

# Geometry

## 2-D shapes

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<ul style="list-style-type: none"> <li>recognise and name common 2-D shapes [for example, rectangles (including squares), circles and triangles]</li> </ul>	<ul style="list-style-type: none"> <li>identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line</li> <li>identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid]</li> <li>compare and sort common 2-D shapes and everyday objects</li> </ul>	<ul style="list-style-type: none"> <li>draw 2-D shapes</li> </ul>	<ul style="list-style-type: none"> <li>compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes</li> <li>identify lines of symmetry in 2-D shapes presented in different orientations</li> </ul>	<ul style="list-style-type: none"> <li>distinguish between regular and irregular polygons based on reasoning about equal sides and angles.</li> <li>use the properties of rectangles to deduce related facts and find missing lengths and angles</li> </ul>	<ul style="list-style-type: none"> <li>draw 2-D shapes using given dimensions and angles</li> <li>compare and classify geometric shapes based on their properties and sizes</li> <li>illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius</li> </ul>
Autumn 3	Autumn 3	Summer 4	Summer 4	Summer 1	Summer 1

# 3-D shapes

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<ul style="list-style-type: none"><li>recognise and name common 3-D shapes [for example, cuboids (including cubes), pyramids and spheres]</li></ul>	<ul style="list-style-type: none"><li>recognise and name common 3-D shapes [for example, cuboids (including cubes), pyramids and spheres]</li><li>compare and sort common 3-D shapes and everyday objects</li></ul>	<ul style="list-style-type: none"><li>make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them</li></ul>		<ul style="list-style-type: none"><li>identify 3-D shapes, including cubes and other cuboids, from 2-D representations</li></ul>	<ul style="list-style-type: none"><li>recognise, describe and build simple 3-D shapes, including making nets</li></ul>
Autumn 3	Autumn 3	Summer 4		Summer 1	Summer 1

# Angles and lines

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		<ul style="list-style-type: none"> <li>recognise angles as a property of shape or a description of a turn</li> <li>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</li> <li>identify horizontal and vertical lines and pairs of perpendicular and parallel lines</li> </ul>	<ul style="list-style-type: none"> <li>identify acute and obtuse angles and compare and order angles up to two right angles by size</li> <li>identify lines of symmetry in 2-D shapes presented in different orientations</li> <li>complete a simple symmetric figure with respect to a specific line of symmetry</li> </ul>	<ul style="list-style-type: none"> <li>know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles</li> <li>draw given angles, and measure them in degrees</li> <li>identify:               <ul style="list-style-type: none"> <li>angles at a point and one whole turn (total <math>360^\circ</math>)</li> <li>angles at a point on a straight line and <math>\frac{1}{2}</math> a turn (total <math>180^\circ</math>)</li> <li>other multiples of <math>90^\circ</math></li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>find unknown angles in any triangles, quadrilaterals, and regular polygons</li> <li>recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles</li> </ul>
		Summer 4	Summer 4	Summer 1	Summer 1

# Position and direction

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<ul style="list-style-type: none"> <li>describe position, direction and movement, including whole, half, quarter and three-quarter turns</li> </ul>	<ul style="list-style-type: none"> <li>order and arrange combinations of mathematical objects in patterns and sequences</li> <li>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)</li> </ul>		<ul style="list-style-type: none"> <li>describe positions on a 2-D grid as coordinates in the first quadrant</li> <li>describe movements between positions as translations of a given unit to the left/right and up/down</li> <li>plot specified points and draw sides to complete a given polygon</li> </ul>	<ul style="list-style-type: none"> <li>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</li> </ul>	<ul style="list-style-type: none"> <li>describe positions on the full coordinate grid (all four quadrants)</li> <li>draw and translate simple shapes on the coordinate plane, and reflect them in the axes</li> </ul>
Summer 3	Summer 4		Summer 6	Summer 2	Summer 2

# Year 1 RTP Geometry

Ready to progress criteria	Block	Steps
1G-1 Recognise common 2D and 3D shapes presented in different orientations, and know that rectangles, triangles, cuboids and pyramids are not always similar to one another.	Autumn 3	<ol style="list-style-type: none"><li>1 – Recognise and name 3-D shapes</li><li>2 – Sort 3-D shapes</li><li>3 – Recognise and name 2-D shapes</li><li>4 – Sort 2-D shapes</li><li>5 – Patterns with 2-D and 3-D shapes</li></ol>
1G-2 Compose 2D and 3D shapes from smaller shapes to match an example, including manipulating shapes to place them in particular orientations.	Autumn 3	<ol style="list-style-type: none"><li>1 – Recognise and name 3-D shapes</li><li>2 – Sort 3-D shapes</li><li>3 – Recognise and name 2-D shapes</li><li>4 – Sort 2-D shapes</li><li>5 – Patterns with 2-D and 3-D shapes</li></ol>

## Year 2 RTP Geometry

Ready to progress criteria	Block	Steps
2G-1 Recognise common 2D and 3D shapes presented in different orientations, and know that rectangles, triangles, cuboids and pyramids are not always similar to one another.	Autumn 3	<ol style="list-style-type: none"><li>1 – Recognise 2-D and 3-D shapes</li><li>2 – Count sides on 2-D shapes</li><li>3 – Count vertices on 2-D shapes</li><li>7 – Sort 2-D shapes</li><li>8 – Count faces on 3-D shapes</li><li>9 – Count edges on 3-D shapes</li><li>10 – Count vertices on 3-D shapes</li><li>11 – Sort 3-D shapes</li></ol>

# Year 3 RTP Geometry

Ready to progress criteria	Block	Steps
3G-1 Recognise right angles as a property of shape or a description of a turn, and identify right angles in 2D shapes presented in different orientations.	Summer 4	2 – Right angles
3G-2 Draw polygons by joining marked points, and identify parallel and perpendicular sides.	Summer 4	6 – Parallel and perpendicular 8 – Draw polygons



## Year 4 RTP Geometry

Ready to progress criteria	Block	Steps
4G-1 Draw polygons, specified by coordinates in the first quadrant, and translate within the first quadrant.	Summer 6	3 – Draw 2-D shapes on a grid 4 – Translate on a grid
4G-2 Identify regular polygons, including equilateral triangles and squares, as those in which the side-lengths are equal and the angles are equal. Find the perimeter of regular and irregular polygons.	Spring 2	8 – Perimeter of regular polygons 9 – Perimeter of polygons
	Summer 4	4 – Triangles 5 – Quadrilaterals 6 – Polygons
4G-3 Identify line symmetry in 2D shapes presented in different orientations. Reflect shapes in a line of symmetry and complete a symmetric figure or pattern with respect to a specified line of symmetry.	Summer 4	7 – Lines of symmetry 8 – Complete a symmetric figure

## Year 5 RTP Geometry

Ready to progress criteria	Block	Steps
5G-1 Compare angles, estimate and measure angles in degrees ( $^{\circ}$ ) and draw angles of a given size.	Summer 1	2 – Classify angles 3 – Estimate angles 4 – Measure angles up to $180^{\circ}$ 5 – Draw lines and angles accurately
5G-2 Compare areas and calculate the area of rectangles (including squares) using standard units.	Spring 4	4 – Area of rectangles 5 – Area of compound shapes

# Year 6 RTP Geometry

Ready to progress criteria	Block	Steps
6G-1 Draw, compose, and decompose shapes according to given properties, including dimensions, angles and area, and solve related problems.	Spring 5	1 – Shapes - same area 2 – Area and perimeter 3 – Area of a triangle – counting squares 4 – Area of a right-angled triangle 5 – Area of any triangle 6 – Area of a parallelogram
	Summer 1	4 – Angles in a triangle 5 – Angles in a triangle – special cases 6 – Angles in a triangle – missing angles 7 – Angles in a quadrilateral 8 – Angles in polygons 10 – Draw shapes accurately