



Geometry: Shapes and Angles

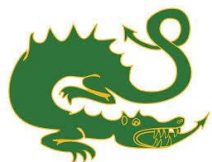
2D Shapes					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Recognise and name common 2D shapes (e.g. rectangles, squares, circles and triangles).	Identify and describe the properties of 2D shapes, including the number of sides and vertical lines of symmetry.	Draw 2D shapes with accuracy.	Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and size.	Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.	Draw 2D shapes using given dimensions and angles.
	Identify 2D shapes on the surface of a 3D shapes (e.g. a triangle on a pyramid).		Identify lines of symmetry in 2D shapes presented in different orientations.	Use the properties of rectangles to find missing lengths and angles.	Compare and classify geometric shapes based on their properties and sizes.
	Compare and sort common 2D shapes and everyday objects.				Illustrate and name parts of circles including: radius, diameter and circumference. Additionally, know that the diameter is twice the radius.
True or false? All 2-D shapes have at least 4 sides. Other possibilities	Always, sometimes, never Is it always, sometimes or never true that when you fold a	Always, sometimes, never Is it always, sometimes or never that all sides	Always, sometimes, never Is it always, sometimes or never true that the two diagonals of a	Always, sometimes, never Is it always, sometimes or never true that the number of lines of reflective symmetry in a regular polygon is equal	Always, sometimes, never Is it always, sometimes or never true that, in a polyhedron, the number of vertices plus the



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<p>Can you find shapes that can go with the set with this label?</p> <p>"Have straight sides."</p> <p>What's the same, what's different?</p> <p>Find a rectangle and a triangle in this set of shapes. What is the same? What is different?</p>	<p>square in half you get a rectangle?</p> <p>Other possibilities</p> <p>Can you find shapes that can go with the set with this label?</p> <p>"Have straight sides and all sides are the same length."</p>	<p>of a hexagon are the same length?</p> <p>Other possibilities</p> <p>Can you find shapes that can go with the set with this label?</p> <p>"Have straight sides that are different lengths."</p>	<p>rectangle meet at right angles?</p> <p>Other possibilities</p> <p>Can you show or draw a polygon that fits both of these criteria? What do you look for?</p> <p>"Has exactly two equal sides."</p> <p>"Has exactly two parallel sides."</p>	<p>to the number of its sides?</p> <p>Other possibilities</p> <p>A rectangular field has a perimeter between 14 and 20 metres. What could its dimensions be?</p>	<p>number of faces equals the number of edges?</p> <p>Other possibilities</p> <p>The angle at the top of an isosceles triangle is 110 degrees. What are the other angles in the triangle?</p>
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3D Shapes					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>Recognise and name common 3-D shapes (e.g. cuboids, cubes, pyramids and spheres).</p>	<p>Recognise and name common 3-D shapes (e.g. cuboids, cubes, pyramids and spheres).</p>	<p>Make 3D shapes using modelling materials.</p>		<p>Identify 3 shapes, including cubes and cuboids, from 2D nets.</p>	<p>Recognise and build simple 3-D shapes, including making nets.</p>
	<p>Compare and sort common 3D</p>	<p>Recognise 3D shapes in different</p>			



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	shapes and everyday objects.	orientations and describe them.			
	<p>What's the same, what's different?</p> <p>Look at and touch three 3D shapes.</p> <p>Do they all have straight edges and flat surfaces? What is the same and what is different between them?</p>	<p>Visualising</p> <p>I am thinking of a 3D shape which has faces that are triangles and squares. What could my shape be?</p>		<p>What's the same, what's different?</p> <p>What is the same and what is different about the net of a cube and the net of a cuboid?</p>	<p>What's the same, what's different?</p> <p>What is the same and what is different about the net of a triangular prism and a square based pyramid?</p>

Angles & Lines					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		Recognise angles as a property of a shape or a description of a turn.	Identify acute and obtuse angles.	Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles.	Find unknown angles in any triangles, quadrilaterals and regular polygons.
		Identify right angles, recognising that two right angles make a half turn,	Compare and order angles up to two right angles by size.	Draw given angles, and measure them in degrees.	Recognise angles where they meet at a point, on a straight line, vertically opposite and use these to find missing angles.



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		three make three quarters and four make a whole turn.			
		Identify whether angles are greater of less than a right angle.	Identify lines of symmetry in 2D shapes.	Identify: <ul style="list-style-type: none"> • Angles at a point/a whole turn (total 360). • Angles at a point on a straight line (total 180). • Other multiplies of 90. 	Draw given angles, and measure them in degrees.
		Identify horizontal and vertical lines that are perpendicular and parallel.	Complete a simple symmetric figure with respect to a line of symmetry.		
		Convince Me Which capital letters have perpendicular and /or parallel lines? Convince me.	Convince Me Billy says that he can draw a right angled triangle which has another angle which is obtuse. Is he right? Explain why.	Convince Me What is the angle between the hands of a clock at 4 o'clock? At what other times is the angle between the hands the same? Convince me.	Convince Me One angle at the point where the diagonals of a rectangle is 36 degrees. What could the other angles be? Convince me.



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Vocabulary					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
cube cuboid pyramid sphere cone cylinder circle square triangle flat curved round straight face side edge sort 2D 3D	property surface circular hexagon octagon quadrilateral pentagon polygon prism vertical horizontal vertex vertices line of symmetry reflection	equilateral isosceles scalene angles right angle symmetrical perpendicular regular irregular acute obtuse parallel	Circumference relax opposite construct spherical cylindrical	nets	intersecting intersection radius diameter