

Bee: Debugging

Lesson time: 30 Minutes

LESSON OVERVIEW

Debugging is an essential element of learning to program. In this lesson, students will encounter puzzles that have been solved incorrectly. They will need to step through the existing code to identify errors, including incorrect loops, missing blocks, extra blocks, and misordered blocks.

TEACHING SUMMARY

Getting Started

[Introduction](#)

Activity: Bee: Debugging

[Bee: Debugging](#)

Extended Learning

[Extension Activities](#)

LESSON OBJECTIVES

Students will:

- Predict where a program will fail
- Modify an existing program to solve errors
- Identify an algorithm that is unsuccessful when the steps are out of order
- Reflect on the debugging process in an age-appropriate way

GETTING STARTED

Introduction

Ask students to think about problems they have to solve in everyday life.

- How do you fix something that isn't working?
- Do you follow a specific series of steps?
- The puzzles in this unit have already been solved for you (yay!), but they don't seem to be working (boo!)
- We call the problems in these programs "bugs," and it will be your job to "debug" them.

ACTIVITY

[Bee: Debugging](#)

As your students work through the puzzles, observe how they search for bugs. Identify different strategies used and ask students to share with the whole class. This helps students to recognize that there are many ways to approach these problems. Have students follow the path described by the code with their fingers to find potential bugs.

EXTENDED LEARNING

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

Planting bugs

Have students go back through previous levels, purposefully adding bugs to their solutions. They can then ask other students to debug their work. This can also be done with paper puzzles.



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