Max’s Magnificent Symmetry Challenge

Learning objective: To identify, describe, and represent the position of a shape following a reflection or translation, and to identify lines of symmetry in 2D shapes.

Join Max the monkey as he explores the patterns in the jungle! Answer these 10 questions to help him solve his symmetry puzzles. Good luck!

Answer Key: 1. B, 2. True, 3. Vertical, 4. C, 5. False, 6. A, 7. Translation, 8. B, 9. True, 10. 4. (Max's tip: A square has 4 lines of symmetry: 2 through the sides and 2 through the corners!)

Word bank: Reflection · Translation · Symmetrical · Axis · Vertex · Horizontal · Vertical

1. 1. Max is looking at a star shape. Which of these shows a reflection? A) The shape moves to a new spot. B) The shape is flipped over an axis. C) The shape is turned around. D) The shape stays exactly the same. Correct: B* (1 mark)

2. 2. True or False: A regular pentagon has 5 lines of symmetry. (1 mark)

3. 3. If you draw a line straight down the middle of an equilateral triangle from the top point to the base, what type of line of symmetry is this? (1 mark)

4. 4. Which letter has a horizontal line of symmetry? A) A, B) L, C) E, D) F (1 mark)

5. 5. True or False: A parallelogram always has at least one line of symmetry. (1 mark)

6. 6. When a shape slides across a grid without turning or flipping, it is called: A) Translation, B) Reflection, C) Rotation, D) Symmetry. Correct: A* (1 mark)

7. 7. What is the word for moving a shape from one position to another without changing its orientation? (1 mark)

8. 8. How many lines of symmetry does a rectangle have? A) 1, B) 2, C) 3, D) 4. Correct: B* (1 mark)

9. 9. True or False: Every circle has an infinite number of lines of symmetry. (1 mark)

10. 10. How many lines of symmetry does a square have? (1 mark)

Draw: Draw a butterfly with one wing completed. Ask a friend to draw the reflection of the other wing to make the butterfly perfectly symmetrical.

Extension challenge: Max has a budget of £10.00. He wants to buy square tiles that cost £0.50 each to make a symmetrical mosaic pattern. How many tiles can he buy, and can you sketch a design that uses 8 of them with at least one line of symmetry?