

Name:

Date:

Light Study Guide

Electromagnetic Spectrum

1. List the electromagnetic waves in order from most to least energetic.
2. Explain in complete sentences the unique features of 3 of the electromagnetic waves.
3. Draw a low energy wave and label the Crest Trough and Wavelength.
4. How does the wavelength and frequency change when the waves goes from low to high energy. Draw an image and explain in words.
5. Why are we not overwhelmed by the amount of waves traveling through the room right now?

Visible Spectrum

6. What are the colors in the visible spectrum. List them in order from most energy to least.
7. Why is it that we can see color? (Use a red pen as an example).

Behavior of Light

8. Draw a diagram of light reflecting, refracting, absorbing and transmitting.

9. Contrast light reflecting and refracting. Give an example from class of both.

10. How are the angle of reflection and angle of incidence related. If I know my angle of incidence is 72.3 degrees, what would my angle of reflection be?

Lenses

11. Draw a diagram of light rays passing through a convex lens and a concave lens.

12. Give an example of what we might use a convex lens for in our every day life. What would we use a concave lens for?

The Eye

13. List the path that light takes through the eye.

14. Explain why the image we see appears flipped in the retina.

15. Why is the Iris, the colorful part of the eye, made of muscles?