

Activity

CHAPTER 3

Programming Concepts, If Statements

Name:

Date:

Purpose: Group activity teaching the concept of *If statements* and their syntax.

Materials: Cut up sheet of silly conditionals and actions.

Vocabulary to be explained prior to activity:

If statement:

These simple statements exist in real life as well as in computer programming. They are simple statements that indicate if something is true or has occurred, then a resulting action takes place.
If statement pseudo-code: If (conditional) { action }

if:
The word that always starts an *If statement*. It's never capitalized.

Parenthesis () :
Indicates and bookends the conditional portion of an *If statement*.

Conditional:
The question or condition that if true initiates the action of the If statement.

Curly brackets { } :
Indicates and bookends the action portion of an *If statement*.

Action:
Portion of code that occurs when the conditional is true. This can be anything including another *If statement*.

Activity:

Preparation:
Cut up the conditional and action portions of the silly *If statements* included with this activity, or you can write your own and cut those up.

Activity:

First mix and then distribute the slips of paper among your students. Explain the concept of an *If statement* to your students and then have them try to match up all the conditionals with the resulting actions. It is possible to mismatch the conditionals and actions, but this portion of the activity is mainly to have fun and establish the idea of a conditional and a resulting action, so don't worry if the kids mismatch some, just make sure you get some laughter out of this portion of the activity.

Second have seven students stand up to model portions of the *If statement*. The first student is the "If", the second student is the first parenthesis, the third student is the conditional, the fourth student is the closing parenthesis, the fifth student is the first curly bracket, the sixth student is the resulting action and the final student is the closing curly bracket. Students then model one of the silly *If statements* they have matched up. Each student reads or says aloud the portion of the *If statement* they represent. Once the seven students have gone through the *If statement*, the last student sits down, all the standing students move one space over to the right and a new student stands up to join the group as the "If" portion. Students should cycle through this way until either everyone has had a turn to be each part of the *If statement*, or all the silly *If statements* have been used up. Encourage students who are representing the parenthesis and curly brackets to make parenthesis and curly brackets with their arms to demonstrate which are opening parenthesis and curly brackets and which are closing parenthesis and curly brackets.

Once the *If statements* and position of the parenthesis and brackets have been established in your classroom you can use the semantics where ever you see fit. For example, If (we line up quickly and quietly) { then we will have more recess time. }