PART 1 | PHYSICS OF LIGHT

Explore the White Room to find clues that will help you answer these questions!

1. **What colors combine to make up white light, or visible light?** (Check all that apply.)

   ▢ red ▢ orange ▢ yellow ▢ green ▢ blue ▢ violet ▢ indigo

2. **The color of objects depends on the light shining on them. A leaf looks green because the green wavelengths of light are:**

   ▢ reflected into our eyes
   ▢ absorbed into the object
   ▢ returned to the Sun

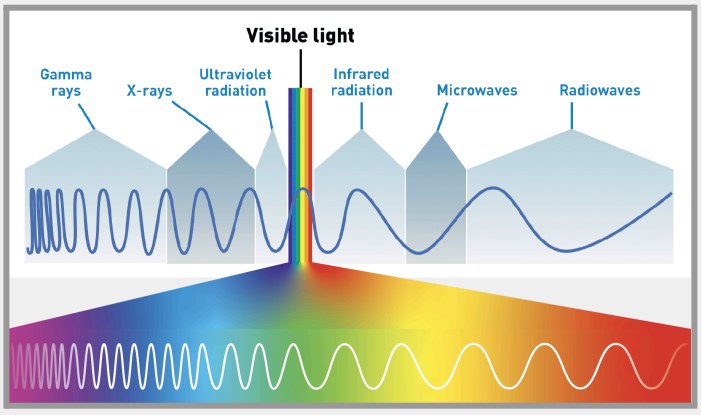


3. **What parts of our bodies do we use to perceive color?** (Check all that apply.)

   ▢ our brains
   ▢ our eyes
   ▢ our toes

THE COLOR OF LIGHT

Light is a kind of energy called electromagnetic radiation. There are many different forms of electromagnetic radiation, such as radio waves, microwaves, ultraviolet rays and infrared light, and X-rays. Each form is characterized by a different wavelength. The light that we see — visible light — falls somewhere in the middle of this "electromagnetic spectrum."



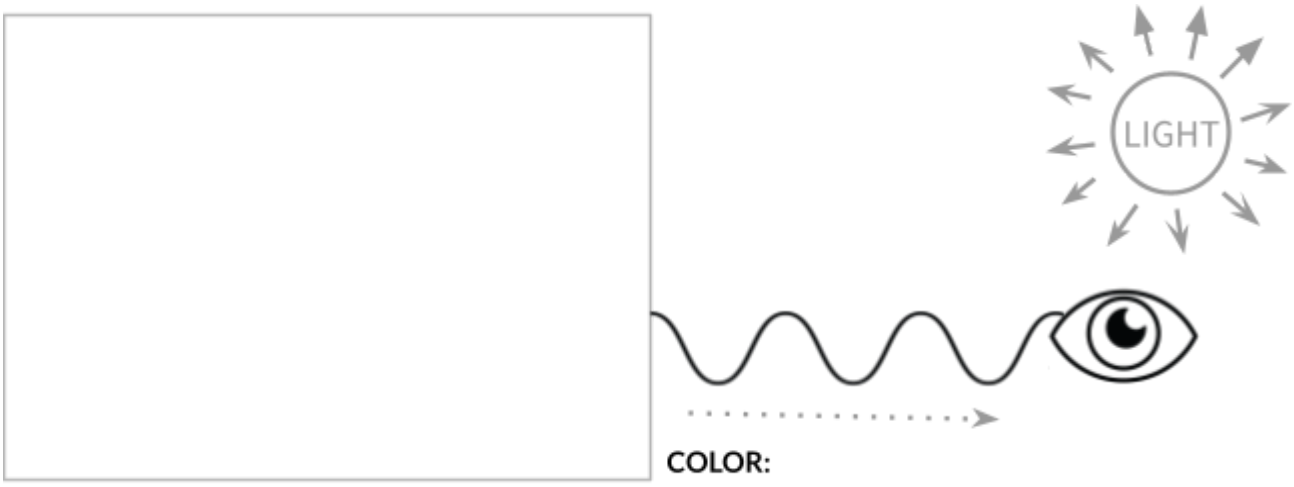
Visible light may be a tiny part of the electromagnetic spectrum, but there are still many variations of wavelengths. We see these variations as colors. On one end of the spectrum is red light, with the longest wavelength. Blue or violet light has the shortest wavelength.

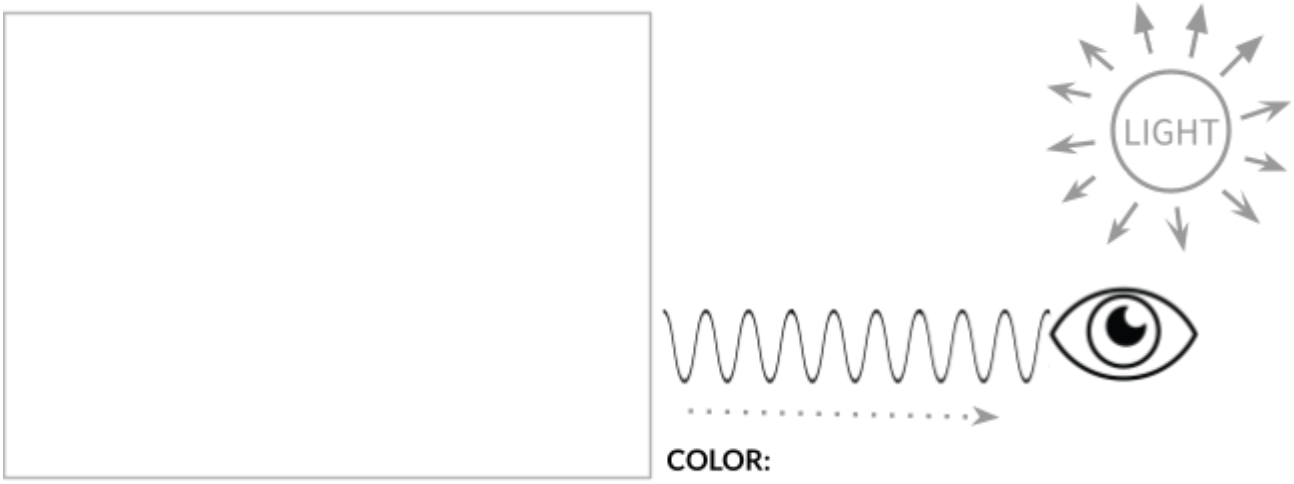
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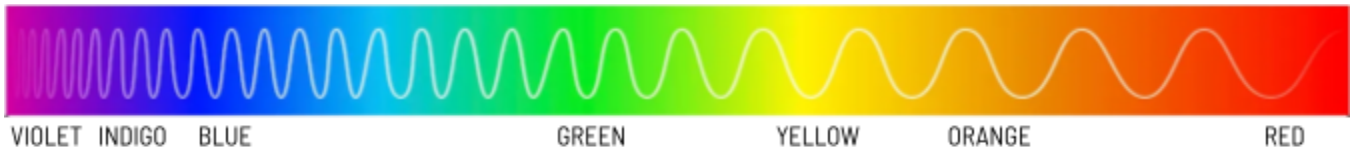
PART 2 | WHAT'S THAT COLOR?

For each of the two wavelengths below:

1. **Decode** the color represented by the wavelength. (Hint: See the visible light diagram at the bottom!)
2. **Find** an organism, a rock, or a cultural object in the exhibition that reflects that color of visible light.
3. **Draw** each animal, plant, or object in the box. **Note** facts about its colors. e.g. how an organism's colors help it survive; how a rock's chemical composition affects the colors of light it reflects; what might be the cultural meaning might of an objects colors.



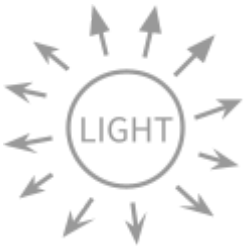




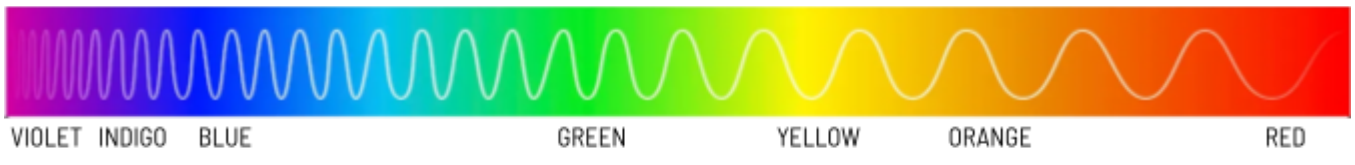
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PART 3 | COLORS & LIGHT

1. **Find** an organism, a rock, or a cultural object with multiple colors. **Sketch** it in the space below.
2. For each color, **draw** the wavelength of light that is being reflected into your eyes. Use the visible light spectrum diagram as a guide.
3. **Note** facts about its colors. e.g. how an organism's colors help it survive; how a rock's chemical composition affects the colors of light it reflects; what might be the cultural meaning might of an objects colors







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