

Mathematics Skill Progression

Geometry: Properties of Shapes						
Identifying Shapes and their Properties						
Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Explore characteristics of everyday objects and shapes and use mathematical language to describe them	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 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]		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) illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius
Drawing and Constructing						
			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 recognise, describe and build simple 3-D shapes, including making nets (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 distinguish between regular and irregular polygons based on reasoning about equal sides and angles	compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons
Angles						
			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	identify acute and obtuse angles and compare and order angles up to two right angles by size	know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles identify: <ul style="list-style-type: none"> • 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

Geometry: Properties of Shapes Vocabulary

Shape Square Rectangle Circle Triangle Sides Straight side Curved side	Same as EYFS, plus: 2-D Shapes 3-D Shapes Two-Dimensional Three-Dimensional Cuboid Cube Pyramid Cone Cylinder Sphere	Same as EYFS & Year 1, plus: Properties Compare Common Line symmetry Vertical line Edges Faces Vertices Pentagon Hexagon Heptagon Octagon Nonagon Decagon	Same as EYFS & Year 1, plus: Properties Compare Common Line symmetry Vertical line Edges Faces Vertices Pentagon Hexagon Heptagon Octagon Nonagon Decagon Same as EYFS & KS1, plus: Angle Turn Right angles Quarter of a turn Half-turn Three quarters of a turn Complete turn Horizontal lines Vertical lines Perpendicular lines Parallel lines	Same as previous year groups, plus: Lines of symmetry Symmetric figure Classify Geometric shapes Quadrilaterals Acute angle Obtuse angle	Same as previous year groups, plus: Angles Measure Degrees Missing lengths Missing angles Regular polygons Irregular polygons Degrees Estimate compare Reflex angle Point Straight line Multiples	Same as previous year groups, plus: Radius Diameter Circumference Nets
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Geometry: Position and Direction

Position, Direction and Movement

Children use everyday language to talk about position, distance.	describe position, direction and movement, including half, quarter and three-quarter turns.	use mathematical vocabulary to describe position, direction and movement including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise)		describe positions on a 2-D grid as coordinates in the first quadrant describe movements between positions as translations of a given unit to the left/right and up/down plot specified points and draw sides to complete a given polygon	identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed	describe positions on the full coordinate grid (all four quadrants) draw and translate simple shapes on the coordinate plane, and reflect them in the axes.
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Pattern

Recognise, create and describe patterns.		order and arrange combinations of mathematical objects in patterns and sequences				
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Geometry: Position and Direction Vocabulary

Position Distance Direction Move Movement Patterns	Same As EYFS, PLUS: Half turn Quarter turn Three-quarter turn Left Right Up Down	Same as EYFS & Y1 plus: Rotation Right angle Clockwise Anti-clockwise Order Arrange Sequence	Same as EYFS & KS1	Same as previous classes plus: Co-ordinates Quadrant Grid Translate Translation Axis X-axis Y-axis Spaces Unit Plot Point Polygon	Same as previous classes plus: Reflection	Same as previous classes plus: Four quadrants
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