

Directed Reading A

Section: The Nervous System

TWO SYSTEMS WITHIN A SYSTEM

1. What is the central nervous system?

2. What is the peripheral nervous system?

Mark each of the following statements P for peripheral nervous system or C for central nervous system.

_____ 3. includes nerves

_____ 4. acts as the control center for your body

_____ 5. includes your brain and spinal cord

_____ 6. connects all areas of your body to the brain and spinal cord

THE PERIPHERAL NERVOUS SYSTEM

7. Nerve cells specialized to receive and conduct electrical impulses are called _____.

8. Electrical messages, called _____, may travel as fast as 150 m/s or as slow as 0.2 m/s.

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

_____ 9. allows the neuron to receive information

a. cell body

_____ 10. has branches that allow information to pass to other cells

b. dendrite

c. axon

_____ 11. contains cell organelles and a nucleus

12. The tip of each branch of an axon is called a(n) _____

Directed Reading A *continued*

13. Specialized nerve endings on sensory neurons that detect changes inside and outside the body are called _____.
14. Neurons that send impulses from the brain and spinal cord to other systems are called _____.

NERVES

- _____ 15. Nerves do NOT contain
- a. muscle fiber.
 - b. blood vessels.
 - c. axons.
 - d. connective tissue.
16. Nerves may contain the axons of both _____ and _____ neurons.

SOMATIC AND AUTONOMIC NERVOUS SYSTEMS

- _____ 17. The two parts of the peripheral nervous system are
- a. neurons and cell bodies.
 - b. nerve cells and brain cells.
 - c. CNS and PNS.
 - d. sensory neurons and motor neurons.
18. The _____ part of the peripheral nervous system is composed of the somatic and autonomic nervous systems.

Mark each of the following statements S for somatic nervous system or A for autonomic nervous system.

- _____ 19. is under your conscious control
- _____ 20. controls digestion and heart rate
- _____ 21. is composed of the sympathetic and parasympathetic nervous systems
- _____ 22. is used for writing, talking, and other voluntary movements
- _____ 23. maintains a stable internal environment (homeostasis)

THE CENTRAL NERVOUS SYSTEM

24. What is the largest organ of the central nervous system?
- _____

Directed Reading A *continued*

Mark each of the following actions V for voluntary or I for involuntary.

_____ 25. digesting food

_____ 26. moving your arm

27. The three connected parts of the brain are the _____, the _____, and the _____.

28. Most memories are stored in the _____.

29. The right hand is controlled by the _____ hemisphere of the cerebrum.

30. Which part of the brain keeps track of your body's position?

31. Your body's involuntary processes, such as heart rate, are controlled by the _____.

THE SPINAL CORD

32. The spinal cord is protected by _____.

33. The spinal cord is made of _____ and _____.

34. Nerve fibers in your spinal cord allow your brain to communicate with your _____ nervous system.

35. A spinal cord injury may block all information to and from the _____.

36. What is a possible effect of a spinal cord injury?

37. What are two ways to help prevent spinal cord injuries?

