

Max's Coordinate Quest: Mapping the Jungle Grid

Learning objective: To describe positions on the full coordinate grid (all four quadrants) and plot points with precision.

Max the monkey is helping his friends navigate the jungle. Use your knowledge of the four-quadrant grid to help him map out the locations of his friends' favourite spots. Remember: always go along the corridor (x-axis) before you go up or down the stairs (y-axis).

Word bank: origin · x-axis · y-axis · quadrant · coordinate · positive · negative · intersection · horizontal · vertical

1. The Treasure Hunt: Max has hidden a banana at (3, -2). Identify which quadrant this is located in and explain how you know. (2 marks)

2. Mapping Pip's Path: Pip the caterpillar starts at (-4, 1) and moves 5 units to the right. What are the new coordinates of Pip's position? (2 marks)

3. Reflecting Shapes: Zara the zebra has drawn a triangle with vertices at (1, 1), (1, 4), and (3, 1). If she reflects this shape across the y-axis, what will the new coordinates be? (3 marks)

4. The Midpoint Mystery: Nova the owl is flying between two points: (-2, 2) and (4, 2). Calculate the coordinate exactly halfway between these two points. (2 marks)

5. Real-World Application: If a small jungle shop sells maps at £2.50 each, and Max buys 4 maps, how would you plot the total cost (£10.00) on a graph where the x-axis represents the number of maps and the y-axis represents the total cost in pounds? (3 marks)

Extension challenge: Challenge: Create your own 'Jungle Grid' by drawing a four-quadrant coordinate plane. Mark five secret locations for your friends and write a set of 'clue coordinates' for a partner to solve.