**Day 3 Lesson**

**What is Color?**

[Instruction Screencast](https://drive.google.com/file/d/1GvjAoZvEY_Sc3MoI5NM2yukLTCZwnFwo/view?usp=sharing)

**PART 1**: EVERYONE watch this [video](https://youtu.be/Um0ZXhrQUJ4) and fill in the blanks below:

1. Different colors are different \_\_wavelengths\_\_\_\_\_\_\_\_\_ of \_\_light\_\_\_\_\_.
2. All the colors combined make \_\_white\_\_\_\_\_ light.
3. When light hit the red car, the \_\_molecules\_\_\_\_\_\_\_\_ absorb \_\_every\_\_\_ \_\_other\_\_\_\_ \_\_color\_\_\_ except for \_\_red\_\_\_\_\_ which is reflected.
4. Inside the eye, \_\_photoreceptor\_\_\_\_\_\_ cells sense the light.
5. Cones detect \_\_different colors\_\_\_\_\_ while rods detect colors that look like a shade of black and white. Rods are used for night vision.

**PART 2**:

Expand your knowledge! Choose 1 video to watch and write down 3 facts below.

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| **Options:** **Choose 1 &** HIGHLIGHT it | **Summary** | **Difficulty Level** |
| [Video 1](https://youtu.be/9Vsl0Iom3S0)“The Science of Light and Color for Kids: Rainbows and the Electromagnetic Spectrum” | What is a rainbow, really?Learn more about how we see color, how a rainbow is formed, and review the other parts of the electromagnetic spectrum. | 8th Grade Level - This video covers standards that match what is expected for 8th grade science.  |
| [Video 2](https://www.youtube.com/watch?v=jjy-eqWM38g)“Light: Crash Course Astronomy #24” | Want more Astronomy? Learn more about light and how it helps us figure out the chemical composition, spin, temperature, density, and general motion of planets, stars, etc. without actually going there. You’ll learn about spectroscopy and how we know the universe is expanding! | Above Grade Level - This video goes above and beyond the 8th grade level standards, moving into some high school physics information.  |

Write down 3 new, interesting facts you learned:

1. Hotter objects emit light with greater energy, while cooler objects emit light with less energy.
2. Different atoms emit different wavelengths of light from which we can find out what an object is made out of. This is how we can find out what far away objects in space are made out of.
3. Shorter wavelengths have a higher sound and longer wavelengths have a lower sound. This is how light works. If an object comes towards you, the wavelength shortens -- it becomes blueshifted. If it goes away, the wavelength increases -- it becomes redshifted.

Write down 1-2 questions you have relating to our topic this week:

1. Are there any creatures that can see EM waves other than visible light?