

Find the Bug

Each program has a bug. Follow it, find the mistake and fix it.

Name _____ Date _____ Class _____

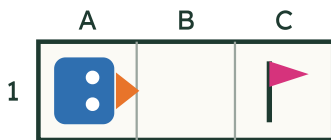
Learning objective: I can find and fix a bug in a program (debugging).

✓ I can follow a program step by step ✓ I can find the bug ✓ I can fix the program

Arrow cards: ↑ = move forward one square ↶ = turn left ↷ = turn right. The robot moves the way its orange nose points.

1 Debug the program Follow each program. Circle the bug, then write the fixed program.

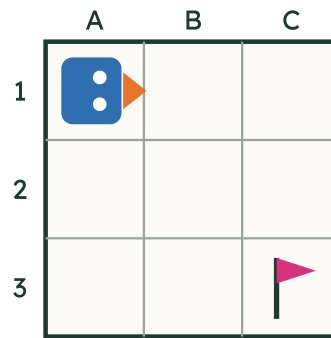
Bug 1



Program: ↑

Fixed:

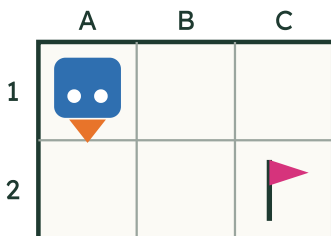
Bug 2



Program: ↑ ↑ ↶ ↑ ↑

Fixed:

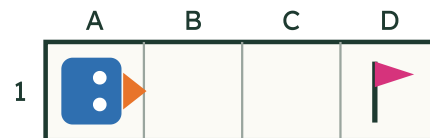
Bug 3



Program: ↑ ↷ ↑ ↑

Fixed:

Bug 4



Program: ↑ ↑ ↑ ↑

Fixed:

Find the Bug

2 Bug facts

	TRUE	FALSE
1 A bug is a mistake in a program.	☐	☐
2 Debugging means finding and fixing mistakes.	☐	☐
3 If a program has a bug, you must start again from nothing.	☐	☐

3 What should you do? Circle the best answer.

- 1 Your robot stops one square before the flag. What do you do?
(A) add one more ↑ (B) add a turn (C) delete everything
- 2 Your robot turned the wrong way. What do you do?
(A) change the turn card (B) add more ↑ cards (C) give up

4 Tell a friend How do you find a bug? Write one tip.

- 1 My tip:

Answer Key

Find the Bug

Question	Answers
1 Debug the program	1. add another ↑ at the end. Fixed program: ↑ ↑. The buggy program stops on B1 2. step 3 should be ↻ (turn right), not ↺. Fixed program: ↑ ↑ ↻ ↑ ↑. The buggy program bumps into the edge. 3. step 2 should be ↺ (turn left), not ↻. Fixed program: ↑ ↺ ↑ ↑. The buggy program bumps into the edge. 4. there is one ↑ too many – take one away. Fixed program: ↑ ↑ ↑. The buggy program bumps into the edge.
2 Bug facts	1 True; 2 True; 3 False – you can usually fix just the step that is wrong
3 What should you do?	1 A (add one more ↑); 2 A (change the turn card)
4 Tell a friend	1. e.g. Follow the program one step at a time with your finger.

Teaching note: every buggy program was checked by simulation to make sure it really fails, and every fixed program to make sure it works.