Kit's Robot Garden Planner

1. Move Forward (1 mark)

Working: The robot must travel from the path to the garden bed.

Accept 'Move Forward'.

2. Dig Hole (1 mark)

Working: The ground must be prepared before the seed can be planted.

Accept 'Dig Hole'.

3. Drop Seed (1 mark)

Working: The seed must be placed into the hole created in the previous step.

Accept 'Drop Seed'.

4. Cover with Soil (1 mark)

Working: The seed needs to be covered to finish the planting process.

Accept 'Cover with Soil'.

5. Move Backward (1 mark)

Working: The robot needs to return to the path after finishing the task.

Accept 'Move Backward'.

6. The order is important because a computer follows instructions exactly as they are written. If the robot tries to cover the soil before digging the hole, it will just push dirt around on top of the ground instead of planting the seed inside. (3 marks)

Look for: The student explains that computers follow a specific sequence and that actions must happen in a logical order to work.

Good: The order matters because the robot needs to do things in the right way.

Better: The order is important because if you cover the soil first, there is no hole for the seed.

Best: The sequence is vital because an algorithm must be in the correct order. If the robot covers the soil before digging, the seed will stay on top of the ground instead of being planted.

What moves an answer up: Moving from 'good' to 'best' requires explaining the logical consequence of the error (the seed not being planted) rather than just stating that order matters.

What a secure answer looks like

A secure answer shows an understanding that an algorithm is a step-by-step process where the sequence determines the success of the outcome.

If your child is stuck

Ask the child to act out the steps using their hand as the robot. If they try to cover the soil before digging, ask them, 'Where did the seed go?'

Common mistakes to watch for

Children often forget that computers cannot 'guess' what to do next and will try to perform actions out of order, or they may struggle to understand that 'Move Backward' is the logical inverse of 'Move Forward'.