

Max's Geometric Shape Investigation

Learning objective: To identify, describe, and classify 2D and 3D shapes, including their properties, angles, and nets.

Max the monkey is helping us organise his collection of shapes! Use this fact-file template to describe a 2D or 3D shape you find in your classroom or at home. You will need to identify the number of sides, vertices, and faces, as well as calculate missing angles if applicable.

Word bank: Polygon · Vertex · Parallel · Perpendicular · Face · Edge · Net · Reflex angle · Acute · Obtuse

1. Shape Identification: Write the name of your chosen shape and list its primary properties (e.g., number of sides, vertices, or faces). (2 marks)

2. Geometric Reasoning: Explain whether the shape has any parallel or perpendicular lines. If it is a 2D polygon, what is the sum of its interior angles? (3 marks)

3. Angle Analysis: Choose one angle within your shape. Estimate its size in degrees and classify it (e.g., acute, right, obtuse, or reflex). (2 marks)

4. Net Construction: If you were to unfold this shape into a 2D net, describe how many faces would be visible and what shapes they would be. (3 marks)

5. Real-World Application: Where might you see this shape in the real world? Why is this specific shape useful for that purpose? (2 marks)

Extension challenge: Challenge: Max has a shape with 6 faces, 8 vertices, and 12 edges. Can you identify the shape and sketch its net on the back of this sheet?