

## PsychSim 5: HEMISPHERIC SPECIALIZATION

Name: \_\_\_\_\_

Section: \_\_\_\_\_

Date: \_\_\_\_\_

This activity describes what researchers have learned about the special abilities of the left and right sides of the brain. You will learn how information is transmitted to these two hemispheres and about the unique function of each.

### **Hemispheric Connections**

- What is the name of the band of fibers connecting the left and right hemispheres of the brain? What is its function?
- Each hemisphere is primarily connected to the opposite\_side of the body. This means that a touch on the *left* hand would be registered in which hemisphere?
- When sound waves enter the *right* ear, which hemisphere receives the primary information?
- This crossover pattern is also true in part for the visual pathway. When light enters the *left* eye, which hemisphere receives the information?
- How is the visual pathway from the eye *different* from that of the ear or hand?

### **Split-Brain Research**

- Briefly explain split-brain research.
- If a participant is blindfolded and a fork is placed in his or her *right* hand, how would you guess that the person would respond?
- If a participant is blindfolded and a fork is placed in his or her *left* hand, how would you guess that the person would respond?

### **Split-Brain Research (continued)**

- A split-brain patient can name an unseen object placed in the right hand, but cannot name objects placed in the left hand. What does this suggest about the language abilities of the two hemispheres?
- In an additional experiment, words are flashed briefly to the left or right visual field of the participant. Try to predict the results. For example, when the word appears in the *left* visual field, will the person be able to read the word?
- In a different task, a split-brain patient has to look at a completed block pattern and assemble the blocks near his or her *right* hand to match the pattern, using only the *right* hand. Can the patient do it? Explain your thinking.
- Why is it that normal humans (with an intact corpus callosum) can name objects placed in either hand and easily read words flashed to either visual field?