## Activity Lesson Opener

For use with pages 87-95

**SET UP:** Work with a partner.

**YOU WILL NEED:** • index cards

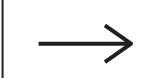
Consider the following statements.

Statement A: The student is a boy.

Statement B: The student is a girl.

- 1. Write Statement A on one index card, Statement B on another, the word "not" on each of two index cards, and an arrow,  $\rightarrow$ , on another index card. The arrow,  $\rightarrow$ , means "implies."
- **2.** Arrange the cards to make as many conditional statements as you can. After you arrange a statement, record it using symbols. For example, the following arrangement is recorded as  $A \rightarrow B$ .

Statement A: The student is a boy.



Statement B: The student is a girl.

Then decide whether the statement is *true* or *false*.

- **3.** Did you create any statements that could be combined to form a biconditional statement? If so, give the pair(s) of statements that compose the biconditional(s).
- **4.** How do you think a double arrow,  $\leftrightarrow$ , could be used to write a biconditional using symbolic notation? Use your answer to write the biconditional statement(s) using symbols. Decide whether each statement you created is *true* or *false* and explain your answer.