

LESSON 6

Grid Navigator: Cracking the 4x4 Code

30 minutes

Solving Problems

WHAT THIS LESSON DOES

This lesson begins with a fun game of 'Simon Says' to practice following instructions. You'll then explore a 4x4 grid on an interactive whiteboard, learning how to navigate a character using up and down arrows. You'll play different versions of a grid game, focusing on numbers, fruits, and colours. Finally, you'll complete a worksheet activity involving a frog navigating a 4x4 grid to find fruit.

WHAT STUDENTS SHOULD BE ABLE TO DO

- Develop ability to follow instructions through interactive games.
- Understand and apply the concept of a 4x4 grid.
- Utilise directional language to navigate a character on a grid.
- Identify and differentiate between numbers, fruits, and colours in a grid format.
- Apply grid navigation skills to solve worksheet problems independently.

BEFORE THE LESSON

- Open the 4x4 grid interactive on the whiteboard and check the up and down arrows move the character as expected before pupils are watching.
- Print one Gridwork worksheet per pupil, with the frog and fruit grid.
- Have a Simon Says command or two in mind to open with; a full list is in the step notes.

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HOW THE LESSON RUNS

Simon Says

4x4 Grids

Numbers Grid

Fruit Grid

Colours Grid

Grid Worksheet Activity

TEACHING MOVES

- 1. Simon Says. Play a few rounds and deliberately give a command without 'Simon says' so pupils practise not following it. This is the listening-to-instructions muscle the grid work needs.
- 2. 4x4 Grids. Count the four across and four down aloud with pupils before moving anything. Model one move yourself, then hand the arrows to individual pupils so the whole class calls the directions.
- 3. Numbers Grid. Set a target square by naming the number, and ask pupils to say the sequence of arrow presses out loud before anyone touches the board.
- 4. Fruit Grid. Swap the target to a named fruit and let a different pupil drive. Keep asking 'how many steps and which way' so the language stays precise.
- 5. Colours Grid. Use this final grid to let a pupil plan the whole route before pressing anything, checking they can hold a short sequence in their head.
- 6. Grid Worksheet Activity. Work the 'right, right, right' example on the board first, moving the frog three steps and naming the fruit it lands on. Then let pupils try their sheets independently.

WHAT TO WATCH FOR

- Pupils count the starting square as their first move rather than counting only the steps they take. Walk one example slowly on the board, tapping and counting only the arrow presses. Show that the frog's start does not count as a step.
- Pupils mix up which arrow does which, pressing down when they mean up. Pause and have them point to the arrow and say the direction aloud before pressing, matching the word to the button each time.

DIFFERENTIATION

- Emerging: Give a single one-step instruction and let the pupil press just that arrow, building up to two steps once they are confident. Sit with them for the first worksheet row and count the steps together out loud.