

technology

Drive the floor robot

Lesson at a glance

Open with the floor robot on a taped mat and the teddy target visible; take a few first-move ideas only. Model Clear, press a short forward sequence, then freeze for a class guess before Go. Plan one clean route on the algorithm-sequencer interactive, then groups drive real robots (or child-robots with arrow cards) using the Say-Clear-Press-Guess-Go chant. Close with a quick oral notice of what the steps did.

Learning objectives

- Press a short sequence of moves on a floor robot (or direct a child robot with arrow cards) to reach a target
- Guess where the robot will stop before it goes

Before the bell – prep

Tape one simple 3×3 floor grid per station and place a teddy picture a short straight path away. Charge or wake floor robots. If none, ready big arrow cards and choose a child-robot. Open the algorithm-sequencer interactive in explore mode on the IWB.

Materials

Item	Qty	Per	Source	Low-cost substitute
Bee-Bot or similar floor robot	1	group	school kit	a child acts as the robot and follows big arrow cards across a taped floor grid
taped floor mat with picture squares (masking tape grid)	1	group	classroom	chalk grid on a playground surface, or carpet squares laid in a grid
target picture cards (teddy or similar)	3	group	provided printable	a small soft toy or classroom object placed on one square
big arrow cards (forward, turn left, turn right)	1	group	provided printable	draw large arrows on scrap card or paper plates

Safety watch-point

Robots stay on the floor mats only; keep walkways clear and no running to 'help' the robot mid-path.



Teaching moves

- **Getting Started:** Place the robot on the mat facing a clear first square and point at the teddy. Ask only 'What should we say first?' Take two or three sensible calls from the floor, then stop — do not run a full sequence yet so the later guess still has surprise.
- **Steps in order:** Keep eyes on the robot, not the board. Hold the phrase 'steps in order' until after the demo move in the next step, then name it: we give steps one by one and the robot does them in that exact order.
- **Watch the robot go:** Always Clear first and say 'empty robot.' Press a short forward-only sequence slowly, pause for every child to point at the stop square, then Go. If it misses, smile, Clear, and fix — a miss proves the robot follows steps, not the teddy. Cue facing with 'nose toward the window or the teddy?'
- **Plan the route:** Open the algorithm-sequencer in explore mode; you move the cards, children call ideas. Start forward-only on a straight line. Before any turn, stand everyone facing the same way as the sprite and body-turn together. After one or two clean wins, send groups to the mats.
- **Drive the robot:** Lead the chant every try: Say the steps → Clear → Press → Guess the stop square → Go. Waiting groups plan with arrow cards on the floor. On a miss ask 'which step should we change?' then restart from Clear. Keep sequences to two or three steps.
- **What did we notice?:** Keep talk on our robot and our steps. Offer starters: 'I noticed...', 'Our first step was...', 'Next time I would...'. Draw out that the robot only does what we give it and that Clear wipes old steps. One teacher line only on real robots following steps for jobs.

What it should show

Most groups reach the teddy with two forwards on a straight path when they Clear and guess first. A miss usually means old steps were left in memory, a wrong facing, or a turn pressed when forward was needed — Clear and re-say the sequence. Affirm any short ordered plan that lands on the picture.

Misconceptions & interventions

- **The robot 'knows' where the teddy is and will find it by itself.** — After a deliberate miss, point at the path and say it only did the buttons we pressed. Clear, press a correct short sequence, and watch it land only when our steps match.
- **A turn moves the robot onto the next square.** — Before Go, point at the robot's nose: 'turn stays on the square; only the nose changes. Then forward moves it.' Do a quick whole-class body turn facing the same way as the robot.
- **Children press new buttons on top of an old sequence and wonder why it goes the wrong way.** — Stop the group, press Clear together, and chant 'empty robot' before every new try so leftover steps cannot hide inside.

Differentiation

Emerging	Developing	Proficient
• Straight forward-only path of two steps; teacher or partner says the chant and presses Clear with them. • Child-robot with arrow cards held up in order so they see each step before moving.	• Guess the stop square aloud every try and name which step to change after a miss. • Add one turn only after a whole-class body-facing check.	• Plan a slightly longer route with one turn, still guessing before Go and Clearing between tries. • Watch the next group and spot whether they remembered Clear and facing.

Cross-curricular hook

Link to oral language sequencing — first, next, then — the same order talk used in retells and getting-ready routines.