

### 15-1 Which Brain Side Is Dominant?

The human brain is divided into a left and a right side. Many things that you do with the right side of your body are controlled by your brain's left side. Many things that you do with the left side of your body are controlled by your brain's right side. If much of what you do is done by your body's right side, your dominant brain side is the left side. If much of what you do is done by your body's left side, your dominant brain side is the right side.

#### INVESTIGATION

#### OBJECTIVES

- In this exercise, you will:
- check to see how many activities you do using your left hand or your right hand.
  - check how many activities you do using your left foot or your right foot.
  - find out if you draw or see objects more to the right side or the left side.
  - find out if the left side or the right side of your brain is dominant.

#### KEYWORDS

- Define the following keywords:
- cerebrum \_\_\_\_\_
  - dominant \_\_\_\_\_
  - left cerebrum side \_\_\_\_\_
  - right cerebrum side \_\_\_\_\_

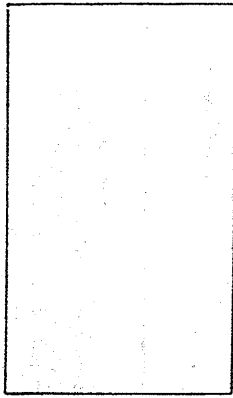
#### MATERIALS

- paper
- red pencil

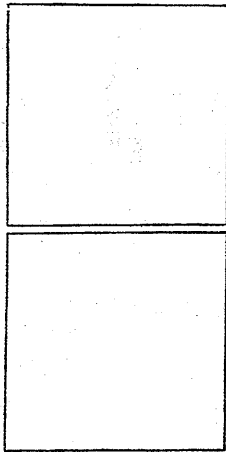
#### PROCEDURE

- Place a check mark in the proper column in Table 1 to show which hand you usually use to do the following tasks. Note: If you use either hand just as often, then check both columns. Tell which hand you use to
  - write your name.
  - wave "hello."
  - bat while playing baseball.
  - which thumb is on top when folding your hands.
  - hold your spoon or fork while eating.

- Place a check mark in the proper column in Table 1 to show which foot you usually use to do the following tasks. Note: If you use either foot just as often, check both columns. Tell which foot you use to
  - start down a flight of stairs.
  - start up a flight of stairs.
  - catch yourself from falling as you lean forward.
  - start skipping.
  - place most weight on when you are standing.
  - start to run.
  - kick a ball.



dog drawing



left hand

right hand

- Draw, in the space provided, a simple side view of a dog. Place a check mark in the column in Table 1 that shows the direction the nose faces.
- Draw a circle in the space provided with your *right* hand. Note the direction in which you made this circle. Now draw a circle with your left hand. Note the direction in which you made this circle. If both circles were drawn clockwise, mark the right column in Table 1. If both circles were drawn counterclockwise, mark the left column in Table 1. If you drew one circle in each direction, check both columns.

- Roll a sheet of paper into a tube. Look through the tube at some distant object with both eyes open as shown in Figure 1. Then while looking through the tube at that distant object, close one eye and then the other. The eye that sees the object through the tube is your dominant eye. Place a check mark in the proper column in Table 1.

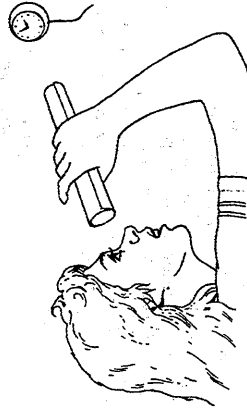


FIGURE 1. Finding your dominant eye

6. Total up the check marks for each column of Table 1 and place the total at bottom of the columns.

**Table 1. Finding Your Dominant Side**

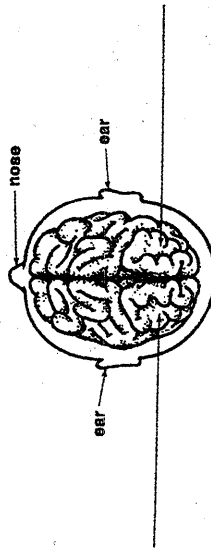
| Task               | Left side | Right side |
|--------------------|-----------|------------|
| Write name         |           |            |
| Wave "hello"       |           |            |
| Bat                |           |            |
| Thumb position     |           |            |
| Hold spoon         |           |            |
| Walk down stairs   |           |            |
| Walk up stairs     |           |            |
| Catch from falling |           |            |
| Shipping           |           |            |
| Standing           |           |            |
| Start to run       |           |            |
| Take off shoe      |           |            |
| Leg on top         |           |            |
| Kick               |           |            |
| Dog drawing        |           |            |
| Circle drawing     |           |            |
| Dominant eye       |           |            |
| Totals             |           |            |

**QUESTIONS**

- Which column in Table 1 has the most check marks? \_\_\_\_\_
- Which column in Table 1 has the fewest check marks? \_\_\_\_\_
- Which body side seems to be your dominant side? \_\_\_\_\_
- The human cerebrum is divided into left and right sides.
  - Which brain side controls the left side of your body? \_\_\_\_\_
  - Which brain side controls the right side of your body? \_\_\_\_\_
  - The brain side that you use the most is said to be your dominant brain side.

Which is your dominant brain side?

(HINT: The answer will be the opposite side from your answer to question 3.)  
 Look at Figure 2. It shows a top view of the brain. Label the following parts: left cerebrum side, right cerebrum side. Use a red pencil to shade in your dominant brain side.



**FIGURE 2.** Top view of brain

- Your teacher will ask for a class survey of certain results. Complete the following data for your class:
  - number of students who are right-handed and show the right body side as dominant. \_\_\_\_\_
  - number of students who are right-handed and show the left body side as dominant. \_\_\_\_\_
  - number of students who are left-handed and show the right body side as dominant. \_\_\_\_\_
  - number of students who are left-handed and show the left body side as dominant. \_\_\_\_\_
- Using your results from question number 7,
  - does a person who uses his or her right hand for writing always show a dominant right body side? \_\_\_\_\_
  - does a person who uses his or her left hand for writing always show a dominant left body side? \_\_\_\_\_