

Max's Magnificent Shape Hunt

Learning objective: To identify, describe, and classify 2D and 3D shapes, including horizontal and vertical lines of symmetry.

Max the monkey is exploring the school garden to find shapes hidden in nature. Help him solve these geometry puzzles by using your knowledge of 2D and 3D properties.

Max has found many objects! He sees a square tile, a triangular leaf, a sphere-shaped pebble, and a rectangular garden gate.

Word bank: vertex · edge · face · parallel · perpendicular · symmetry · quadrilateral · polygon

1. Max finds a leaf shaped like an equilateral triangle. How many vertices does this shape have, and how many lines of symmetry can you draw on it? (2 marks)

2. Max looks at a square garden tile. Explain why a square is a special type of quadrilateral. (2 marks)

3. A pebble is shaped like a sphere. Does a sphere have any edges or vertices? Explain your answer. (2 marks)

4. Look at a rectangle. Max says, 'The opposite sides are parallel.' Is he correct? Draw a rectangle and use arrows to show the parallel sides. (2 marks)

5. Max finds a hexagonal stone. How many sides does it have, and is it a regular or irregular polygon if all sides are the same length? (2 marks)

Draw: Draw a composite 2D shape that is made up of one square and one triangle joined together. Label the lines of symmetry on your drawing.



Extension challenge: Max wants to build a 3D model of a house using a cube and a triangular prism. List how many faces, edges, and vertices each of those two shapes has separately.