

Physical Principles in Living Systems

Name:

Light Review Questions

Period:

Use Chapter 3 to help you answer the review questions below about light.

- _____ 1. What is a wave that consists of changing electric and magnetic fields called?
a. sound wave b. water wave c. surface wave d. electromagnetic wave
- _____ 2. Which of the following do concave lenses and convex lenses use to form images?
a. illumination b. transmission c. refraction d. absorption
- _____ 3. Which of the following make up only a small portion of the electromagnetic spectrum?
a. radio waves b. X rays c. visible light waves d. infrared waves
- _____ 4. When does light travel in straight lines?
a. when the material light travels through changes
b. when the material light travels through does not change
c. when the material light travels through is luminous
d. when the material light travels through is absorbed
- _____ 5. Why are you able to see objects that are luminous?
a. Your eyes detect light that is transmitted by the objects.
b. Your eyes detect light that is emitted by the objects.
c. Your eyes detect light that is reflected by the objects.
d. Your eyes detect light that is absorbed by the objects.
- _____ 6. Why are you able to see objects that are illuminated?
a. Your eyes detect light that is absorbed by the objects.
b. Your eyes detect light that is emitted by the objects.
c. Your eyes detect light that is reflected by the objects.
d. Your eyes detect light that is transmitted by the objects.
- _____ 7. Which colors of light do you see when you look at an opaque object?
a. only the colors that are reflected c. only the colors that are transmitted
b. only the colors that are absorbed d. only the colors that are refracted
- _____ 8. Which of the following do a magnifying glass and the human eye use to form images?
a. convex lens b. concave lens c. shutter d. aperture
- _____ 9. What happens when light travels through a medium that changes?
a. The light is transmitted. c. The light is absorbed.
b. The light refracts. d. The light disappears.

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

- _____ 10. bouncing of light waves off an object a. absorption
- _____ 11. interaction of light with matter that causes light to change direction b. reflection
- _____ 12. arrival of a beam of light at a surface c. scattering
- _____ 13. transfer of light energy to particles of matter d. incidence

turn over for more questions

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

- | | |
|---|-----------------------------|
| _____ 14. range of colors of light | a. electromagnetic wave |
| _____ 15. type of wave that makes up light | b. electromagnetic spectrum |
| _____ 16. visible light of all wavelengths combined | c. white light |
| _____ 17. entire range of electromagnetic waves | d. visible spectrum |

Use the terms from the following list to complete the sentences below.

lens infrared waves transmission ultraviolet light visible light

18. An EM wave that can cause sunburn is called _____.
19. Light that you can see is called _____.
20. The passing of light through matter is called _____.
21. A transparent object that forms an image by refracting light is called a _____.
22. EM waves that warm Earth are called _____.

Use the terms from the following list to complete the sentences below.

law of reflection refraction convex lens concave lens

23. The angle of incidence is equal to the angle of reflection, according to the _____.
24. A transparent object that is thicker in the middle than at the edges is called a _____.
25. The bending of a wave as it passes at an angle from one medium to another is called _____.
26. A transparent object that is thinner in the middle than at the edges is called a _____.