Maths Skills Progression: Properties of Shape

Please note that this progression framework has been taken from NCETM to support understanding of progression of the different maths strands. Skills may appear more than once as some skills support more than one area of progression.

	Identifying Shapes and Their Properties			Drawing and Constructing	
EYFS	Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language: 'sides', 'corners'; 'straight', 'flat', 'round'	Select, rotate and manipulate shapes to develop spatial reasoning skills		Select shapes appropriately: flat surfaces for building, a triangular prism for a roof, etc Combine shapes to make new ones – an arch, a bigger triangle, etc	Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can
Year 1	Recognise and name common 2-D and 3-D shapes, including: * 2-D shapes [e.g. rectangles (including squares), circles and triangles] * 3-D shapes [e.g. cuboids (including cubes), pyramids and spheres].				
Year 2	Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line	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]		
Year 3				Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them	
Year 4	Identify lines of symmetry in 2-D shapes			Complete a simple symmetric figure with respect to a specific line of symmetry	

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	presented in different orientations				
Year 5	Identify 3-D shapes, including cubes and other cuboids, from 2-D representations			Draw given angles, and measure them in degrees (o)	
Year 6	Recognise and describe simple 3-D shapes, including making nets		Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius	Draw 2-D shapes using given dimensions and angles	Build simple 3-D shapes, including making nets

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	Comparing and Classifying		Angles		
EYFS	Compare quantities				
Year 1					
Year 2	Compare and sort common 2-D and 3-D shapes and everyday objects				
Year 3			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 pairs of perpendicular and parallel lines
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	
Year 5	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	Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles	Identify: * angles at a point and one whole turn (total 360o) * angles at a point on a straight line and ½ a turn (total 180o) * other multiples of 90o	

Year 6	Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons			Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles	