Geometry Progression

2-D Shapes

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Three and Four-Year-Olds • talk about and explore 2D shapes (for example circles, recatangles and triangles) using informal and mathematical language: sides, corners, straight, flat, round • Select shapes appropriately: flat surfaces for a building, a triangular pattern for a roof, etc • Combine shapes to	• recognise and name common 2-D shapes [for example, rectangles (including squares), circles and triangles]	• identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line • identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid] • compare and sort common 2-D shapes	• draw 2-D shapes	• compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes • identify lines of symmetry in 2-D shapes presented in different orientations	• distinguish between regular and irregular polygons based on reasoning about equal sides and angles. • use the properties of rectangles to deduce related facts and find missing lengths and angles	• draw 2-D shapes using given dimensions and angles • compare and classify geometric shapes based on their properties and sizes • illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius

make new ones – an arch, a bigger triangle etc **Reception** • Select, rotate and manipulate shapes in order to develop spatial reasoning skills. • Compose and decompose shapes so that children can recognise a shape can have other shapes within it, just as numbers can.		and everyday objects			
	Autumn 3	Autumn 3	Summer 4	Summer 4	Summer 1	Summer 1

3-D Shapes

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6

Three and Four-Year-Olds • talk about and explore 3D shapes (for example cuboids) using informal and mathematical language: sides, corners, straight, flat, round • Select shapes appropriately: flat surfaces for a building, a triangular pattern for a roof, etc • Combine shapes to make new ones – an arch, a bigger triangle etc **Reception** • Select, rotate and	• recognise and name common 3-D shapes [for example, cuboids (including cubes), pyramids and spheres]	• recognise and name common 3-D shapes [for example, cuboids (including cubes), pyramids and spheres] • compare and sort common 3-D shapes and everyday objects	• make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them		• identify 3-D shapes, including cubes and other cuboids, from 2-D representations	• recognise, describe and build simple 3-D shapes, including making nets

manipulate shapes in order to develop spatial reasoning skills. • Compose and decompose shapes so that children can recognise a shape can have other shapes within it, just as numbers can.						
	Autumn 3	Autumn 3	Summer 4		Summer 1	Summer 1

Angles & Lines

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
			• 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 • identify lines of symmetry in 2-D shapes presented in different orientations • complete a simple symmetric figure with respect to a specific line of symmetry	• know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles • draw given angles, and measure them in degrees • identify: ➢ angles at a point and one whole turn (total 360°) ➢ angles at a point on a straight line and $\frac{1}{2}$ a turn (total 180°) ➢ other multiples of 90°	• find unknown angles in any triangles, quadrilaterals, and regular polygons • recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles
			Summer 4	Summer 4	Summer 2	Summer 1

Position & Direction

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Three and Four-Year-Olds • Understand position through words alone – for example, "The bag is under the table," - with no pointing. • Describe a familiar route. • Discuss routes and locations, using words like 'in front of' and 'behind'. • Talk about and identify the patterns around them. For example, stripes on clothes, designs on rugs and wallpaper. Use	• 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

informal language like 'pointy', 'spotty', 'blobs', etc • Extend and create ABAB patterns – stick, leaf, stick, leaf. • Notice and correct an error in a repeating pattern. **Reception** • Draw information from a simple map. • Continue, copy and create patterns.						
	Summer 3	Summer 4		Summer 6	Summer 2	Summer 2