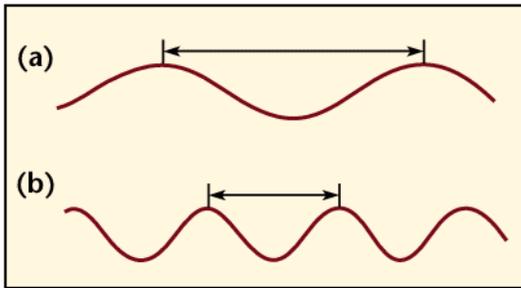


Use the visual below to answer question 5.



(a) Longer wavelength; (b) shorter wavelength

5. Which has more energy, A or B? Explain your reasoning.

6. Define a wavelength.

7. What is a frequency of a wavelength?

Visible Light

8. What makes each color of visible light different?

9. What makes up white light?

10. For visible light (ROYGBIV), which has the shortest wavelength? Which has the longest? Place all the other colors in order based on their wavelength.

11. What determines the color of an object we see? What happens to all other colors?

Electromagnetic Spectrum

<http://www.lbl.gov/MicroWorlds/ALSTool/EMSpec/EMSpec2.html>

Click on the link above to answer the following questions:

12. What kind of electromagnetic radiation has the shortest wavelength? The longest?

13. What kind of electromagnetic radiation could be used to “see” molecules? A cold virus?

14. Why can't you use visible light to “see” molecules?

15. Some insects, like bees can see light of shorter wavelengths than humans can see. What kind of radiation do you think a bee sees?

Behavior of Light

<http://camillasenior.homestead.com/optics3.html>

Click on the link above and answer the following questions.

16. What is reflection?

17. Draw a picture of an angle of incident equaling an angle of reflection. Do on a sheet of loose leaf and staple to this activity after printing.

18. Explain the difference in how light will act on a smooth versus rough surface.

19. Define refraction.

20. Explain what is happening to the spoon in the cup. Explain what is happening to the water in the pot.

Click the “Next” Arrow at the bottom of the page.

21. What is the difference between convex and concave lenses?

22. On a sheet of loose leaf draw a picture of a convex lens and show how light hits it. Draw a picture of a concave lens and show how light hits it.

23. Is the lens of your eyeball a convex or a concave lens?