

Music 1360: Colors in HTML and CSS

As we've seen a little bit so far, colors in HTML and CSS can be given in plain English. While some browsers understand a few dozen colors, there are only 16 "official" ones recognized by the W3C: **aqua, black, blue, fuchsia, gray, green, lime, maroon, navy, olive, purple, red, silver, teal, white, and yellow.** (http://www.w3schools.com/html/html_colornames.asp)

Clearly there are more colors than that. Most computer devices nowadays can display 16 million colors by combining different amounts of red, green, and blue light. Some scientists say that your eye can see up to 100,000,000 different colors!

So, we need a way to specify these colors numerically to take advantage of them. In this case, we'll use **hexadecimal**, or "base 16" numbers. When you count in base 16, you use the regular digits zero through nine, and the letters A through F.

Counting in hexadecimal is simple. On the right, there is a table of the numbers 1 through 30 in our regular counting system along with their hexadecimal counterparts.

If we want access to all 16-million colors that most computers can display, we need to be able to specify the amount of red, green, and blue in each color in a compact way. The formula is simple:

#RRGGBB

Each color value is a 2-digit hexadecimal number, ranging from 00 to FF. Or, in our regular counting system, 0 to 255. Here are some simple examples:

Red: #FF0000
Green: #00FF00
Blue: #0000FF
Dark Blue: #0000C0
Dark Red: #C00000
Black: #000000
White: #FFFFFF
Dark Grey: #121212
Medium Grey: #999999
Light Grey: #EFEFEF

DECIMAL	HEXADECIMAL
0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	A
11	B
12	C
13	D
14	E
15	F
16	10
17	11
18	12
19	13
20	14
21	15
22	16
23	17
24	18
25	19
26	1A
27	1B
28	1C
29	1D
30	1E

Here is an example of a CSS definition for a paragraph using color and font:

```
p {  
  font-family: Arial;  
  color: #EA05FF;  
}
```

In this case, when the browser interprets the CSS, every paragraph in your document would display in Arial font and all the text would be bright purple.