

Max's Geometric Shape Explorer

Learning objective: To identify, describe, and classify 2D and 3D shapes, including their properties such as parallel lines, perpendicular lines, and symmetry.

Join Max the monkey on his mathematical adventure! Use this fact-file template to explore a shape of your choice. Observe your chosen shape carefully, identify its key features, and record your findings in the boxes below to prove you are a geometry expert.

Word bank: polygon · parallel · perpendicular · vertices · symmetry · quadrilateral · faces · edges · acute · obtuse

1. Shape Identification: Name your chosen 2D or 3D shape and draw a neat sketch of it. List the number of sides (or faces) and vertices it possesses. (2 marks)

2. Line Properties: Examine your shape. Does it contain any parallel lines? Do any lines meet at a right angle (perpendicular)? Describe what you find. (2 marks)

3. Symmetry Check: Does your shape have lines of symmetry? If so, how many can you find? Explain how you know by visualising a mirror line. (2 marks)

4. Angle Analysis: Look at the internal angles of your 2D shape. Are they all acute, obtuse, or are there any right angles? Compare them to a square. (2 marks)

5. Max's Challenge: Explain why your shape belongs to its specific family. For example, if you chose a rectangle, why is it also a quadrilateral? (2 marks)

Extension challenge: Find an object in your classroom or at home that matches your shape. Write a short paragraph explaining how its shape helps it perform its job (e.g., why is a clock circular or a book rectangular?).