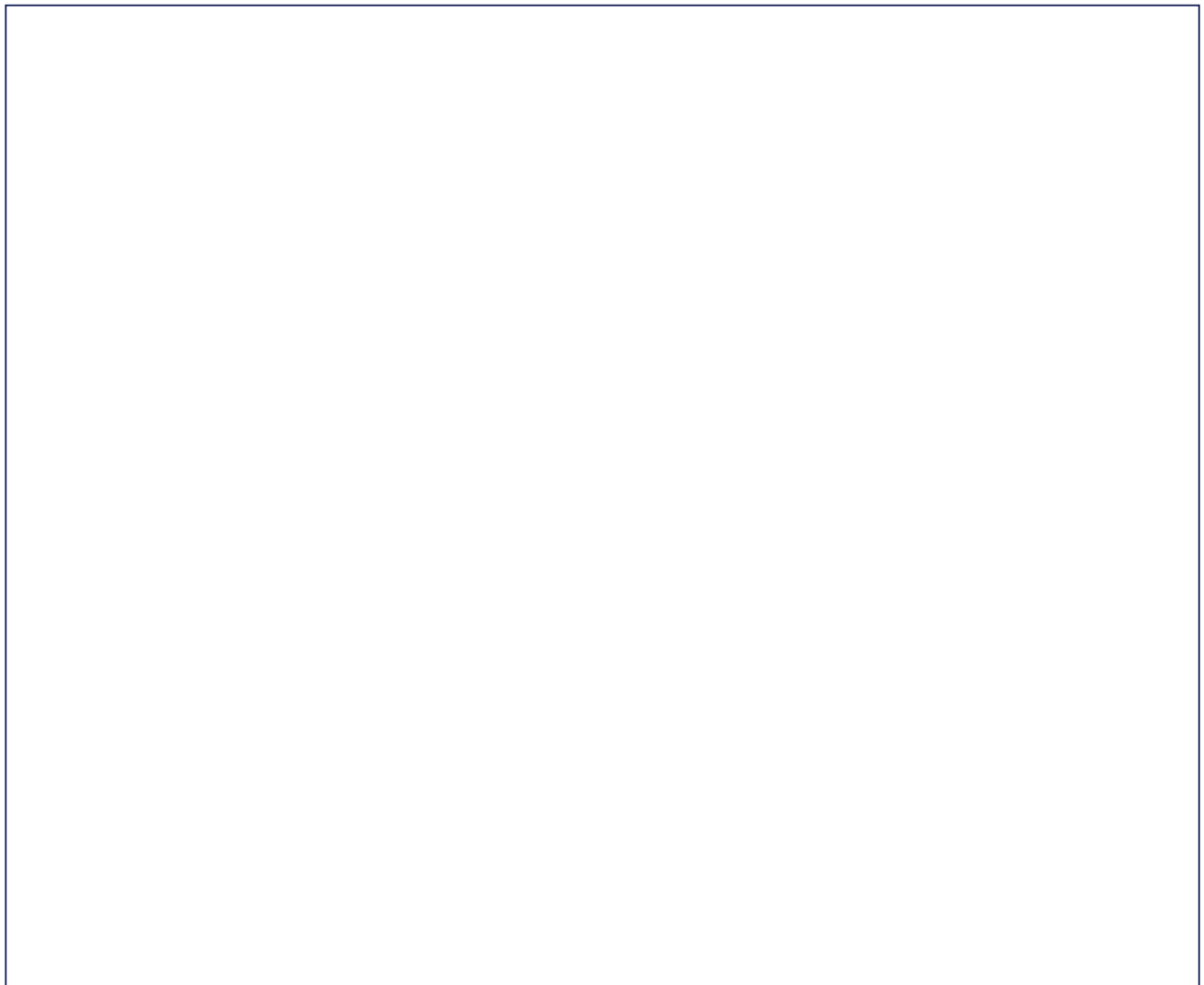


Kit's Computing Challenge: The Great Debugging Mission

Learning objective: To understand that algorithms can contain errors (bugs) and that debugging is the process of identifying and fixing these errors.

Kit the fox has written a simple algorithm to help a robot move across a grid to collect a star. However, there is a bug in the code! Follow the steps below to draw the scene and fix the error.

Draw: Draw a 5x5 square grid on your paper. In the bottom-left corner, draw a small robot. In the top-right corner, draw a golden star. Draw a 'path' using arrows to show the robot's movement. Draw a large red 'X' over one of the arrows where the robot makes a mistake (the bug), and draw a green arrow showing the correct path that the robot should have taken instead.



Label words: Algorithm · Bug · Debug · Sequence · Error · Code

Steps:

1. Kit's robot is supposed to move: 'Forward 2 squares, Turn Right, Forward 1 square'. Currently, the robot hits a wall. Describe one 'bug' you might draw in your scene that stopped the robot.
2. Why is it important to test your code after you have finished 'debugging' it?
3. Label your drawing to show which part of the robot's path is the 'bug' and which part is the 'corrected'

sequence'.

4. If Kit's robot costs £15.50 and the remote control costs £4.25, what is the total cost of the equipment?
5. List two steps you would take to debug a piece of code that isn't working correctly.