7

Bee: Conditionals

Lesson time: 30 Minutes

LESSON OVERVIEW

In the Bee environment, students write programs with conditional statements. Students originally learned this concept in Course 2, but this lesson introduces more complex implementations of conditionals.

TEACHING SUMMARY

Getting Started

[Introduction](#)

Activity: Bee: Conditionals

[Bee: Conditionals](#)

Extended Learning

[Extension Activities](#)

LESSON OBJECTIVES

Students will:

- Compare properties and values using >, =, < symbols
- Translate spoken language conditional statements into a program
- Execute an algorithm with a conditional statement
- Use conditional statements to make logic-based choices
- Nest conditionals to analyze multiple value conditions using if, else if, else logic
- Write functions that execute nested conditionals

GETTING STARTED

Introduction

Review conditional statements with students.

- What is a conditional statement?
- When are they useful?
- What conditional did we use in the Course 2 Bee Conditionals?

ACTIVITY

Bee: Conditionals

In the Course 2 Bee Conditionals, we only looked at simple conditionals called "if statments," such as "if there is one nectar, collect it." Bascially, we are saying if a statement is true, do something. In this stage we are going to look at what to if that statement is *not* true, we call these "if, else" statements.

EXTENDED LEARNING

Use these activities to enhance student learning. They can be used as outside of class activities or other enrichment.

True/False Tag

- Line students up as if to play [Red Light / Green Light](#).
- Select one person to stand in front as the Caller.
- The Caller chooses a condition and asks everyone who meets that condition to take a step forward.
  - If you have a red belt, step forward.
  - If you are wearing sandals, take a step forward.
- Try switching it up by saying things like "If you are *not* blonde, step forward."

Nesting

- Break students up into pairs or small groups.
- Have them write if statements for playing cards on strips of paper, such as:
  - If the suit is clubs
  - If the color is red
- Have students create similar strips for outcomes.
  - Add one point
  - Subtract one point
- Once that's done, have students choose three of each type of strip and three playing cards, paying attention to the order selected.
- Using three pieces of paper, have students write three different programs using only the sets of strips that they selected, in any order.
  - Encourage students to put some if statements inside other if statements.
- Now, students should run through all three programs using the cards that they drew, in the same order for each program.
  - Did any two programs return the same answer?
  - Did any return something different?