

Geometry: Properties of Shapes



IDENTIFYING SHAPES AND THEIR PROPERTIES

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<p>Nursery</p> <p>notice simple shapes in pictures sort objects using properties such as shape describe everyday objects talk about shapes in the environments play with shapes</p>			<p>Reception</p> <p>explore shapes with 4 sides recognise 3D shapes that roll and stack use names to describe 3D shapes investigate relationships between shapes</p>		
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>recognise and name common 2-D and 3-D shapes, including: * 2-D shapes [e.g. rectangles (including</p>	<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 lines of symmetry in 2-D shapes presented in different orientations</p>	<p>identify 3-D shapes, including cubes and other cuboids, from 2-D representations</p>	<p>recognise, describe and build simple 3D shapes, including making nets (appears also in Drawing and Constructing)</p>

<p>squares), circles and triangles] * 3-D shapes [e.g. cuboids (including cubes), pyramids and spheres].</p>	<p>identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces</p>				<p>illustrate and name parts of circles, including radius, diameter and circumference and know that the</p>
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	<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>diameter is twice the radius</p>
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DRAWING AND CONSTRUCTING

Nursery		Reception			
use shapes to build models		recognise that shapes can be combined and separated to make new shapes investigate how many ways a shape can be built using smaller shapes			
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them	complete a simple symmetric figure with respect to a specific 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 3D shapes, including making nets (appears also in Identifying Shapes and Their Properties)

COMPARING AND CLASSIFYING

			Reception compare 3D shapes identifying similarities and differences		
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	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	
		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 acute and obtuse angles and compare and order angles up to two right angles by size	identify: * 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°	recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles
		identify horizontal and vertical lines and pairs of perpendicular and parallel lines			