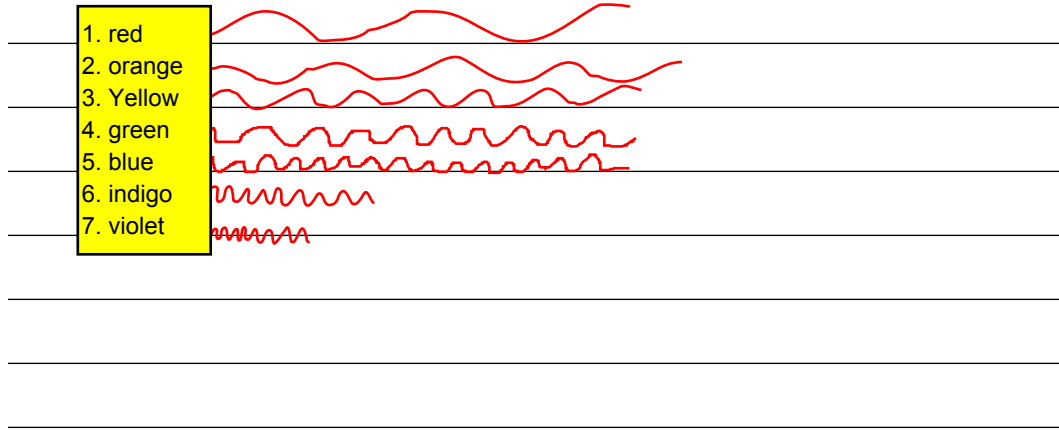


Directed Reading B *continued*

18. To the human eye, the shortest wavelengths of visible light appear as the color **blue or purple**.

19. The range of colors of visible light is called the **visible spectrum**.

20. Name the seven colors of the visible spectrum.



ULTRAVIOLET LIGHT

21. In what way do ultraviolet waves differ from visible light waves?

Ultraviolet waves have a shorter wavelength and carry more energy than the visible waves.

22. Name four ways that the body can be harmed by overexposure to ultraviolet light.

1. skin cancer
2. wrinkles
3. sun burn
4. and eye problems

23. Name two things that people can do to protect themselves against overexposure to ultraviolet light.

1. wear sunscreen (sunblock)
2. wear chapstick (lip balm)
3. wear sunglasses
4. wear long sleeve clothes

24. Describe two good effects of ultraviolet light.

1. it can kill bacteria before packaging food
2. it helps your skin make vitamin D, which helps make strong bones.

Skills Worksheet

Directed Reading B

Section: Interactions of Light with Matter (pp. 82–89)

1. What does the special layer of cells in the back of a cat's eyes do?

The special layer reflects light back to get a second chance to be absorbed, this allows them to see better and hunt in the darkness.

REFLECTION

2. How does light travel when it travels through a material that doesn't change?

It travels in a straight line as long as the material does not slow down the waves.

3. When light waves bounce off an object, **reflection** happens.

4. What does the law of reflection state?

the angle of incidence (incoming rays) is equal to the angle of reflection.

5. The arrival of a beam of light at a surface is called **incidence ray**.

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

normal

6. line perpendicular to a mirror's surface

a. angle of incidence

angle of reflection

7. angle between the reflected beam and the normal

b. angle of reflection

reflected beam or ray

8. beam of light reflected off a mirror

c. reflected beam

incident ray or beam

9. beam of light traveling toward a mirror

d. normal

angle of incidence

10. angle between the incident beam and the normal

e. incident beam

11. What is the difference between regular reflection and diffuse reflection?

regular reflection happens on a flat mirror like surface
diffuse reflection happens when light bounces off many irregular shapes and rays go everywhere.