

Directed Reading B

Section: Refraction (pp. 90–97)

REFRACTION AND MEDIA

- _____ 1. Refraction happens when
- a. a medium's density does not change.
 - b. light follows the law of reflection.
 - c. the wave changes light energy into chemical energy.
 - d. the medium that it travels through changes.
2. A substance through which a wave can travel is called a(n) _____.
3. The bending of a wave as the wave passes at an angle from one medium to another is called _____.
4. Give an example of an optical illusion that can be caused by refraction.
- _____
- _____
- _____
5. Light waves with _____ wavelengths bend more than light waves with _____ wavelengths.
6. When white light separates into different colors during refraction and sunlight is refracted by water drops, a(n) _____ forms.

LENSES AND REFRACTION OF LIGHT

- _____ 7. How does a lens form an image?
- a. The lens reflects light.
 - b. The lens bends light.
 - c. The lens absorbs light.
 - d. The lens transmits light.

Directed Reading B *continued*

Match the description with the correct term. Write the letter in the space provided.

- | | |
|--|-----------------|
| _____ 8. transparent object that forms an image by refracting light | a. focal length |
| _____ 9. point at which light beams cross after passing through a lens | b. lens |
| _____ 10. distance between the lens and focal point | c. focal point |

Match the correct description with the correct term. Write the letter in the space below.

- | | |
|---|------------------|
| _____ 11. is thicker in the middle than at the edges | a. convex lens |
| _____ 12. is formed when an object is less than 1 focal length from a convex lens | b. virtual image |
| _____ 13. is formed when an object is more than 2 focal points from a convex lens | c. real image |

14. How do a real image and a virtual image of an object differ?

15. How are a magnifying glass and the human eye similar?

16. Which two parts of the eye refract light?

17. Name two animals whose eyes process images differently than the human eye does.

18. What is the difference between a concave lens and a convex lens?
