

Structure and Function in Living Systems

Name:

Sensing the Environment

Period:

Use Chapter 17, Section 2 of your textbook to answer the questions below.

Sense of Sight (p.536)

1. Your eyes are like a _____, because they both receive visible light.
2. The _____ is a clear membrane that protects the eye.
3. The _____ is the opening in the center of the eye.
4. The _____ is a layer of light-sensitive cells at the back of the eye.
5. A _____ is a special neuron that responds to light energy.
6. Your brain itself does not see light, but gets _____ that it perceives as light.
7. What kind of photoreceptors would you be using to see at night? _____
8. What kind of photoreceptors would you be using to see colors during the day? _____



Reacting to Light (p.537)

9. What opening lets light into the eye?
a. pupil b. retina c. iris d. rods
10. The _____ is a ring of muscle that controls the amount of light getting into the eye.
11. If it is bright, your iris will make your pupil _____ in diameter to keep too much light from getting in.
12. If it is dark, your pupil will be _____ in diameter to let more light in.

Focusing the Light (p.537)

13. The clear, curved material behind the iris is the _____, which bends light going into your eye.
14. What happens when the lens focuses light in front of the retina?
a. nearsightedness b. farsightedness c. blindness d. normal vision
15. What happens when the lens focuses light behind the retina?
a. nearsightedness b. farsightedness c. blindness d. normal vision

turn over for more questions

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Sense of Hearing (p.538)

16. Sounds are made by _____ that create waves of sound energy.

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

- | | |
|--|--------------|
| _____ 17. tube in the inner ear you must have to hear | a. eardrum |
| _____ 18. part of the ear that funnels sound to the middle ear | b. outer ear |
| _____ 19. thin membrane between the middle and the outer ear | c. cochlea |

The External Ear and Sound (p.539)

_____ 20. What part of the ear gathers sound waves?
a. cochlea b. eardrum c. inner ear d. external ear

21. Some animals, like _____, can move their ears to figure out where a sound is coming from.

Keeping Your Balance (p.539)

_____ 22. Besides hearing, what do your ears enable you to do?
a. breathe b. maintain balance c. regulate temperature d. see

Sense of Taste (p.540)

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

- | | |
|--|----------------|
| _____ 23. are tiny bumps that cover the tongue | a. taste buds |
| _____ 24. are contained in papillae | b. papillae |
| _____ 25. are contained in taste buds | c. taste cells |

Sense of Smell (p.540)

_____ 26. Receptors for smell are located on which of the following?
a. olfactory cells b. hair cells c. taste cells d. retinal cells

27. When you smell something, it is because _____ from that thing have entered your nose.

28. You get a sensation of _____ when your taste buds and olfactory cells work together.