**National Curriculum Subject: Mathematics**

**Skills Progression: Geometry**

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|  | **Properties of 2-D shape** | **Properties of 3-D shape** | **Position and Direction** |
| **EYFS**  **30-50** | I can show awareness of similarities of shapes in the environment.  I can show interest in shapes in the environment.  I can use shapes appropriately for tasks.  I can begin to talk about the shapes of everyday objects, e.g. ‘round’ and ‘tall’. | | I can use positional language.  I can show an interest in shape and space by playing with shapes or making arrangements with objects.  I can show interest in shape by sustained construction activity or by talking about shapes or arrangements. |
| **EYFS**  **40-60** | I can begin to use mathematical names for ‘solid’ 3D shapes and ‘flat’ 2D shapes, and mathematical terms to describe shapes.  I can select a particular named shape.  I can use familiar objects and common shapes to create and recreate patterns and build models. | | I can describe my relative position such as ‘behind’ or ‘next to’.  I can use familiar objects and common shapes to create and recreate patterns and build models. |
| **EYFS**  **ELG** | I can explore characteristics of everyday objects and shapes and use mathematical language to describe them. | | I can recognise, create and describe patterns. |
| **1** | I can explore 2-D shapes [for example, rectangles (including squares), circles and triangles]. | I can explore 3-D shapes [for example, cuboids (including cubes), pyramids and spheres]. | I can describe position, direction and movement, including whole, half, quarter and three-quarter turns. |
| **2** | I can identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line.  I can compare and **sort** common 2-D and 3-D shapes and everyday objects. | I can identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces.  I can identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid.  I can compare and **sort** common 2-D and 3-D shapes and everyday objects. | I can order and arrange combinations of mathematical objects in patterns and sequences.  I can 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). (Use programming robots). |
| **3** | I can draw 2-D shapes.  I can recognise angles as a property of shape or a description of a turn.  I can identify right angles, identify whether angles are greater than or less than a right angle.  I can identify horizontal and vertical lines and pairs of perpendicular and parallel lines. | I can make 3-D shapes using modelling materials.  I can recognise 3-D shapes in different orientations and describe them. | I can recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn. |
| **4** | I can compare and classify geometric shapes, including quadrilaterals and triangles**,** based on their properties and sizes.  I can identify acute and obtuse angles and compare and order angles up to two right angles by size.  I can identify lines of symmetry in 2-D shapes presented in different orientations.  I can complete a simple symmetric figure with respect to a specific line of symmetry. |  | I can describe positions on a 2-D grid as coordinates in the first quadrant.  I can describe movements between positions as translations of a given unit to the left/right and up/down.  I can plot specified points and draw sides to complete a given polygon. |
| **5** | I know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles.  I can draw given angles, and measure them in degrees (o).  I can identify angles at a point and one whole turn (total 360).  I can identify angles at a point on a straight line and 1/2a turn (total 180).  I can identify other multiples of 90o  I can use the properties of rectangles to deduce related facts and find missing lengths and angles.  I can distinguish between regular and irregular polygons based on reasoning about equal sides and angles. | I can identify 3-D shapes, including cubes and other cuboids, from 2-D representations. | I can 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. |
| **6** | I can draw 2-D shapes using given dimensions and angles.    I can compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons.  I can illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius.  I can recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles. | I can recognise, describe and build simple 3-D shapes, including making nets. | I can describe positions on the full coordinate grid (all four quadrants).  I can draw and translate simple shapes on the coordinate plane, and reflect them in the axes. |