

LESSON 17

Bee-Bot's Bloom Hunt: Finding Flowers

30 minutes

Exploring Robotics and Commands

WHAT THIS LESSON DOES

In this lesson, you'll guide your students through a series of engaging Bee-Bot activities. They'll act as Bee-Bots, plan and input commands, and work in groups to guide a Bee-Bot to a flower on a grid. This lesson aims to enhance their programming skills and understanding of sequencing.

WHAT STUDENTS SHOULD BE ABLE TO DO

- Develop problem-solving skills through planning and sequencing instructions for Bee-Bot.
- Understand and apply the concept of programming by inputting planned commands into Bee-Bot.
- Enhance teamwork and communication skills by collaborating in small groups to guide Bee-Bot to a target.
- Gain confidence in programming through iterative testing and adjustment of commands.
- Appreciate the importance of precise instructions and logical sequencing in coding.

BEFORE THE LESSON

- Charge Bee-Bots and check each one moves and turns correctly on the mat.
- Set out grid mats, flower printouts, and one whiteboard with markers per small group.
- Open and test the interactive whiteboard demo so the grid and bot are ready to show.
- Clear floor space for the warm-up where pupils act as Bee-Bots.

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HOW THE LESSON RUNS

Introduction

Planning directions

Whiteboard Demonstration

Flower Hunt Activity

Free Play

Wrap Up

TEACHING MOVES

- 1. Introduction. Outline the three parts: act as Bee-Bots, plan together on the board, then group flower hunts. Keep the human Bee-Bot game short and focused on clear, ordered commands.
- 2. Planning directions. On the class whiteboard, draw arrows for forward, back, left and right. Model mapping a full path before anyone touches a Bee-Bot, saying each move aloud as you draw.
- 3. Whiteboard Demonstration. Show the interactive grid and target. Insist the class agree the whole arrow sequence first, then input it together and fix errors by revising the plan, not random button presses.
- 4. Flower Hunt Activity. Groups pick a start and place one flower elsewhere. They draw the full arrow sequence on their whiteboard before loading Bee-Bot. After a run, they edit the plan and try again.
- 5. Free Play. Early finishers may set new flower targets or paths. Stay hands-off unless a group is mashing buttons with no plan; prompt them back to arrows first.
- 6. Wrap Up. Orally recall what worked: planning before input, precise order, and fixing one step at a time. Do not ask pupils to write or save reflection answers.

WHAT TO WATCH FOR

- Pupils press buttons on Bee-Bot while still deciding the path, so leftover commands from an earlier try run first. Pause the group. Clear the Bee-Bot memory, finish the arrow plan on the whiteboard, then input the full sequence once.
- Left and right are taken from the pupil's view, not the way Bee-Bot is facing, so turns send it the wrong way. Stand behind the Bee-Bot with the child, point the way it faces, and replay the turn from that viewpoint before redrawing the arrows.
- One wrong step makes pupils scrap the whole plan instead of fixing the single error. Watch the run together, mark where it left the path, change only that arrow, and test again.

DIFFERENTIATION

- Emerging: Pair with a partner who draws arrows while they place the flower and watch Bee-Bot's facing. Give a short path (few squares) so the sequence stays short enough to check aloud.
- Developing: Ask them to read the full arrow list to you before any input, then support only when the test run fails. After one success, have them reverse the path back to the start using new arrows.
- Proficient: Invite a longer route or a second flower so they must plan two legs in one sequence. Use free play to set their own targets and explain why each turn sits where it does.