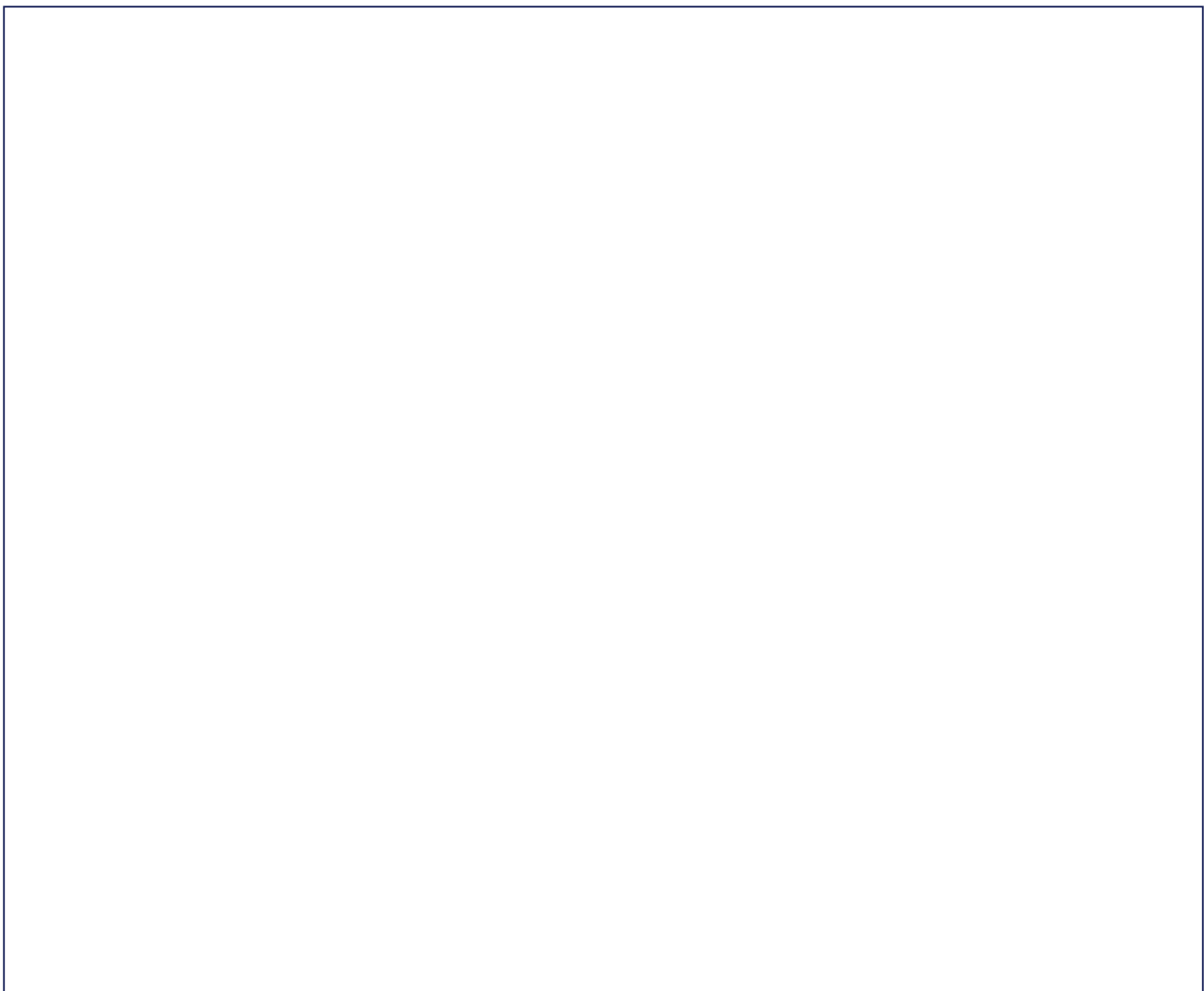


Symmetry in the Garden with Zara the Zebra

Learning objective: To identify and draw lines of symmetry in 2D shapes and patterns, ensuring precise reflection.

Zara the Zebra is planning a symmetrical garden layout. Use your ruler to complete the patterns and shapes below so that both sides are identical reflections of each other.

Draw: Create a garden scene featuring a large, central wooden gate. The gate should be drawn on a grid background. Include a path leading to the gate. On the left side of the gate, draw one half of a decorative iron archway. Pupils must complete the right side to create a perfect mirror image. Add symmetrical flower pots on either side of the gate, ensuring that the patterns on the pots are also reflective. Use a clean, technical drawing style with clear grid lines to aid precision.



Label words: Line of symmetry · Reflection · Horizontal · Vertical · Diagonal · Mirror image · Congruent

Steps:

1. Zara has drawn half of a hexagonal flowerbed. Explain why it is important to measure the distance of each vertex from the line of symmetry when completing the drawing.
2. Compare and contrast a shape with one line of symmetry to a shape with two lines of symmetry. Give an example of each.

3. Look at your completed drawing. Justify why the shape you have drawn is considered a perfect reflection.
4. Step 1: Draw a vertical line of symmetry down the centre of the provided square grid box. Step 2: Draw a simple butterfly wing on the left side. Step 3: Reflect the wing perfectly onto the right side.
5. What might happen to the symmetry of a garden path if you decided to place a circular pond off-centre? Explain your reasoning.
6. Identify one object in your classroom that possesses rotational symmetry. How would you prove it has this property?