

Numbers to Images

The color of an object is determined by the light that it reflects back toward your eyes. All other colors are absorbed by the object. The **RGB color model** states that all color is made up of red, green, or blue light, or some combination of those three colors. A green leaf, for example, is reflecting green light back to your eyes, while a yellow highlighter is reflecting both green and red light.

Landsat senses the amount of red, green, and blue light that is reflected off of the surface of the Earth, and sends that data down to the ground stations. We can then create colorful images of our planet by converting the data back into colors.

This picture of three flashlights, one red, one green, and one blue, demonstrates all of the color combinations that are possible. Where the red and green lights overlap, the light appears yellow; where the red and blue lights overlap, the light appears magenta; and where the blue and green lights overlap, the light becomes cyan. By mixing different amounts of red, green, and blue light, you can create all the colors of the rainbow!



