

Max's Coordinate Cartography Challenge

Learning objective: To identify, describe, and represent the position of a shape or object on a 2D grid using coordinates in the first quadrant.

Max the monkey is mapping out his jungle playground! Use the coordinate grid provided in your workbook to plot the locations of his favourite items. Remember: 'Along the corridor, then up the stairs' (x-axis then y-axis). When you see a coordinate, always write it in brackets like this: (x, y).

Word bank: x-axis · y-axis · origin · coordinates · quadrant · horizontal · vertical · plot · grid

1. Identify the coordinates for the 'Banana Tree' and the 'River Crossing'. Explain why the order of the numbers in your coordinate pair is vital for accuracy. (3 marks)

2. Max wants to build a bridge between the 'High Branch' at (2, 8) and the 'Vine Swing' at (9, 8). Describe the movement needed to travel between these two points. Is this line horizontal or vertical? (2 marks)

3. If Max moves from (3, 4) to (3, 9), compare and contrast his movement to a move from (3, 4) to (8, 4). How does the coordinate change demonstrate the difference between vertical and horizontal movement? (3 marks)

4. Justify your answer: If you were given the coordinate (0, 0), where would you be on the grid and what is the mathematical term for this specific point? (2 marks)

5. Design a new obstacle for Max's course. Plot it at (5, 5). If you translate the obstacle 3 units right and 2 units up, what would its new coordinates be? Show your working out. (3 marks)

6. What might happen if you accidentally reversed the x and y coordinates when plotting the location of a hidden treasure? Provide a reasoned explanation for your answer. (3 marks)

Extension challenge: Imagine the jungle grid is a map. Write a set of instructions for a friend to follow using coordinates to find a hidden 'Golden Mango' treasure. Include at least four different points and describe the shapes formed if you were to connect them with lines.