Activity 8a: Light and Color

Lab originally written by Jatila van der Veen, with modifications by Erin O’Connor

**First:  Explain, in one sentence, what is meant by the Electromagnetic Spectrum.**

### Part 1: Mixing primary colors of light.

The primary colors of LIGHT (***not paint, which is a pigment!***) are **RED, GREEN, and BLUE, and these three colors, in equal proportions, make WHITE light.** Whatever your kindergarten teacher told you about the primary colors being red, yellow, and blue was WRONG. They were mixing up primary colors and primary pigments.

Changing the proportions of RED, GREEN, and BLUE light, relative to the others, can make any color you want. This is how our eyes see color, and this is how color is created on your computer and television and smart phone screens.

**Use the interactive color mixing** **demonstration**[HERE  (](https://www.physicsclassroom.com/Physics-Interactives/Light-and-Color/RGB-Color-Addition/RGB-Color-Addition-Interactive)<https://www.physicsclassroom.com/Physics-Interactives/Light-and-Color/RGB-Color-Addition/RGB-Color-Addition-Interactive>)

**Try to make the following colors:**1. turquoise, 2. sea green, 3. pale orange, 4. medium brown, 5. gray, and
6. your favorite color

**To show how you made each color, fill in the following table with the percentages of Red, Green, and Blue for each color you made.**

|  |  |  |  |
| --- | --- | --- | --- |
|  | % Red | % Green | % Blue |
| Turquoise |  |  |  |
| Sea Green |  |  |  |
| Pale Orange |  |  |  |
| Medium Brown |  |  |  |
| Gray |  |  |  |
| Favorite Color |  |  |  |

**Did anything surprise you?**