# Geometry: Properties of Shapes

| Objectives | EYFS | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
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| **Identifying Shapes and their Properties** | Explore characteristics of everyday objects and shapes and use mathematical language to describe them. | Recognise and name common 2-D and 3-D shapes, including:<br>• 2-D shapes [e.g. rectangles ***(including squares),*** circles and triangles] 3-D shapes [e.g. cuboids ***(Including cubes), pyramids and spheres].*** | Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line<br><br>identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces<br><br>Identify 2-D shapes on the surface of 3-D shapes, ***[for example, a circle on a cylinder and a triangle on a pyramid]*** | | Identify lines of symmetry in 2-D shapes presented in different orientations | identify 3-D shapes, including cubes and other cuboids, from 2-D representations | Recognise, describe and build simple 3-D shapes, including making nets **(Appears also in Drawing and Constructing)** |
| **Drawing and Constructing** | | | | Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them | Complete a simple symmetric figure with respect to a specific line of symmetry | Draw given angles, and measure them in degrees (°) | Draw 2-D shapes using given dimensions and angles<br><br>Recognise, describe and build simple 3-D shapes, including making nets **(Appears also in Identifying Shapes and Their Properties)** |
| **Comparing and Classifying** | | | Compare and sort common 2-D and 3-D shapes and everyday objects | | Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes | Use the properties of rectangles to deduce related facts and find missing lengths and angles | Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons |

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| | | | | | | Distinguish between regular and irregular polygons based on reasoning about equal sides and angles | |
| **Angles** | | | | Recognise angles as a property of shape or a description of a turn | | Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles | |
| | | | | 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 acute and obtuse angles and compare and order angles up to two right angles by size | Identify:<br>• angles at a point and one whole turn (total $360^{\circ}$)<br>• angles at a point on a straight line and ½ a turn (total $180^{\circ}$)<br>• other multiples of $90^{\circ}$ | Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles |
| | | | | Identify horizontal and vertical lines and pairs of perpendicular and parallel lines | | | |