



# ALDINGBOURNE PRIMARY SCHOOL PROGRESSION MAP



## SUBJECT: MATHS - GEOMETRY

### INTENT

Our maths curriculum endeavours to ensure that children are equipped with a powerful set of tools this subject provides whilst immersing the children in creative, ALPS style learning. Through our innovative approach to maths, we provide the skills for the children to become fluent in the fundamentals of maths by developing a conceptual understanding and ability to recall and apply knowledge rapidly and accurately. The children will have the tools to make rich connections across mathematical ideas to develop fluency, reasoning and competence in solving increasingly sophisticated problems. Maths at Aldingbourne is designed to be fun and exciting as well as accessible to all learners so they can access this highly inter-connected discipline that has been developed over centuries.

AUTUMN	EYFS	KEY STAGE ONE		KEY STAGE TWO			
	YEAR R	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
<b>PROPERTIES OF SHAPES</b>		Recognise and name common 2-D and 3-D shapes, including: * 2-D shapes [for example, rectangles (including squares), circles and triangles] * 3-D shapes [for example, cuboids (including cubes), pyramids and spheres].			Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes.	Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles. Draw given angles, and measure them in degrees (o) Identify: * angles at a point and one whole turn (total 360o) * angles at a point on a straight line and 2 1 a turn (total 180o)	Draw 2-D shapes using given dimensions and angles. Recognise, describe and build simple 3-D shapes, including making nets. Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles,

						* other multiples of 90o.	<p>quadrilaterals, and regular polygons.</p> <p>Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius.</p> <p>Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.</p>
<b>POSITION AND DIRECTION</b>							<p>Describe positions on the full coordinate grid (all four quadrants).</p> <p>Draw and translate simple shapes on the coordinate plane, and reflect them in the axes.</p>

SPRING	EYFS	KEY STAGE ONE		KEY STAGE TWO			
	YEAR R	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
<b>PROPERTIES OF SHAPES</b>			<p>Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line.</p> <p>Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces.</p> <p>Identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid].</p> <p>Compare and sort common 2-D and 3-D shapes and everyday objects.</p>	<p>Draw 2-D shapes and make 3-D shapes using modelling materials;</p> <p>recognise 3-D shapes in different orientations and describe them.</p> <p>Recognise angles as a property of shape or a description of a turn.</p> <p>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>Use the properties of rectangles to deduce related facts and find missing lengths and angles.</p> <p>Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.</p>	

				Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.			
<b>POSITION AND DIRECTION</b>							

SUMMER	EYFS	KEY STAGE ONE		KEY STAGE TWO			
	YEAR R	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
PROPERTIES OF SHAPES			<p>Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line.</p> <p>Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces.</p> <p>Identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid].</p> <p>Compare and sort common 2-D and 3-D shapes and everyday objects.</p>		<p>Identify acute and obtuse angles and compare and order angles up to two right angles by size.</p> <p>Identify lines of symmetry in 2-D shapes presented in different orientations.</p> <p>Complete a simple symmetric figure with respect to a specific line of symmetry.</p>	<p>Identify 3-D shapes, including cubes and other cuboids, from 2-D representations.</p>	<p>Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons.</p> <p>Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius.</p> <p>Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.</p>

<b>POSITION AND DIRECTION</b>		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 anticlockwise).		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.	
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## IMPACT (END POINTS)

EYFS	KEY STAGE ONE		KEY STAGE TWO			
YEAR R	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
	<p>A Year 1 mathematician can name and relate common 2D and 3D shapes to everyday objects. They can recognise these shapes in different orientations and size. They can use and understand the vocabulary: left, right, top, middle, bottom, on top of, in front of, above, between, around, near, close, far, up, down, forwards, backward, inside, outside, whole, half, quarter and three-quarter. They can make turns in both directions.</p>	<p>A Year 2 mathematician can identify the properties of 2D and 3D shapes. They can sort shapes and everyday objects based on their properties and use vocabulary such as sides, edges, vertices and face. They can work with patterns of shapes including those in different orientations. Children know clockwise and anticlockwise and right angles in terms of turns.</p>	<p>A Year 3 mathematician can further describe properties of 2D and 3D shapes using accurate language including lengths of lines and right angle. They can draw and make 2D and 3D shapes and know symmetrical and non-symmetrical polygons and polyhedral.</p>	<p>A Year 4 mathematician can classify different triangles and quadrilaterals. They can identify acute and obtuse angles and compare and order angles as well as identify regular and irregular polygons from sight. They have become familiar with different orientations of lines of symmetry. Children can read, write and use pairs of coordinates. They have become familiar with translation.</p>	<p>A Year 5 mathematician can estimate, measure (with a protractor), compare and draw angles. They can find missing lengths and angles in rectangles. Children can identify regular and irregular polygons based on reasoning. They recognise and use reflection and translation in a variety of diagrams using the appropriate language.</p>	<p>A Year 6 mathematician can draw shapes and nets accurately using measuring tools and conventional marking and labels for lines and angles. They can explain how unknown angles and lengths in shapes can be derived from known measurement. Children can identify and illustrate the radius, diameter and circumference of circles. They have extended their knowledge of one quadrant to all four quadrants including the use of negative numbers.</p>

All knowledge and skills are recapped and applied to ensure embedding through morning maths jobs. This happens every Tuesday - Friday for 30 minutes in the junior classes. This happens on Tuesday - Thursday on alternate weeks for the infant classes.