

```
selector {
  color: #f60;
}
```

Functional Notation

Functional notation takes the format `rgb(n, n, n)`, where *n* is a number between 0 and 255 or percentage between 0% and 100%.

```
<div style="color: rgb(255,0,0)">This will be red.</div>
<div style="color: rgb(100%,0%,0%)">This will also be red.</div>
```

Recommendation

Our recommendation is to use three-digit hexadecimal notation (i.e, #rgb) when you can get the color you want and to use the six-digit hexadecimal notation (i.e, #rrggbb) when you need to define the color more granularly.

Color

As you have seen in the examples above, the `color` property is used to set the foreground color of an element.

Code Sample:

BackgroundsAndColors/Demos/Color.html

```
<!DOCTYPE HTML>
<html>
<head>
<meta charset="UTF-8">
<title>Color</title>
</head>
<body>

<h1>Color</h1>

<div style="color: red">color: red</div>
<div style="color: #ff0000">color:  #ff0000</div>
<div style="color: #f00">color: #f00</div>
<div style="color: rgb(255,0,0)">color: rgb(255,0,0)</div>
<div style="color: rgb(100%,0%,0%)">color: rgb(100%,0%,0%)</div>

</body>
</html>
```

The above code will render the following:



Background-color

The background-color property is used to specify the background color of an element. It can be applied to block elements and inline elements.

Syntax

```
selector {  
  background-color:color;  
}
```

Code Sample:

[BackgroundsAndColors/Demos/BackgroundColor.html](#)

```
<!DOCTYPE HTML>  
<html>  
<head>  
<meta charset="UTF-8">  
<title>Background Color</title>  
</head>  
<body style="background-color: #0066ff;">  
<h1>Background Color</h1>  
  
<div style="height: 200px; width: 500px; background-color: #ff6600;">  
  background-color: #ff6600  
</div>  
  
</body>  
</html>
```

Lesson 1, Activity 4: **Background-color**

The `background-color` property is used to specify the background color of an element. It can be applied to block elements and inline elements.

Syntax

```
selector {  
  background-color:color;  
}
```

Code Sample:

BackgroundsAndColors/Demos/BackgroundColor.html

```
<!DOCTYPE HTML>  
<html>  
<head>  
<meta charset="UTF-8">  
<title>Background Color</title>  
</head>  
<body style="background-color: #0066ff;">  
<h1>Background Color</h1>  
  
<div style="height: 200px; width: 500px; background-color: #ff6600;">  
  background-color: #ff6600  
</div>  
  
</body>  
</html>
```

Lesson 1, Activity 5: **Background-image**

Examples of properties associated with background images are shown in [BackgroundsAndColors/Demos/BackgroundImage.html](#), which is listed at the end of this section.

The background-image property is used to specify the background image of an element. It can be applied to block elements and inline elements.

```
selector {  
  background-image:url(url);  
}
```

Background-repeat

The background-repeat property is used with background-image to specify whether and how a background image should repeat. Possible values are listed below.

- no-repeat - does not tile
- repeat-x - tiles horizontally
- repeat-y - tiles vertically

Syntax

```
selector {  
  background-image:url(url);  
  background-repeat:value;  
}
```

Background-attachment

The background-attachment property is used with background-image to specify whether a background image should scroll as the content is scrolled or whether the content should scroll over it. Possible values are listed below.

- scroll
- fixed

Syntax

```
selector {  
  background-image:url(url);  
  background-attachment:value;  
}
```


According to the specification, `background-attachment` specifies whether a background image is fixed relative to the viewport (e.g, the browser window) or scrolls along with the document. Internet Explorer 6 fixes the background image relative to the container, which is incorrect.

Background-position

The `background-position` property is used with `background-image` to specify the location of a background image. Possible values are listed below.

- `top`
- `right`
- `bottom`
- `left`
- `center`
- any combination of the above (e.g, `top center` or `bottom left`)

Syntax

```
selector {
  background-image:url(url);
  background-position:value;
}
```

The following page shows examples of different combinations of background properties.

Code Sample:

[BackgroundsAndColors/Demos/BackgroundImage.html](#)

```
<!DOCTYPE HTML>
<html>
<head>
<meta charset="UTF-8">
<title>Background Image</title>
</head>
<body>
<h1>Background Image</h1>

<div style="height:200px; width:500px;color:#ffffff;
  background-image:url (Images/block.gif) ">
  background-image:url (Images/block.gif)
</div>

<h2>Background Repeat</h2>
<div style="height:200px; width:500px;color:#ffffff;
  background-color:#ff6600;
  background-image:url (Images/block.gif); background-repeat:no-repeat">
  background-color:#ff6600; background-image:url (Images/block.gif);
  background-repeat:no-repeat
```

```

</div>
<hr>
<div style="height:200px; width:500px;color:#ffffff;
    background-color:#ff6600;
    background-image:url (Images/block.gif); background-repeat:repeat-x">
    background-color:#ff6600; background-image:url (Images/block.gif);
    background-repeat:repeat-x
</div>
<hr>
<div style="height:200px; width:500px;color:#ffffff;
    background-color:#ff6600;
    background-image:url (Images/block.gif); background-repeat:repeat-y">
    background-color:#ff6600; background-image:url (Images/block.gif); background-repeat:repeat-y
</div>

<h2>Background Attachment</h2>
<h3>background-attachment:fixed</h3>
<div style="height:200px; width:500px;color:#ffffff;
    overflow:scroll; white-space:pre;
    background-color:#ff6600; background-image:url (Images/block.gif);
    background-repeat:no-repeat; background-attachment:fixed">
    background-color:#ff6600; background-image:url (Images/block.gif);
    background-repeat:no-repeat; background-attachment:fixed<br>
---- C O D E   O M I T T E D ----

    background-color:#ff6600; background-image:url (Images/block.gif);
    background-repeat:no-repeat; background-attachment:fixed
</div>
<h3>background-attachment:scroll</h3>
<div style="height:200px; width:500px;color:#ffffff;
    overflow:scroll; white-space:pre
    background-color:#ff6600; background-image:url (Images/block.gif);
    background-repeat:no-repeat; background-attachment:scroll">
    background-color:#ff6600; background-image:url (Images/block.gif);
    background-repeat:no-repeat; background-attachment:scroll<br>
---- C O D E   O M I T T E D ----

    background-color:#ff6600; background-image:url (Images/block.gif);
    background-repeat:no-repeat; background-attachment:scroll
</div>

<h2>Background Position</h2>
<h3>background-position:right</h3>
<div style="height:200px; width:500px; color:#ffffff;
    background-color:#ff6600;
    background-image:url (Images/block.gif); background-repeat:repeat-y;
    background-position:right;">
    background-color:#ff6600; background-image:url (Images/block.gif);
    background-repeat:repeat-y; background-position:right
</div>
<h3>background-position:bottom</h3>
<div style="height:200px; width:500px; color:#ffffff;
    background-color:#ff6600;
    background-image:url (Images/block.gif); background-repeat:repeat-x;
    background-position:bottom;">

```

```

    background-color:#ff6600; background-image:url (Images/block.gif);
    background-repeat:repeat-x; background-position:bottom
</div>
<h3>background-position:center</h3>
<div style="height:200px; width:500px; color:#ffffff;
    background-color:#ff6600;
    background-image:url (Images/block.gif); background-repeat:no-repeat;
    background-position:center;">
    background-color:#ff6600; background-image:url (Images/block.gif);
    background-repeat:no-repeat; background-position:center
</div>
<h3>background-position:20% 20%</h3>
<div style="height:200px; width:500px; color:#ffffff;
    background-color:#ff6600;
    background-image:url (Images/block.gif); background-repeat:no-repeat;
    background-position:20% 20%;">
    background-color:#ff6600; background-image:url (Images/block.gif);
    background-repeat:no-repeat; background-position:20% 20%;
</div>
<h3>background-position:20px 20px</h3>
<div style="height:200px; width:500px; color:#ffffff;
    background-color:#ff6600;
    background-image:url (Images/block.gif); background-repeat:no-repeat;
    background-position:20px 20px;">
    background-color:#ff6600; background-image:url (Images/block.gif);
    background-repeat:no-repeat; background-position:20px 20px;
</div>

</body>
</html>

```

Lesson 1, Activity 7: Colors and Backgrounds

Duration: 15 to 25 minutes.

In this exercise, you will continue to work on [Stories.html](#) by applying styles to the links on the page.

1. Open [CssText/Exercises/Stories.html](#), which you were working on in the last lesson and save it in the BackgroundsAndColors/Exercises directory.
2. Modify the color and background properties of the different elements on the page. You may do this using inline styles, an embedded style sheet and/or an external style sheet. You are also welcome to add tags to the page. The object of this exercise is to get used to working with backgrounds and colors in CSS.
3. There are images in [Exercises/Images](#) that you may want to use. You're also welcome to use any other images you have access to.
4. When you are done, open [Stories.html](#) in your browser to see the results. You are welcome to go back to the code and continue to work.

Solution:

BackgroundsAndColors/Solutions/Stories.html

```
<!DOCTYPE HTML>
<html>
<head>
<meta charset="UTF-8">
<title>Stories</title>
<style type="text/css">
  h1
  {
    font-family: Arial, Helvetica, sans-serif;
    font-size: x-large;
  }

  h2
  {
    font-family: Arial, Helvetica, sans-serif;
    font-size: large;
    font-style: italic;
    font-weight: normal;
    letter-spacing: .25em;
    word-spacing: .4em;
    text-align: center;
  }

  p
  {
    font-family: "Comic Sans MS", Times, serif;
    font-size: small;
    line-height: 1.2;
    text-indent: 2em;
  }
}
```

```

a
{
  font-style: italic;
  font-weight: bold;
}

.topLink
{
  font-family: "Comic Sans MS";
  font-size: medium;
  font-variant: small-caps;
  font-style: normal;
  font-weight: normal;
}

.BackToTop
{
  text-decoration: none;
  text-transform: capitalize;
}
</style>
</head>
<body>

<h1 name="top">Stories</h1>
<a href="#pooh" class="topLink">Pooh Goes Visiting</a><br>
<a href="#alice" class="topLink">A Mad Tea-Party</a><br>
<a href="#naughtyboy" class="topLink">The Naughty Boy</a><br>

<hr>

<h2 name="pooh">POOH GOES VISITING - A.A. Milne</h2>
<div style="background-image: url(Images/poohsmall.gif);
  background-repeat: no-repeat; background-color:#ff9900;
  color:#000066;">
<p>Pooh always liked a little something at
---- C O D E   O M I T T E D ----
and said to himself 'Silly Old Bear! '</p>
</div>
<a href="#top" class="BackToTop">Back to top</a>

<hr>

<h2 name="alice">A MAD TEA-PARTY - Lewis Carroll</h2>
<div style="background-image: url(Images/TeaParty.gif);
  background-position:right; background-repeat: no-repeat;">
<p>There was a table set out under a tree
---- C O D E   O M I T T E D ----
that's the same thing, you know.'</p>
</div>
<a href="#top" class="BackToTop">Back to top</a>

<hr>

<h2 name="naughtyboy">THE NAUGHTY BOY - Hans Christian Andersen</h2>

```

```
<div style="background-image: url(Images/Cupid.gif); color:#ff3333;">
<p>Along time ago, there lived an old poet,
---- C O D E   O M I T T E D ----
  and you know, too, how ill-behaved he is!</p>
</div>
<a href="#top" class="BackToTop">Back to top</a>
</body>
</html>
```