

Physical Principles in Living Systems

Name:

Refraction and Media

Period:

Use Chapter 3, Section 3 of your textbook to answer the questions below.

Section 2: Refraction

Refraction and Media (p.90)

1. Something through which a wave can travel is called a _____ .

_____ 2. When does a light wave refract?

- a. when a medium's density does not change
- b. when the medium it travels in changes
- c. when the wave changes light energy into chemical energy
- d. when the medium it travels in does not change

3. If a wave bends as it goes from one medium to another, we call this _____ .

4. Temperature changes can affect the density of _____ .

Refraction and Optical Illusions (p.91)

_____ 5. How does your brain interpret light when it reflects off an object?

- a. as traveling in a straight line
- b. as traveling in a wavy line
- c. as traveling in an S-shaped line
- d. as traveling in a curved line

6. When you look at something underwater, the light reflected by it does not travel in a _____ line.

_____ 7. Which of the following can cause people to see optical illusions?

- a. transmission
- b. reflection
- c. refraction
- d. absorption

Refraction and Color Separation (p.91)

8. White light is made up of all colors of _____ light.

_____ 9. During which of the following processes does white light separate into different colors?

- a. absorption
- b. refraction
- c. scattering
- d. transmission

_____ 10. Which of the following processes describes how rainbows form?

- a. color separation by refraction
- b. color separation by absorption
- c. color addition by refraction
- d. color subtraction by transmission

