

Study Guide: Light and the Electromagnetic Spectrum

Use your notes in your ISN to complete the following study guide. We will have a quiz on light and the electromagnetic spectrum tomorrow, Tuesday 3/ 15. Don't forget to study tonight for homework!!!

1. Draw a diagram of the electromagnetic spectrum from GREATEST wavelength to SMALLEST wavelength. In the diagram, include the name of the wave and a picture to represent the relative wavelength.

2. Fill in the following chart with common uses of each type of electromagnetic radiation

EM Radiation	Microwaves	Radio waves	Visible light	Gamma Rays	Infrared	Ultra Violet	X-rays
Picture							

3. What does it mean if an object reflects light? Give an example of reflecting light.
4. What is the difference between reflecting and scattering light? Give an example of each.
5. Define prism, and give an example of something that acts as a prism in nature
6. Describe translucent, transparent, and opaque objects, and give three examples of each.
7. Describe what happens to light in a prism that creates a rainbow.
8. What happens to the image in the lens of the eye? How is that corrected so that you see an image as it appears naturally?
9. What is the function of the iris? Why is it important to help us see?
10. Draw a diagram of the eye and trace the pathway of light in the eye.

11. Explain the pathway of light through the eye in several sentences.
12. What type of wave does light move most similarly to? Draw a picture of this wave and label its parts.
13. Why are humans only able to see certain types of electromagnetic radiation?
14. How is the electromagnetic spectrum organized?
15. What is the relationship between wavelength and frequency of a wave?
16. What is the acronym to remember the colors of visible light in order?
17. What happens to the image of a pencil when you put it in water? What is this called, and why does it happen?
18. If it is a hot summer day, what would be the best color to wear to keep you cool? Why?
19. Which color of light is bent the most? The least? How do you know this?
20. List the colors of light in order from fastest moving to slowest moving.