

**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.

**Vocabulary
Activity**

6-2

Studying the Brain

Directions: Complete each sentence by writing the term that best completes the sentence.

- | | |
|-------------------------------------|------------------------------------|
| computerized axial tomography (CAT) | lobes |
| electroencephalograph (EEG) | magnetic resonance imaging (MRI) |
| forebrain | midbrain |
| hindbrain | positron emission tomography (PET) |

1. The _____ is involved in the most basic processes of life.
2. _____ is an imaging technique used to identify brain injuries and deterioration.
3. The _____ covers the brain's central core.
4. _____ enables researchers to study brain activity and brain structure.
5. The _____ can be used to record the electrical activity of the brain.
6. The cerebral cortex is divided into different regions known as _____.
7. The _____ integrates sensory information and relays it upward.
8. The _____ can capture a picture of the brain as different parts are being used.

Directions: Answer the following questions in the space provided.

9. Describe the functions of three parts of the forebrain.

10. How do psychologists study the brain?
