

Bee-Bot's Bloom Hunt: Finding Flowers

30 minutes**Journey into Robotic Movements**

WHAT THIS LESSON DOES

In this step-by-step lesson, students will continue their Bee-Bot adventure, practicing programming skills through fun activities. They will act as Bee-Bots, participate in a whiteboard demonstration, work in small groups to guide their Bee-Bot to a flower, and engage in free play. The lesson concludes with a wrap-up and reflection.

WHAT STUDENTS SHOULD BE ABLE TO DO

- Develop understanding and proficiency in programming commands and sequences.
- Enhance problem-solving skills through planning and executing Bee-Bot's path to the flower.
- Improve teamwork and collaboration by working in small groups to achieve a common goal.
- Gain confidence in using technology and understanding the logic behind programming.
- Reflect on the importance of precise instructions and correct sequencing in coding.

BEFORE THE LESSON

- One charged Bee-Bot per small group, plus a grid mat, flower printouts and a whiteboard with markers for each group.
- Open and test the interactive LadyBird-Bot grid activity on the board beforehand, and check the school filter does not block it.
- Clear enough floor or table space for each group to lay out a mat and move a Bee-Bot along it.

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HOW THE LESSON RUNS

Introduction

Planning directions

Whiteboard Demonstration

Flower Hunt Activity

Free Play

Wrap Up

TEACHING MOVES

- 1. Introduction. Run the act-as-Bee-Bots warm-up with the whole class: call single commands and have pupils step or turn on the spot. Keep it to a few minutes so the planning work gets the time.
- 2. Planning directions. Draw the route on the whiteboard as arrows before touching any device. Say aloud that you plan first, then press, so pupils copy the habit rather than guessing at the Bee-Bot.
- 3. Whiteboard Demonstration. Model the interactive out loud: point to the target, plan the arrows, then enter the commands. Deliberately show a wrong guess and a replan so pupils see planning saves time.
- 4. Flower Hunt Activity. Insist each group draws the full arrow sequence on the whiteboard before they touch the Bee-Bot. Circulate and ask a group to read their arrows back before they press go.
- 5. Free Play. For groups who finish, set a light challenge: reach a flower in the fewest presses, or plan a route with a turn in it.
- 6. Wrap Up. Ask one group to describe a route that went wrong and how they fixed it. Draw out that a small sequence error, not the Bee-Bot, caused it.

WHAT TO WATCH FOR

- Pupils confuse a turn command with a move: they think pressing left makes the Bee-Bot travel to the left square rather than rotate on the spot. Have them turn their own body left without stepping, then press left on the Bee-Bot and watch it rotate in place. Point out it still needs a forward press to travel.
- Pupils count squares from where the Bee-Bot ends up facing, forgetting a turn changes its direction, so the next forward goes the wrong way. At the whiteboard, redraw the Bee-Bot's new facing after each turn arrow so the group sees the front has moved before planning the next step.
- Pupils press commands one at a time and expect the Bee-Bot to move on each press, not realising the whole sequence runs after go. Show the plan-then-run cycle explicitly: enter the full sequence from the whiteboard, then press go once and watch the complete route.

DIFFERENTIATION

- Emerging: Give a short grid, two or three squares to the flower, and let them plan just those arrows before programming. Pair them with a partner who reads each arrow aloud as they press the matching button.
- Developing: Ask them to draw the whole arrow sequence before any pressing, then check their plan against the Bee-Bot's path square by square.
- Proficient: Challenge them to reach the flower in the fewest presses, or to plan a route that includes at least one turn. Have them explain their sequence back to you and predict where the Bee-Bot will stop before pressing go.