RGB Colors

If every pixel is a single color, then how do we represent that color in memory? We use a scheme called **RGB**, or red, green blue. By combining different quantities of pure red, green and blue light, we can create any color at all.

Each of the red, green and blue light levels is encoded as a number in the range `0..255`, with `0` meaning zero light and `255` meaning maximum light.

So for example (`red=255`, `green=100`, `blue=0`) is a color where red is maximum, green is medium, and blue is not present at all, resulting in a shade of orange. In this way, specifying the brightness `0..255` for the red, blue, and green color components of the pixel, any color can be formed.

> *Pigment Note -- you may have mixed color paints, such as adding red and green paint together. That sort of "pigment" color mixing works totally differently from the "light" mixing we have here. Light mixing is easier to follow, and in any case, is the most common way that computers store and manipulate images.*

It's not required that you have an intuition about, say, what `blue=137` looks like. You just need to understand that any color can be made by combining the three color values.