



## St. Joseph's Catholic Primary School

### Progression in Geometry: Properties of Shape



IDENTIFYING SHAPES AND THIER PROPERTIES						
Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>(40-60 Months) select, rotate and manipulate shapes to develop spatial reasoning skills.</p> <p>(40-60 Months) Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can.</p> <p>Develop an awareness of relationships between shapes (e.g.) spot shapes within shapes</p> <p>Describe</p>	<p>recognise and name common 2-D and 3-D shapes, including:</p> <p>* 2-D shapes [e.g. rectangles (including squares), circles and triangles]</p> <p>* 3-D shapes [e.g. cuboids (including cubes), pyramids and spheres].</p>	<p>identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a <b>vertical line</b></p>	<p>identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a <b>vertical line</b> <b>(Consolidation from Year 2)</b></p>	<p>identify lines of symmetry (<b>vertical, horizontal, diagonal</b>) 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 3-D shapes, including making nets – <b>draw and make</b> (appears also in Drawing and Constructing)</p>
		<p>identify and describe the properties of 3-D shapes, including the number of <b>edges, vertices and faces</b></p>	<p>identify and describe the properties of 3-D shapes, including the number of <b>edges, vertices and faces</b> <b>(Consolidation from Year 2)</b></p>			<p>illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius</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>identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid] <b>(Consolidation from Year 2)</b></p>			



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<p>properties of shapes.</p> <p>Show an awareness of properties of shapes (e.g.) Using cylinders for wheels as they can roll.</p> <p>Shape awareness: developing shape awareness through construction.</p>						
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DRAWING AND CONSTRUCTING						
Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>(40 – 60 months)</b> Continue, copy and create repeating patterns.			draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them <b>(Nets made only)</b>	complete a simple symmetric figure with respect to a specific line of symmetry	draw given angles, and measure them in degrees ( )	draw 2-D shapes using given dimensions and angles
						recognise, describe and build simple 3-D shapes, including making nets – <b>draw and make</b> (appears also in Identifying Shapes and Their Properties)
COMPARING AND CLASSIFYING						
		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	



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ANGLES					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		recognise angles as a property of shape or a description of a turn	recognise angles as a property of shape or a description of a turn <i>(Consolidation from Year 3)</i>	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 $360^\circ$ ) * angles at a point on a straight line and $\frac{1}{2}$ a turn (total $180^\circ$ ) * other multiples of $90^\circ$	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			