

# Geometry: Properties of Shapes



## IDENTIFYING SHAPES AND THIER PROPERTIES

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Select, rotate and manipulate shapes in order to develop spatial reasoning skills.	recognise and name common 2-D and 3-D shapes, including: * 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		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)
	* 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				illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius
		identify 2-D shapes on the surface of 3-D				

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		<p>shapes, [for example, a circle on a cylinder and a triangle on a pyramid]</p>				
DRAWING AND CONSTRUCTING						
			<p>draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them</p>	<p>complete a simple symmetric figure with respect to a specific line of symmetry</p>	<p>draw given angles, and measure them in degrees (<math>^{\circ}</math>)</p>	<p>draw 2-D shapes using given dimensions and angles</p>
						<p>recognise, describe and build simple 3-D shapes, including making nets (appears also in Identifying Shapes and Their Properties)</p>
COMPARING AND CLASSIFYING						

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EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Compose and decompose shapes so that children can recognise a shape can have other shapes within it, just as numbers can.		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	use the properties of rectangles to deduce related facts and find missing lengths and angles	compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons
					distinguish between regular and irregular polygons based on reasoning about equal sides and angles	
ANGLES						
			recognise angles as a property of shape or a description of a turn		know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles	

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			<p>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</p>	<p>identify acute and obtuse angles and compare and order angles up to two right angles by size</p>	<p>identify:</p> <ul style="list-style-type: none"> <li>* angles at a point and one whole turn (total <math>360^\circ</math>)</li> <li>* angles at a point on a straight line and <math>\frac{1}{2}</math> a turn (total <math>180^\circ</math>)</li> <li>* other multiples of <math>90^\circ</math></li> </ul>	<p>recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles</p>
			<p>identify horizontal and vertical lines and pairs of perpendicular and parallel lines</p>			