

BRAIN CHEMISTRY  
**TEACHER'S GUIDE**

POST-ASSESSMENT: BRAIN CHEMISTRY

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U.S. Department of Health and Human Services

## OVERVIEW: POST-ASSESSMENT

In this post-assessment, students will demonstrate what they have learned about brain chemistry.

# BRAIN CHEMISTRY

Students will demonstrate what they have learned about brain chemistry by revisiting and revising the pre-assessment from the beginning of the unit.



### UNIT LINKS

**Legacy of Lost Canyon**  
Review all Science boxes.

### MATERIALS

**Per Student** (see Setup)

- Notebook paper

### SETUP

Have students' pre-assessment sheets ready to distribute to students. The pre-assessments should not be graded. Students will

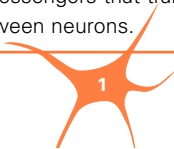
work individually to revise their student sheets.

### PROCEDURE

1. Begin with a class discussion. Encourage students to share something they have learned from this unit. Ask questions to prompt further discussion, if necessary.
2. Return the "Know Your Brain?" pre-assessments to each student.
3. Instruct students to review the statements and decide if they would like to change any responses. On a separate sheet of paper or on the back of the student sheet, have each student list the responses he or she would like to change and his or her reasoning for making the change.
4. Next, have students examine their corrected responses and identify statements that they marked as false. Instruct students to rewrite each false statement as a true statement.
5. With the class, discuss answers that students changed and the ways in which they corrected the false statements.

### EXPLANATION FOR FALSE STATEMENTS

- |  |  |
|--|--|
| 4. More than 100 different chemicals, neurotransmitters, have been identified.                                     | 16. Nicotine is one of the most addictive substances in common use.  |
| 7. Neuroscience is a constantly evolving field of science with many new discoveries every year.                    | 17. Judgment and planning functions of the cerebrum develop throughout adolescence, later than many other functions. |
| 11. There are more than 10,000 different kinds of nerve cells.   | 18. The cerebrum is responsible for many functions, including thinking, learning and memory.                         |
| 13. Addiction is a disease caused by changes in the brain and characterized by an overwhelming need to use a drug. | 21. Neurotransmission involves chemical messengers that transmit signals between neurons.                            |



### CONCEPTS

- The human brain is complex.
- Messages within the brain and the rest of the nervous system are conducted by cells called neurons.
- Drugs and other substances can interfere with or modify the transmission of messages between neurons.

### SCIENCE & MATH SKILLS

Summarizing ideas and presenting results

### TIME

**Preparation:** 10 minutes

**Class:** 30-45 minutes

### EXTENSION

Have students write a letter to an anonymous teen, explaining the consequences of abusing drugs.