

**Guided Reading  
Activity****6-1***For use with textbook pages 155–159***The Nervous System:  
The Basic Structure**

**Directions: Outlining** Locate the heading in your textbook. Then use the information under the heading to help you write each answer.

**I. The Nervous System: The Basic Structure****A. Introduction**

1. What feeling do runners get from “runner’s high”? \_\_\_\_\_
2. What produces “runner’s high”? \_\_\_\_\_

**B. How the Nervous System Works**

1. What two parts make up the nervous system? \_\_\_\_\_  
\_\_\_\_\_
2. What tasks do nerves perform? \_\_\_\_\_  
\_\_\_\_\_
3. What protects the brain, spinal cord, and peripheral nerves? \_\_\_\_\_  
\_\_\_\_\_
4. What is meant by the “all-or-none” principle of neuronal firing? \_\_\_\_\_  
\_\_\_\_\_
5. What are the three basic parts of a neuron? \_\_\_\_\_  
\_\_\_\_\_
6. What purpose does the myelin sheath serve? \_\_\_\_\_  
\_\_\_\_\_
7. How do neurotransmitters help transmit impulses between neurons? \_\_\_\_\_  
\_\_\_\_\_
8. What different jobs do afferent neurons, efferent neurons, and interneurons have? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
9. What is the difference between the somatic and autonomic nervous systems? \_\_\_\_\_  
\_\_\_\_\_

**Guided Reading  
Activity****6-2****Studying the Brain***For use with textbook pages 160–168***Directions: Filling in the Blanks** Use your textbook to fill in the blanks using the words in the box.

behavior	hypothalamus	pons
brain waves	limbic system	reticular activating system
cerebellum	magnetic resonance imaging	right hemisphere
cerebral cortex	medulla	thalamus
electrodes	occipital lobe	

**The Three Brains**

The **1** \_\_\_\_\_ helps control posture and balance. The **2** \_\_\_\_\_ controls breathing and a variety of reflexes, while the **3** \_\_\_\_\_ functions as a bridge to interconnect messages between the spinal cord and brain. The **4** \_\_\_\_\_ \_\_\_\_\_ alerts the rest of the brain to incoming signals.

The forebrain includes the **5** \_\_\_\_\_, which is a relay station for all the information that travels to and from the cortex, and the **6** \_\_\_\_\_, which controls functions such as hunger and body temperature. The **7** \_\_\_\_\_ \_\_\_\_\_ gives you the ability to learn and store complex information, and the **8** \_\_\_\_\_ \_\_\_\_\_ regulates emotions and motivations.

Visual signals are processed in the **9** \_\_\_\_\_ \_\_\_\_\_ . The **10** \_\_\_\_\_ \_\_\_\_\_ controls the left side of the body.

**How Psychologists Study the Brain**

Psychobiologists study the role of the brain in **11** \_\_\_\_\_ . **12** \_\_\_\_\_ \_\_\_\_\_ occur because the neurons in the brain tend to increase or decrease their amount of activity in unison. **13** \_\_\_\_\_ may be used to set off the firing of neurons as well as to record it. **14** \_\_\_\_\_ \_\_\_\_\_ involves passing non-harmful radio frequencies through the brain, allowing researchers to study the structure of the brain as well as to identify tumors or types of brain damage.

## Guided Reading Activity

# 6-3



## The Endocrine System

*For use with textbook pages 170–173*

**Directions: Recalling the Facts** Use the information in your textbook to answer the questions.

1. What causes the “rush” people experience when doing something risky, such as running with bulls at the Pamplona fiesta? \_\_\_\_\_  
\_\_\_\_\_
2. In what way is the endocrine system like the nervous system? \_\_\_\_\_  
\_\_\_\_\_
3. Why are endocrine glands also called ductless glands? \_\_\_\_\_  
\_\_\_\_\_
4. What are three ways that hormones affect behavior? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
5. How does the pituitary gland act as the master gland? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
6. What is hypothyroidism and how does it make people feel? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
7. When a person is angry or frightened, how do the adrenal glands prepare the person for action? \_\_\_\_\_  
\_\_\_\_\_
8. What do ovaries produce? \_\_\_\_\_  
\_\_\_\_\_
9. How does testosterone affect males in adolescence? \_\_\_\_\_  
\_\_\_\_\_
10. What is the difference between a hormone and a neurotransmitter? \_\_\_\_\_  
\_\_\_\_\_
11. As organisms grew more complex, their single communication system split into two. How did these two systems differ in the kinds of messages they sent? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Guided Reading  
Activity****6-4***For use with textbook pages 174–176***Heredity and  
Environment****Directions: Filling in the Blanks** Use your textbook to fill in the blanks using the words in the box.

behavior

heredity

monozygotic

dizygotic

identical twins

nature

environment

instinctive

nurture

fraternal twins

John Watson

Sir Francis Galton

genes

learned

**Heredity and Environment**

**1** \_\_\_\_\_ establish(es) what you could be, and **2** \_\_\_\_\_ define(s) the final product. People often argue about whether human behavior is **3** \_\_\_\_\_ (due to heredity) or **4** \_\_\_\_\_ (due to environment). **5** \_\_\_\_\_ is the genetic transmission of characteristics from parents to their offspring. In the nature—nurture question, **6** \_\_\_\_\_ refers to environmental factors, such as family, culture, education, and individual experiences; **7** \_\_\_\_\_ refers to the characteristics that a person inherits—his or her biological makeup.

**8** \_\_\_\_\_ became one of the first to preach the importance of nature in the modern era. He found that success ran in families and concluded that heredity was the cause. Many psychologists, however, have emphasized the importance of the environment. The tone was set by **9** \_\_\_\_\_, the founder of behaviorism.

Genes build and modify the body's physical structures, which must then interact with their environment to produce **10** \_\_\_\_\_. One way to find out whether a trait is inherited is to study twins. **11** \_\_\_\_\_ develop from a single fertilized egg (thus they are called **12** \_\_\_\_\_) and share the same genes. **13** \_\_\_\_\_ develop from two fertilized eggs (thus, **14** \_\_\_\_\_), and their genes are no more similar than those of brothers or sisters.

# Guided Reading Activity

# 7-1



# Sleep and Dreams

*For use with textbook pages 183–190*

**Directions: Recalling the Facts** Use the information in your textbook to answer the questions.

1. What is sleep? \_\_\_\_\_  
\_\_\_\_\_
2. Describe three views on why we sleep. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
3. What are the characteristics of Stage I sleep? \_\_\_\_\_  
\_\_\_\_\_
4. What happens during REM sleep? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
5. What is jet lag and how do you cure it? \_\_\_\_\_  
\_\_\_\_\_
6. List five types of sleep disorders. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
7. What are the causes of sleep apnea? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
8. What is the difference between nightmares and night terrors? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
9. How do dreams change as the night progresses? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
10. Why did Sigmund Freud believe dreams are important? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Guided Reading  
Activity**

**7-2**

**Hypnosis,  
Biofeedback, and Meditation**

*For use with textbook pages 191–195*

**Directions: Outlining** Locate the heading in your textbook. Then use the information under the heading to help you write each answer.

**I. Hypnosis, Biofeedback, and Meditation**

**A. Introduction**

1. Some operations have been performed without using anesthesia. How is this possible? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**B. What Is Hypnosis?**

1. What is hypnosis? \_\_\_\_\_  
\_\_\_\_\_
2. How does hypnosis work? \_\_\_\_\_  
\_\_\_\_\_
3. Can a hypnotist force the participant to do things against his or her will? Why or why not? \_\_\_\_\_  
\_\_\_\_\_
4. What is the neodissociation theory of hypnosis? \_\_\_\_\_  
\_\_\_\_\_
5. Give three examples of uses of hypnosis. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**C. Biofeedback**

1. How has biofeedback been used? \_\_\_\_\_  
\_\_\_\_\_
2. What is the basic principle of biofeedback? \_\_\_\_\_  
\_\_\_\_\_

**D. Meditation**

1. How can people benefit from meditation? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Guided Reading  
Activity****7-3***For use with textbook pages 197–202***Drugs and  
Consciousness****Directions: Filling in the Blanks** Use your textbook to fill in the blanks using the words in the box.

abusers

depressant

perceptions

alcohol

dreaming

physically

augment

inhibit

plants

breathing

memory

psychologically

control

narcotics

synthetic

**Marijuana**

Marijuana is not **1** \_\_\_\_\_ addictive but may cause people to become **2** \_\_\_\_\_ addicted. In general, marijuana **3** \_\_\_\_\_ sensory experiences. It also disrupts **4** \_\_\_\_\_ formation, making it difficult to carry out mental and physical tasks.

**Hallucinations and Hallucinogens**

Hallucinations are **5** \_\_\_\_\_ that have no direct external cause. Hallucinations can occur under normal conditions, such as when a person is **6** \_\_\_\_\_. Hallucinogens are found in **7** \_\_\_\_\_. One of the most powerful hallucinogens, however, is LSD, which is a **8** \_\_\_\_\_ substance.

**Opiates and Alcohol**

Opiates are usually called **9** \_\_\_\_\_. An overdose results in a loss of control of **10** \_\_\_\_\_. The most widely used and abused mind-altering substance in the United States is **11** \_\_\_\_\_. It is actually a **12** \_\_\_\_\_ that serves to **13** \_\_\_\_\_ the brain's normal functions.

**Drug Abuse and Treatment**

Drug **14** \_\_\_\_\_ are people who regularly use illegal drugs or excessively use legal drugs. The greatest risk associated with use of psychoactive drugs is loss of **15** \_\_\_\_\_.

**Guided Reading  
Activity****8-1****Sensation***For use with textbook pages 207–213***Directions: Filling in the Blanks** Use your textbook to fill in the blanks using the words in the box.

absolute

detection

receptors

adaptation

difference

senses

change

perception

stimulus

competing

range

**What Is Sensation?**

Any aspect of or change in the environment to which an organism responds is called a

**1** \_\_\_\_\_. A sensation occurs any time a stimulus activates one of your**2** \_\_\_\_\_. A sensation may be combined with other sensations and your past experience to yield a **3** \_\_\_\_\_.**Threshold**The weakest amount of a stimulus required to produce a sensation is the **4** \_\_\_\_\_ threshold. Humans sense a somewhat limited **5** \_\_\_\_\_ of the physical phenomena in the everyday world.**Sensory Differences and Ratios**A just noticeable **6** \_\_\_\_\_ is the smallest increase or decrease in the intensity of a stimulus that a person can detect. According to Weber's law, the larger or stronger the stimulus, the larger the **7** \_\_\_\_\_ required for a person to notice it.**Sensory Adaptation****8** \_\_\_\_\_ are most responsive to increases and decreases, to new events rather than ongoing, unchanging stimulation. Without sensory **9** \_\_\_\_\_, you would feel the constant pressure of the clothes on your body.**Signal-Detection Theory****10** \_\_\_\_\_ thresholds involve recognizing some stimulus against a background of competing stimuli. Signal-detection theory is based on the notion that the stimulus must be detected in the presence of **11** \_\_\_\_\_ stimuli.



# Guided Reading Activity

# 8-2



# The Senses

*For use with textbook pages 214–222*

**Directions: Recalling the Facts** Use the information in your textbook to answer the questions.

1. How do sensory receptors make it possible for you to perceive external stimuli? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
2. What are the differences between rods and cones? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
3. Why does a pea look green? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
4. Why do some people see the world in only blacks, whites, and shades of gray? \_\_\_\_\_  
\_\_\_\_\_
5. Why would you perceive one object as closer than another? \_\_\_\_\_  
\_\_\_\_\_
6. How would you describe the sound of a bass guitar at a rock concert in terms of sound waves? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
7. How can your ears tell you from which direction a sound is coming? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
8. If you experience dizziness while riding a roller coaster, what is likely occurring? \_\_\_\_\_  
\_\_\_\_\_
9. Why does food often taste bland when you have a cold? \_\_\_\_\_  
\_\_\_\_\_
10. How does feeling pain benefit you? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
11. What process makes it possible to bounce a basketball without looking at it? \_\_\_\_\_  
\_\_\_\_\_

**Guided Reading  
Activity****8-3****Perception**

*For use with textbook pages 223–231*

**Directions: Outlining** Locate the heading in your textbook. Then use the information under the heading to help you write each answer.

**I. Perception****A. Introduction**

1. What occurs during the perception process? \_\_\_\_\_  
\_\_\_\_\_

**B. Principles of Perceptual Organization**

1. Name four principles the brain uses in constructing perceptions. \_\_\_\_\_  
\_\_\_\_\_

**C. Figure-Ground Perception**

1. What is figure-ground perception? \_\_\_\_\_

**D. Perceptual Inference**

1. What makes perceptual inference possible? \_\_\_\_\_  
\_\_\_\_\_

**E. Learning to Perceive**

1. What factors influence learning to perceive? \_\_\_\_\_  
\_\_\_\_\_  
2. What would make a message subliminal? \_\_\_\_\_  
\_\_\_\_\_

**F. Depth Perception**

1. What are some monocular cues used to perceive distance and depth? \_\_\_\_\_  
\_\_\_\_\_

**G. Constancy**

1. What process produces size constancy? \_\_\_\_\_

**H. Illusions**

1. When are illusions created? \_\_\_\_\_

**I. Extrasensory Perception**

1. Name the four types of ESP. \_\_\_\_\_  
\_\_\_\_\_