Subject Specific-Skills: Age-related expectations in maths – Properties of Shape

Year	Identifying Shapes and their properties.	Drawing and Constructing	Comparing and Classifying	Angles
N	• Shows an interest in shape and space by playing with shapes or making arrangements with objects. • Shows awareness of similarities of shapes in the environment. • Uses shapes appropriately for tasks			
R	• Begin to use mathematical names for 2D and 3D shapes and use mathematical terms to describe shapes. • Can select a named shape. • Explore characteristics of everyday objects and shapes and use mathematical language to describe them.			
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].			
2	• identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line		• compare and sort common 2-D and 3-D shapes and everyday objects	

	• 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]			
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 pairs of perpendicular and parallel lines
4	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	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

5	identify 3-D shapes, including cubes and other cuboids, from 2-D representations	draw given angles, and measure them in degrees ($^{\circ}$)	• 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 360°)
				  ○ angles at a point on a straight line and ½ a turn (total 180°)
				  ○ other multiples of 90°
				•

| 6 | • recognise, describe and build simple 3-D shapes, including making nets (appears also in Drawing and Constructing)

 • 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

 • recognise, describe and build simple 3-D shapes, including making nets (appears also in Identifying Shapes and Their Properties) | 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 |