Name _____ Class _____ Date _____

Skills Worksheet

Active Reading

Section: Structures of the Nervous System

Read the passage below. Then answer the questions that follow.

The brain consists of three major parts—the cerebrum, the cerebellum, and the brain stem.

Cerebrum: The cerebrum is the largest part of the brain. The capacity for learning, memory, perception, and intellectual functioning resides in the cerebrum. The cerebrum has a folded outer layer with many bumps and grooves. A long, deep groove down the center of the brain divides the cerebrum into right and left halves, or hemispheres. The cerebral hemispheres communicate through a connecting band of axons called the corpus callosum. In general, the left cerebral hemisphere receives sensations from and controls the movements of the right side of the body. The right cerebral hemisphere receives sensations from and controls the movements of the left side of the body.

Most sensory and motor processing occurs in the cerebral cortex, the folded, thin (2–4 mm) outer layer of the cerebrum. The cerebral cortex contains about 10 percent of the brain's neurons. The folded outer surface of the cerebrum is the cerebral cortex, which has a large surface area. The cerebral cortex is primarily involved with the functioning of sensory systems.

Cerebellum: The cerebellum, which is located at the posterior base of the brain, regulates balance, posture, and movement. The cerebellum smoothes and coordinates ongoing movements, such as walking, by timing the contraction of skeletal muscles. The cerebellum integrates and responds to information about body position from the cerebrum and the spinal cord to control balance and posture.

Brain stem: At the base of the brain is the stalklike brain stem. The brain stem is a collection of structures leading down to the spinal cord and connecting the cerebral hemispheres with the cerebellum. The lower brain stem consists of the midbrain, the pons, and the medulla oblongata. These structures relay information throughout the central nervous system and play an important role in homeostasis by regulating vital functions such as heart rate, breathing rate, body temperature, and sleep.

Name _____ Class _____ Date _____

SKILL: READING EFFECTIVELY

In the space provided, write the letter of the part of the brain that best matches the description.

a. cerebrum
b. cerebellum
c. brain stem

_____ 1. regulates balance
_____ 2. leads to the spinal cord
_____ 3. largest part of the brain
_____ 4. divided into two hemispheres
_____ 5. pons is located here
_____ 6. contains the corpus callosum
_____ 7. responds to information about body position
_____ 8. capacity for learning resides here
_____ 9. breathing rate is regulated here
_____ 10. located at the base of the brain
_____ 11. has a folded layer with many bumps and grooves
_____ 12. regulates posture
_____ 13. left side controls right side of the body
_____ 14. medulla oblongata located here
_____ 15. times contractions of the skeletal muscles
_____ 16. cerebral cortex is located here
_____ 17. located at the posterior base of the brain
_____ 18. heart rate is regulated here
_____ 19. capacity for intellectual function resides here

An analogy is a comparison. In the space provided, write the letter of the term or phrase that best completes the analogy.

_____ 20. Cerebellum is to movement as cerebrum is to
a. breathing.
b. walking.
c. sleeping.
d. perception.