Max’s Geometric Garden

Learning objective: To identify, describe, and classify 2D shapes, including identifying lines of symmetry in 2D shapes presented in different orientations.

Help Max the monkey organise his garden! Look at the shapes hidden in the flowerbeds. Colour all the quadrilaterals blue, the triangles yellow, and the pentagons green. Draw a line of symmetry on each shape that has one.

Max the monkey is planting a special garden where every flowerbed is a perfect geometric shape. He has planted three triangular sunflowers, four square daisies, and two pentagonal tulips. Max loves to measure the sides of his garden beds to make sure they are perfectly symmetrical. He knows that a shape has symmetry if he can fold it in half so that both sides match exactly. Can you help Max identify his shapes and find their lines of symmetry?

Word bank: Quadrilateral · Pentagon · Symmetry · Vertex · Parallel · Polygon

1. Max has a flowerbed in the shape of a regular pentagon. How many sides does this shape have and how many lines of symmetry can you draw on it? (2 marks)

2. If Max replaces a square flowerbed with a rectangle that has a perimeter of £20, and two sides are 6cm long, what is the length of the other two sides? (2 marks)

3. Explain why a square is a special type of quadrilateral. (2 marks)

4. Look at the triangle in the garden. If it has three equal sides, what type of triangle is it? (1 mark)

5. Max wants to build a fence around his garden. If the garden is a regular hexagon with each side measuring 5m, what is the total length of fencing he needs? (2 marks)

Draw: A garden scene featuring Max the monkey holding a ruler. The garden contains a large square, a triangle, and a pentagon. Include a path that creates a line of symmetry down the middle of the drawing.

Extension challenge: Design your own symmetrical playground for Max using at least one quadrilateral, one triangle, and one hexagon. Label the lines of symmetry with a dotted line.