Max’s Pattern Playground

Learning objective: To identify, continue, and predict sequences of shapes and patterns using logic and spatial awareness.

Max the monkey is organising his collection of wooden blocks for his maths puzzles. Each row follows a strict pattern. Look at the sequences below and draw the next two shapes in the sequence. Then, explain the 'rule' for each pattern to Max.

Word bank: Rotate · Reflect · Repeat · Clockwise · Anticlockwise · Sequence · Pattern

1. Pattern A: Square, Triangle, Circle, Square, Triangle, Circle... Draw the next two shapes and describe the pattern rule. (2 marks)

2. Pattern B: An arrow pointing UP, an arrow pointing RIGHT, an arrow pointing DOWN. Draw the next two arrows in the sequence. (2 marks)

3. Pattern C: One dot, two dots, four dots, eight dots. What is the pattern rule for the number of dots? (2 marks)

4. Pattern D: A shaded triangle, an unshaded triangle, a shaded triangle. If the pattern continues, will the 10th triangle be shaded or unshaded? (2 marks)

5. Look at these three shapes: A large star, a small star, a large star. Max adds a small star next. Is this a repeating pattern? Why or why not? (2 marks)

Draw: Draw a brand new pattern using at least three different shapes. Make sure your pattern repeats at least twice!

Extension challenge: Max has 50p. If a single wooden shape costs 5p, how many shapes can he buy to create a pattern that repeats five times? Show your working out.