Brentfield Primary School
Children of Today, Champions for Tomorrow

Progression in Geometry

All programmes of study statements are included in the progression map and some appear twice. This is indicated in the text. This occurs where:

- The statement has central relevance to more than one sub category within a topic;
- The statement has central relevance to more than one mathematics topic. This is done to reflect the aims of the curriculum that pupils should make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems.

PROGRESSION IN GEOMETRY – PROPERTIES OF SHAPE

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
IDENTIFYING SHAPES AND THIER PROPERTIES	• Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language: 'sides', 'corners'; 'straight', 'flat', 'round'.	• 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 ($^{\circ}$)	• draw 2-D shapes using given dimensions and angles • recognise, describe and build simple 3-D shapes, including making nets

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: - 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

PROGRESSION IN GEOMETRY – POSITION AND DIRECTION

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
POSITION, DIRECTION AND MOVEMENT	• understand position through words alone – for example, "The bag is under the	• describe position, direction and movement, including half, quarter and	• use mathematical vocabulary to describe position, direction and movement including		• describe positions on a • 2-D grid as coordinates in the first quadrant	• identify, describe and represent the position of a shape following a reflection or translation, using	• describe positions on the full coordinate grid (all four quadrants)

	table," – with no pointing. • describe a familiar route. • discuss routes and locations, using words like 'in front of' and 'behind'.	three-quarter turns.	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 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	the appropriate language, and know that the shape has not changed	• draw and translate simple shapes on the coordinate plane, and reflect them in the axes.
PATTERN	• talk about and identifies the patterns around them. For example: stripes on clothes, designs on rugs and wallpaper • extend and create ABAB patterns – stick, leaf, stick, leaf. • notice and correct an error in a repeating pattern. • continue, copy and create repeating patterns		• order and arrange combinations of mathematical objects in patterns and sequences				