Patterns in Nature: The Art of Symmetry and Geometry

Learning objective: I can explore and apply repeating patterns, symmetry, and geometric shapes in my drawings.

About 45 minutes. Grown-up tip: Encourage your child to look for patterns in the garden or park, such as the arrangement of petals on a flower.

In this activity, we will observe how Zara the zebra uses nature's geometry to create art. We will focus on two types of patterns: Symmetrical (the same on both sides) and Tessellating (shapes that fit together without gaps). Worked Example: To draw a radial pattern, start with a central point and draw identical shapes radiating outwards, like the petals of a daisy.

Draw: Draw a large oak tree in the centre of the page. In the background, design a pattern for the sky using repeating geometric shapes (like clouds made of circles or diamonds). In the foreground, draw a fox surrounded by a border of alternating leaf shapes. Use fine liners to add intricate patterns inside the fox's fur, inspired by the stripes and spots Zara the zebra loves.

Label words: Symmetry · Tessellation · Geometric · Radial · Repetition

Steps:

1. Draw a simple leaf in the space provided. Add veins that show a line of symmetry down the centre.

2. Create a repeating tessellation pattern in the box below using only triangles. Ensure no gaps are left between them.

3. Label the 'line of symmetry' on your leaf drawing from Question 1 using an arrow.

4. Look at the pattern of a honeycomb. Why do you think bees use hexagons instead of circles to build their cells?

5. Describe the difference between a symmetrical pattern and a tessellating pattern in your own words.



I did it! Name: _____ Date: _____

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