

Progression in Geometry and Statistics

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>To recognise and name common 2D and 3D shapes, including: 2D shapes (rectangles (including squares), circles and triangles) 3D shapes (cuboids (including cubes), pyramids and spheres).</p> <p>To describe position, directions and movements, including half, quarter and three-quarter turns.</p>	<p>To identify and describe the properties of 2D shapes, including the number of sides and symmetry in a vertical line.</p> <p>To identify and describe the properties of 3D shapes including the number of edges, vertices and faces.</p> <p>To identify 2D shapes on the surface of 3D shapes, for example circle on a cylinder and a triangle on a pyramid.</p> <p>To compare and sort common 2D and 3D shapes and everyday objects.</p> <p>To order and arrange combinations of mathematical objects in patterns.</p> <p>To use mathematical vocabulary to describe position, direction and movement, including distinguishing between rotation as a turn and in terms of right angles for quarter, half and three quarter turns (clockwise and anti-clockwise) and movement in a straight line.</p>	<p>To identify and describe the properties of 2D and 3D shapes, including the number of sides, symmetry in a vertical line, edges, vertices, and faces.</p> <p>To identify 2D shapes on the surface of 3D shapes, for example circle on a cylinder and a triangle on a pyramid.</p> <p>To compare and sort common 2D and 3D shapes and everyday objects.</p> <p>To recognise angles as a property of shape and associate angles with turning.</p> <p>To 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.</p> <p>To draw 2D shapes and make 3D shapes using modelling materials; recognise 3D shapes in different orientations and describe</p>	<p>To compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes.</p> <p>To identify lines of symmetry in 2D shapes presented in different orientations.</p> <p>To complete a simple symmetric figure with respect to a specific line of symmetry.</p> <p>To identify acute and obtuse angles and compare and order angles up to two right angles by size.</p> <p>To describe positions on a 2D grid as coordinates in the first quadrant.</p> <p>To describe movements between positions as translations of a given unit to the left/right and up/down.</p> <p>To plot specified points and draw sides to complete a given polygon.</p>	<p>To know angles are measured in degrees; estimate and compare acute, obtuse and reflex angles</p> <p>To draw given angles and measure them in degrees ($^{\circ}$).</p> <p>To identify: angles at a point and one whole turn (total 360°) angles at a point on a straight line and $1/2$ a turn (total 180°) other multiples of 90°.</p> <p>To distinguish between regular and irregular polygons based on reasoning about equal sides and angles.</p> <p>To use the properties of rectangles to deduce related facts and find missing lengths and angles.</p> <p>To identify 3D shapes including cubes and cuboids from 2D representations.</p> <p>To 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.</p>	<p>To illustrate and name parts of circles, including radius, diameter and circumference.</p> <p>To recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.</p> <p>To draw 2D shapes using given dimensions and angles.</p> <p>To compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals and regular polygons.</p> <p>To recognise, describe and build simple 3D shapes, including making nets.</p> <p>To describe positions on the full co-ordinate grid (all four quadrants).</p> <p>To draw and translate simple shapes on the co-ordinate plane and reflect them in the axes.</p> <p>To recognise that shapes with the same area can have different perimeters and vice versa.</p>

		<p>them with increasing accuracy.</p> <p>To identify horizontal, vertical, perpendicular and parallel lines in relation to other lines.</p>			<p>To calculate the area of parallelograms and triangles.</p> <p>To recognise when it is necessary to use the formulae for area and volume of shapes.</p> <p>To calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed (cm³) and cubic metres (m³) and extending to other units such as mm³ and km³.</p>
STATISTICS	<p>To interpret and construct simple pictograms, tally charts, block diagrams and simple tables.</p> <p>To ask and answer simple questions by counting the number of object in each category and sorting the categories by quantity.</p> <p>To ask and answer questions about totalling and compare categorical data.</p>	<p>To interpret and present data using bar charts, pictograms and tables</p> <p>To solve one-step and two-step questions such as 'How many more?' and 'How many fewer?' using information presented in scaled bar charts and pictograms and tables.</p>	<p>To interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.</p> <p>To solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and simple line graphs.</p>	<p>To complete, read and interpret information in tables, including timetables.</p> <p>To solve comparison, sum and difference problems using information presented in a line graph.</p>	<p>To interpret and construct pie charts and line graphs and use these to solve problems.</p> <p>To interpret and construct line graphs and use these to solve problems</p>