

# Geometry: Properties of Shapes

## IDENTIFYING SHAPES AND THEIR PROPERTIES

F1	F2	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Talk about and explore 2d and 3d shapes... using informal and mathematical language "sides", "corners", "straight", "flat", "round"	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] *3-D shapes [e.g. cuboids (including cubes), pyramids and spheres].	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)
Select shapes appropriately: flat surfaces for building, a triangular prism for a roof etc.	Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can.		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
Combine shapes to make new ones.	Recognise and name common 2d and 3d shapes and talk about properties of sides, corners, edges, faces, curved and flat		identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid]				

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	ELG: THERE IS NO ELG FOR SSM						
<b>DRAWING AND CONSTRUCTING</b>							
Understand position through words alone e.g. "The bag is under the table" without pointing	Compose and decompose shapes so that children recognise a shape can have other shapes within, just as numbers can			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 (°)	draw 2-D shapes using given dimensions and angles
Select shapes appropriately: flat shapes for building e.g. a triangular prism for a roof	Using various construction sets in sustained construction projects e.g. The Shard, The 3 bears beds and chairs.						recognise, describe and build simple 3-D shapes, including making nets (appears also in Identifying Shapes and Their Properties)
Using construction sets to create various models.	THERE IS NO ELG FOR SSM						

# Geometry: Properties of Shapes

COMPARING AND CLASSIFYING							
F1	F2	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Talk about and compare 2d and 3d shapes (e.g. circles, rectangles, triangles and cuboids) using informal and formal mathematical language e.g. sides, corners, flat, round	Select, rotate and manipulate shapes in order to develop spatial reasoning skills		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
Make comparisons between objects relating to size, length	Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can					distinguish between regular and irregular polygons based on reasoning about equal sides and angles	

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	To sort shapes into categories according to their properties, e.g. all 3 sided shapes, shapes with curved edges						
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<b>ANGLES</b>							
				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 ½ 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			