

Twist and Turn: Bee-Bot's Lateral Moves

25 minutes

Exploring Robotics and Commands

WHAT THIS LESSON DOES

In this lesson, you'll guide your students in mastering the art of turning Beebots. You'll recap straight line movements, demonstrate lateral movements, and allow students to practice these skills. The lesson concludes with a review and discussion of the day's learning. Remember, turning is key to navigating Beebots around corners and changing direction.

WHAT STUDENTS SHOULD BE ABLE TO DO

- Understand and apply the concept of turning in Beebot navigation.
- Differentiate between turning and moving actions in Beebot operation.
- Execute sequences of turn and move commands to guide Beebot to specific locations.
- Develop spatial awareness and precise programming skills through hands-on Beebot practice.
- Engage in reflective discussion to reinforce learning and identify areas for improvement.

BEFORE THE LESSON

- Charge and test one Bee-Bot per small group.
- Set out a Bee-Bot grid mat on the floor (any grid mat works) plus stickers or small objects as targets.
- Open and test the straight-line recap interactive and the lateral-movement interactive on the IWB.
- Clear tabletop or floor space so each group can practise safely.

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HOW THE LESSON RUNS

Introduction

Straight Line Recap

IWB Practice Lateral Movement

Teacher Bee-Bot Demonstration

Student Practice

Wrap Up

TEACHING MOVES

1. Introduction. Set the focus: today is turning left and right so the Bee-Bot can change direction and go around corners, not only travel in a straight line.
2. Straight Line Recap. Rehearse forward and backward moves. Have pupils make an X with their arms to clear the code after each try. Use the interactive game briefly if memories need refreshing.
3. IWB Practice Lateral Movement. State the key rule clearly: turn only rotates the Bee-Bot. It stays put until forward or backward is pressed. Demonstrate that on the interactive activity.
4. Teacher Bee-Bot Demonstration. On the grid mat, press left and right turns so pupils see facing change with no travel. Then add a forward move so the difference is obvious in a real square.
5. Student Practice. In small groups, practise short sequences such as turn right then forward two. When a pupil is secure, place a target and have them turn and move to reach it.
6. Wrap Up. Gather the class and restate: turning changes facing only. Ask what felt challenging or exciting about turning and moving. Keep the reflection spoken, not written.

WHAT TO WATCH FOR

- Pupils think pressing left or right also makes the Bee-Bot travel in that direction. Demo a turn alone on the mat or interactive: it rotates and stays in the same square. Only then add forward or backward.
- Pupils build a long sequence without clearing, so old commands run with the new ones. Pause and use the X-arms clear gesture before each new attempt so only the intended commands run.

DIFFERENTIATION

- Emerging: Stay with one turn and one forward move, side by side with a partner who presses the buttons while they say the plan aloud. Teacher models the facing change on the group's Bee-Bot before they try.
- Developing: Give a short oral sequence (turn, then move) and have them run it, then say what each button did. Add a nearby target only when straight turn-and-move feels steady.
- Proficient: Place a target two or more squares away that needs more than one turn to reach. Ask them to predict the path aloud before pressing Go, then check against the Bee-Bot's route.