



**CAPTAIN WEBB PRIMARY SCHOOL**  
**Maths Curriculum – Key Knowledge and Skills**  
 (Bold-Statutory Statements from NC;  
 Italics-Non-statutory, but fundamental to ensure knowledge is secure)

		Daycare 2/Rising 3	Nursery Pre-School (3s)	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	
<b>GEOMETRY-PROPERTIES OF SHAPE</b>											
<b>Identifying shapes &amp; their properties.</b>											
<b>Comparing &amp; Classifying Shapes</b>											
<b>DECLARATIVE KNOWLEDGE:</b>	<b>Facts and formulae(Fluency)</b>	<b>Relationships between facts</b>	Knows spatial words like on top of, up, down and through.	Knows the term 2D and knows the informal and formal mathematical language associated with it. Eg circle, rectangles, triangles, side, corner, flat, round.	Knows characteristic s of everyday objects and shapes and uses mathematical language to describe them.	Knows the mathematical names of 2d and 3d shapes.	<i>Knows that symmetry is reflection in a vertical line.</i>	Knows and can recognise different types of lines (horizontal/vertical, pairs of parallel and perpendicular).	Knows the properties of regular and irregular polygons focusing on different quadrilaterals.	<i>Knows the conventional markings for parallel lines and right angles.</i>	Knows the properties of geometric shapes.
				Knows the term 3D and know the informal and formal mathematical language associated with it. Eg cube, cuboid, sphere.			<i>Knows the properties of 2d shapes including the number of lines and line symmetry in vertical line.</i>	<i>Knows the different types of triangles.</i>	<i>Knows the term diagonal and can make conjectures about the angles formed between sides, and between diagonals and parallel sides, and other properties of quadrilaterals.</i>	Knows the parts of the circle.	Knows that the diameter is twice the radius.



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<p><b>PROCEDURAL KNOWLEDGE:</b></p> <p><b>Methods Relationships between facts, procedures and missing facts.</b></p>	<p><b>Knows how to complete inset puzzles.</b> Knows how to use blocks to create simple structures including lines of identical shapes.</p> <p>Knows how to make simple constructions by stacking or clicking together.</p>	<p><b>Knows how to select shapes for a purpose</b> Eg cone for a roof.</p> <p><b>Knows how to combine shapes to make a new one</b> Eg bigger triangles.</p>	<p><b>Knows how to rotate and manipulate shape to develop special reasoning skills.</b></p>	<p><b>Knows how to compare and sort 2d and 3d shapes (including everyday objects)</b></p>	<p><i>Knows how to describe 2D and 3D shapes using accurate language including taught lines, acute and obtuse angles.</i></p>	<p><i>Knows how to compare lengths and angles to decide if a polygon is regular or irregular.</i></p> <p><b>Knows how to classify and compare shapes using mathematical properties.</b></p> <p><i>Knows how to classify and compare triangles based on their properties.</i></p>	<p><b>Knows how to use the properties of rectangles to deduce related facts and find missing lengths and angles.</b></p> <p><b>Know how to distinguish between regular and irregular polygons based on reasoning about equal sides and angles.</b></p> <p><b>Know how to identify 3-D shapes, including cubes and other cuboids, from 2-D representations.</b></p>	<p><b>Knows how to compare and classify geometric shapes based on their properties.</b></p>
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### Drawing & Constructing Shapes

Drawing & Constructing Shapes									
	Daycare <i>2/Rising 3</i>	Nursery <i>Pre-School (3s)</i>	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>DECLARATIVE KNOWLEDGE:</b> <i>Facts and formulae, relationships (Fluency)</i>					<i>Knows that a ruler can be used to draw straight, accurate lines.</i>	<b>Knows the names of 3-D shapes in different orientations and describe them</b>	<b>Knows that lines of symmetry in a 2D shape can be presented in different orientations.</b>	<b>Knows that angles are measured in degrees using a protractor. (R)</b>	<b>Knows that 3D shapes can be identified by net drawings.</b>
<b>PROCEDURAL KNOWLEDGE:</b> <i>Methods. Relationships between facts, procedures and missing facts.</i>			<b>Knows how to compose and decompose shapes to recognise a shape can have another shape within it.</b>  <i>Knows how to use own ideas to make models of increasing complexity, selecting blocks needed, solving problems and visualising what I will need.</i>		<i>Knows how to draw basic 2D shapes using a straight edge.</i>	<b>Knows how to draw 2-D shapes</b> <b>Knows how to make 3-D shapes using modelling materials</b>	<b>Knows how to complete a simple symmetric figure with respect to specific line of symmetry.</b>	<b>Knows how to draw given angles and measure them using a protractor (R)</b>	<b>Knows how to draw 2-D shapes using given dimensions and angles.</b>  <b>Knows how to describes and builds simple 3D shapes including making nets.</b>



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<b>Angles</b>										
<p><b>DECLARATIVE KNOWLEDGE:</b></p> <p><i>Facts and formulae (Fluency)</i></p> <p><i>Relationships between facts</i></p>							<p>Knows that two right angles make a half turn, three make three quarters of a turn and four a complete turn</p> <p>Knows and can recognise right angles in 2d shapes.</p> <p>Knows what acute and obtuse angles are in relation to right angles.</p>	<p>Knows the properties of acute and obtuse angles.</p> <p>Knows that two right angles form a straight line.</p>	<p>Knows that angles are measured in degrees using a protractor. Knows that angles at a point and one whole turn equal <math>360^\circ</math></p> <p>Knows that angles at a point on a straight line equals <math>180^\circ</math></p>	<p>Knows that angles that meet at a point, or are on a straight line total certain degrees.</p> <p>Knows that vertically opposite angles are equal.</p>
<p><b>PROCEDURAL KNOWLEDGE:</b></p> <p><i>Methods. Relationships between facts, procedures and missing facts.</i></p>								<p>Knows how to compare and order angles up to two right angles by size</p>	<p>Knows how to identify right, acute, obtuse, straight, and reflex angles and can estimate and compare them. Knows how to draw given angles and measure them using a protractor. Knows how to use angle facts and other properties to make deductions.</p>	<p>Knows how to find unknown angles on a straight, round a point and in any triangles quadrilaterals and regular polygons</p>



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								<i>about missing angles and lengths</i>	
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	Daycare <i>2/Rising 3</i>	Nursery Pre-School (3s)	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Vocabulary		Slanty Twisted Pointy Wiggly Bumopy Sides Corners Straight Flat Round Circle Oblong Rectangle Triangle Cube Pyramid cylinder	Straight Sides Circle corners edge <b>square</b> Oblong Rectangle Triangle Cube Pyramid Sphere cylinder <b>repeat pattern</b>	Circle square Oblong Rectangle Triangle Cuboid Cube Pyramid Sphere <b>2D</b> <b>3D</b>	Sides <b>Edges</b> <b>Lines of symmetry</b> <b>Vertices</b> <b>Faces</b> <b>Surfaces</b> <b>Quadrilateral</b> <b>Polygon</b> <b>Prism</b> Cuboid Cube cone Pyramid Sphere	<b>Angle</b> <b>Right angle (rectangle)</b> <b>Horizontal and vertical lines</b> <b>Perpendicular and parallel lines</b> <b>Symmetrical</b> <b>Non-symmetrical</b> <b>Acute</b> <b>obtuse</b>	Quadrilateral al <b>Isosceles</b> <b>Equilateral</b> <b>Scalene</b> <b>Parallelogram</b> <b>Rhombus</b> <b>Trapezium</b> <b>Regular</b> <b>Irregular</b> <b>Degree</b> Acute Obtuse Line of symmetry <b>Classify</b>	Regular Irregular Polygon Angle <b>Diagonal</b> <b>Angle sum fact</b>	Angle <b>Net</b> <b>Radius</b> <b>Diameter</b> <b>Circumference</b> <b>At a point</b> <b>Vertically opposite</b>