

Bee: Conditionals

Lesson time: 30 Minutes

LESSON OVERVIEW

Up until this point all the programs your students have written should run exactly the same way every time - reliable, but not very flexible. In this stage we introduce the conditional statement, code that functions differently depending on the conditions it encounters.

TEACHING SUMMARY

Getting Started

[Introduction](#)

Activity: Bee: Conditionals

[Bee: Conditionals](#)

Extended Learning

[Extension Activities](#)

LESSON OBJECTIVES

Students will:

- Compare values using the = operator
- Translate spoken language conditional statements into a program
- Identify when a conditional can be used to deal with unknown values
- Execute an algorithm with a conditional statement
- Solve puzzles using a combination of looped sequences and conditionals

GETTING STARTED

Introduction

Review the Conditionals with Cards activity with your students.

- What is a conditional statement?
- When is it useful?
- What are some of the conditions you used in the Unplugged activity?

Now we're going to use conditionals with our bee to help us deal with some mysterious purple flowers. We don't know if those flowers have nectar or not, so we'll need to use conditionals to make sure that we collect nectar if it's there, but that we don't try to collect nectar from a flower that doesn't have any.

ACTIVITY

[Bee: Conditionals](#)

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?



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