Max’s Symmetry Detective Log

Learning objective: To identify, describe, and draw lines of symmetry in 2D shapes.

Max the monkey has found some mysterious shapes in the jungle! Help him become a symmetry expert by examining these shapes. Use a ruler to draw lines of symmetry where possible, and explain your findings in the boxes below. Remember, a line of symmetry must divide a shape into two identical mirror images.

Word bank: Symmetry · Line of symmetry · Mirror image · Reflection · Vertical · Horizontal · Diagonal · Identical

1. Shape Observation: Choose a 2D shape you have found. Describe its properties and state how many lines of symmetry it has. (2 marks)

2. The Mirror Test: If you were to fold your chosen shape along its line of symmetry, what would happen? Explain why the two sides must be identical. (2 marks)

3. Real-World Symmetry: Look around the room. Find an object that is symmetrical. Name the object and describe where the line of symmetry would be. (2 marks)

4. Max’s Puzzle: Max has a rectangle. Can you explain why a rectangle has two lines of symmetry, but a square has four? (3 marks)

5. Design Challenge: Imagine a new shape that has exactly one diagonal line of symmetry. Describe what it looks like or draw a small sketch to show your idea. (2 marks)

Extension challenge: Find three different shapes around your home. Use a mirror to check if they have lines of symmetry. Record your results in a tally chart.