

Y4- Overview

	Autumn 1			Autumn 2		Spring 1		Spring 2		Summer 1		Summer 2		
Unit	1	2	3	4	5	6	7	8	9	10	11	12		

Unit 6	Properties of 2D and 3D shapes and symmetry (2 weeks)
Ready to progress	4G-3 Identify line symmetry in 2D shapes presented in different orientations. Reflect shapes in a line of symmetry and complete a symmetric figure or pattern with respect to a specified line of symmetry.
NCETM documents	
Small steps	1.To identify different types of triangles and describe their properties. 2.To sort and classify triangles based on their properties. 3.To complete different types of symmetrical patterns. 4.To compose symmetrical shapes by joining two identical shapes. 5.To investigate lines of symmetry in 2D shapes by folding. 6.To find lines of symmetry in 2D shapes and understand their relationship to the number of sides in regular polygons. 7.To reflect polygons in a line of symmetry, including cases with no sides parallel to the line. 8.To reflect polygons that are dissected by a line of symmetry and explore resulting shapes. 9.To reflect shapes in diagonal lines of symmetry. 10.To investigate symmetry in real-life contexts and design symmetrical patterns.
Links	Classroom Slides_ https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.ncetm.org.uk%2Fmedia%2Fu5jdfjgc%2Fcp-year-4-unit-10-symmetry-in-2d-shapes.pptx&wdOrigin=BROWSELINK Oak - https://www.thenationalacademy/teachers/programmes/maths-primary-ks2/units/symmetry-in-2d-shapes/lessons?sid-ebldc7=ZIMvsw6aMS&sm=0&src=3 Whiterose- https://assets.whiteroseeducation.com/new-schemes/Y4%20Summer%20Block%204%20SOL%20Shape.pdf
Reasoning	What's the Same, What's Different? What is the same and what is different about the diagonals of these 2-D shapes? How does this help you identify and classify the shapes? Visualising Imagine a square cut along the diagonal to make two triangles. Describe the triangles. What kind of triangles are they? Are they symmetrical? Try joining the triangles along different edges to make new shapes. Describe the new shapes. Are any of the shapes symmetrical? Convince me. Other Possibilities Can you draw a triangle that is not right-angled but still has a line of symmetry? Are there other ways to make a symmetrical triangle that isn't equilateral? Always, Sometimes, Never Is it always, sometimes or never true that the two diagonals of a rectangle meet at right angles? How does your answer help you understand rectangles, squares, and other quadrilaterals? Other Possibilities Can you draw a polygon that: - Has exactly two equal sides - Has exactly two parallel sides What should you look for when designing or identifying this shape? Convince Me Ayub says he can draw a right-angled triangle that also has an obtuse angle. Is he correct? Explain your reasoning using what you know about angles in triangles.

Glossary

- Equilateral triangle - Equilateral triangles have 3 equal sides and 3 equal angles.
- Isosceles triangle - Isosceles triangles have 2 equal sides and 2 equal angles.
- Scalene triangle - Scalene triangles have no equal sides and no equal angles.
- Right-angled triangle - A right-angled triangle has one 90° angle. Right-angled triangles can be classified as isosceles or scalene.
- Symmetrical - When a shape has a line of symmetry, it can be described as symmetrical.
- Mirror line - Another term for a line of symmetry. If you were to fold a shape on its line of symmetry, both halves would match exactly.
- Line of symmetry - If you were to fold a shape on its line of symmetry, both halves would match exactly.
- Identical - Two shapes that are exactly the same can be described as identical.
- Kite - A quadrilateral with two pairs of adjacent, equal sides.
- Regular polygon - A regular polygon has sides that are all equal and angles that are all equal.
- Mirror line - Another term for a line of symmetry. If you were to fold a shape on its line of symmetry, both halves would match exactly.
- Reflect - When you reflect a shape, you flip it over a mirror line or line of symmetry without turning it or changing the size.
- Reflection - The mirror image of a shape.

Stem sentences

This is a line of symmetry because it splits the shape into two equal parts which are mirror images.

Representations





