

Bowmansgreen Primary School

Progression of Geometry: Position and Direction

National Curriculum (Statutory Requirements)

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Describe position, direction and movement, including whole, half, quarter and three-quarter turns.	Order and arrange combinations of mathematical objects in patterns and sequences. 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.

Notes and Guidance (Non-Statutory)

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>Notice, describe and extend patterns. In repeating patterns, they think about what part is repeated.</p> <p>Recognise, create and describe patterns.</p> <p>Compare and classify objects using given criteria and own ideas.</p> <p>Develop spatial thinking and spatial language linked to position and directions, both in movements and represented using symbols.</p>	<p>Pupils use the language of position, direction and motion, including: left and right, top, middle and bottom, on top of, in front of, above, between, around, near, close and far, up and down, forwards and backwards, inside and outside.</p> <p>Pupils make whole, half, quarter and three-quarter turns in both directions and connect turning clockwise with movement on a clock face.</p>	<p>Pupils should work with patterns of shapes, including those in different orientations.</p> <p>Pupils use the concept and language of angles to describe 'turn' by applying rotations, including in practical contexts (for example, pupils themselves moving in turns, giving instructions to other pupils to do so, and programming robots using instructions given in right angles).</p>		<p>Pupils draw a pair of axes in one quadrant, with equal scales and integer labels. They read, write and use pairs of coordinates (2, 5) including using coordinate-plotting ICT tools.</p>	<p>Pupils recognise and use reflection and translation in a variety of diagrams, including continuing to use a 2-D grid and coordinates in the first quadrant. Reflection should be in lines that are parallel to the axes.</p>	<p>Pupils draw and label a pair of axes in all four quadrants with equal scaling. This extends their knowledge of one quadrant to all four quadrants, including the use of negative numbers.</p> <p>Pupils draw and label rectangles (including squares), parallelograms and rhombuses, specified by coordinates in the four quadrants, predicting missing coordinates using the properties of shapes. These might be expressed algebraically for example, translating vertex (a, b) to (a-2, b+3); (a, b) and (a+d, b+d) being opposite vertices of a square of side d.</p>