

SPJS CURRICULUM LADDER - MATHS - GEOMETRY: PROPERTIES OF SHAPE



Main objectives are taken from the National Curriculum. Highlighted objectives are non-statutory and are taken from the Ready to Progress documents.

IDENTIFYING SHAPES AND THIER PROPERTIES

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
recognise and name common 2-D shapes [e.g. rectangles (including squares), circles and triangles]	identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line recognise and name common 3-D shapes [e.g. cuboids (including cubes), pyramids and spheres] identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid]		identify lines of symmetry in 2-D shapes presented in different orientations	identify 3-D shapes, including cubes and other cuboids, from 2-D representations	recognise, describe and build simple 3-D shapes, including making nets (appears also in Drawing and Constructing) illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius


DRAWING AND CONSTRUCTING

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
1G-2 Compose 2D and 3D shapes from smaller shapes to match an example, including manipulating shapes to place them in particular orientations.		draw 2-D shapes make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe the 3G-2 Draw polygons by joining marked points, and identify parallel and perpendicular sides.	complete a simple symmetric figure with respect to a specific line of symmetry 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.	draw given angles, and measure them in degrees ($^{\circ}$)	draw 2-D shapes using given dimensions and angles recognise, describe and build simple 3-D shapes, including making nets (appears also in Identifying Shapes and Their Properties) 6G-1 Draw, compose, and decompose shapes according to given properties, including dimensions, angles and area, and solve related problems.

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COMPARING AND CLASSIFYING

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	compare and sort common 2-D and 3-D shapes and everyday objects		compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes G-2 Identify regular polygons, including equilateral triangles and squares, as those in which the side-lengths are equal and the angles are equal. Find the perimeter of regular and irregular polygons.	 LINK IT (Algebra): use the properties of rectangles to deduce related facts and find missing lengths and angles distinguish between regular and irregular polygons based on reasoning about equal sides and angles	compare and classify geometric shapes based on their properties and sizes find unknown angles in any triangles, quadrilaterals, and regular polygons

ANGLES

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
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		<p>recognise angles as a property of shape or a description of a turn identify right angles</p> <p>recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn</p> <p>identify whether angles are greater than or less than a right angle identify horizontal and vertical lines and pairs of perpendicular and parallel lines</p>	<p>identify acute and obtuse angles and compare and order angles up to two right angles by size</p>	<p>know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles identify:</p> <ul style="list-style-type: none"> * angles at a point and one whole turn (total 360°) * angles at a point on a straight line and $\frac{1}{2}$ a turn (total 180°) * other multiples of 90° 	<p>recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles</p>
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LINK IT: Indicates a link with another unit of work

Objectives written with a **red heading** and black writing **MUST** be taught within the unit

Objectives written in **green** are optional links - Discuss when possible and use for mental starters, extension tasks etc.