

Mathematics Programme of Study – Geometry

	2D and 3D Shapes	Position and Direction	Angles	Lines, Symmetry, Sequences	Grids, Coordinates
Year 1	<p>recognise and name common 2-D shapes [for example, rectangles (including squares), circles and triangles]</p> <p>recognise and name common 3-D shapes [for example, cuboids (including cubes), pyramids and spheres].</p>	<p>describe position, direction and movement, including whole, half, quarter and three-quarter turns</p>			
Year 2	<p>identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line</p> <p>identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces</p> <p>identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid]</p>	<p>use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise).</p>		<p>order and arrange combinations of mathematical objects in patterns and sequences</p>	

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	compare and sort common 2-D and 3-D shapes and everyday objects.				
Year 3	draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them	recognise angles as a property of shape or a description of a turn	identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle	identify horizontal and vertical lines and <i>pairs of perpendicular and parallel lines</i>	
Year 4	compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes		identify acute and obtuse angles and compare and order angles up to two right angles by size	identify lines of symmetry in 2-D shapes presented in different orientations complete a simple symmetric figure with respect to a specific line of symmetry	describe positions on a 2-D grid as coordinates in the first quadrant <i>describe movements between positions as translations</i> of a given unit to the left/right and up/down plot specified points and draw sides to complete a given polygon.
Year 5	identify 3-D shapes, including cubes and other cuboids, from 2-D representations		know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles		

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	<p>use the properties of rectangles to deduce related facts and find missing lengths and angles</p> <p>distinguish between regular and irregular polygons based on reasoning about equal sides and angles.</p> <p>identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed</p>		<p>draw given angles, and measure them in degrees (o)</p> <p><i>identify angles at a point and one whole turn (total 360o)</i></p> <p><i>identify angles at a point on a straight line and 2 1 a turn (total 180o) other multiples of 90o</i></p>		
Year 6	<p>draw 2-D shapes using given dimensions and angles</p> <p>recognise, describe and build simple 3-D shapes, including making nets</p> <p>compare and classify geometric shapes based on their properties and sizes and</p>		<p><i>find unknown angles in any triangles, quadrilaterals, and regular polygons</i></p> <p>recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.</p>		<p>describe positions on the full coordinate grid (all four quadrants)</p> <p>draw and translate simple shapes on the coordinate plane, and reflect them in the axes.</p>

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	<i>illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius</i>				