

Hexadecimal Colors

The three primary colors are red, blue, and yellow.

Now on to the 6-digit representation of color known as the hex code.

Basic Hexadecimal Notation:

Hex numbers use 16 digits:
0 1 2 3 4 5 6 7 8 9 A B C D E F

Zero, "0", is the smallest representation of a color. It's almost the total absence of color. F is 15 times the intensity of the color of 0. Combinations of these digits create different shades of a particular color. Double Zero, "00," is equal to zero hue. FF is equal to a pure color.

This color representation is done three times, once for red, once for green, and once for blue, in that order. Put the three, two-digit, codes together and you get a 6-digit hex code. The hex code is just a representation of the red, green, and blue intensity, in that order. The computer creates the three intensities, mashes them together, and you get a single shade of color.

For an example, here are the opposite ends of the color scale:

FFFFFF

The code above is equal to white. Why? Notice the three colors are all set to FF. That means the highest level of red, green, and blue. As I said above, in a computer, or television, the combination of all three primary colors creates white. Now here's black:

000000

This is just the opposite. All three settings of red, green, and blue are set to a total absence of color. Black.

Now, here are a few other codes and their breakdown:

FFFF00

Let's start with the concern from up above, yellow. The code above produces pure yellow. Notice the red and the green are at full tilt. There is no blue. By mashing the red and green up against each other, the red cancels out the blue and all that is left is the yellow. It's actually a subtractive color method being employed in an additive world. Man, this gets loopy, huh?

DC143C

The code above creates a shade of red called "crimson." The red setting, DC, is pretty intense. There's not much green. Blue is set a little less than halfway up.

EE82EE

That's violet. The Red and the Blue are at pretty high levels. The green is there, but at a lower level. Now, this is not purple, but violet. Purple, as I said above, is a combination of red and blue alone. The code is 800080. Notice there's no green at all. Just an equal amount of red and blue.

FFA500

That's orange. There's lots of red, not quite an equal level of green, and no blue.

That's how the hex codes work. This lesson probably won't make you an expert in color creation, but at least you'll be able to understand the creation of color in a computer.

So, are there more hex code colors than what I show above? Oh, yes. There are thousands upon thousands covering every color in the scale from pure black to pure white. Every time you change even one of the red, green, or blue levels, you change the color.