



Geometry Progress Ladder

<i>Maths Makes Sense</i> Foundation End-of-year objectives	page 2
<i>Maths Makes Sense</i> 1 – 2 End-of-block objectives	page 3
<i>Maths Makes Sense</i> 3 – 4 End-of-block objectives	page 4
<i>Maths Makes Sense</i> 5 – 6 End-of-block objectives	page 5

OXFORD

Maths Makes Sense Foundation End-of-year objectives

Counting	Number	Writing
- Participate in stories, songs and rhymes involving number, repetition and actions - Count forwards starting at any number (0–1000) - Count backwards starting at any number (0–1000) - Count up to 10 objects when asked How many...?, and reply with the correct number - Count objects when asked ‘How much is there here?’ and reply with, for example, [number] cups	- Read, say and match numbers 0–9 - Read, say and match numbers 10–20 - Sequence numbers in order - Match the number of objects to the numeral - Recognise and say numbers greater than 20 in an everyday context - Play simple games that involve use of number	- Recognise and write numbers from 0–9 - Recognise and write numbers from 10–20 - Recognise and write fractions: $\frac{1}{2}$ $\frac{1}{4}$ - Copy and write Maths Stories, e.g. $2 + 3 - 4 = 1$
Calculating	Shape	Position
- Read what an addition or subtraction Maths Story with 1-digit whole numbers including $\frac{1}{2}$ and $\frac{1}{4}$ (with a whole-number answer) says - Read what an addition or subtraction Maths Story with 1-digit whole numbers including $\frac{1}{2}$ and $\frac{1}{4}$ (with a whole-number answer) means - Act the Real Story for an addition or subtraction Maths Story with 1-digit whole numbers including $\frac{1}{2}$ and $\frac{1}{4}$ with cups - Act out a Real-Life Story an addition or subtraction Maths Story with 1-digit whole numbers including $\frac{1}{2}$ and $\frac{1}{4}$ using, e.g. pennies - Share objects into equal groups and count how many in each group - Participate in role play prompted by a Maths Story	- Recognise, name and describe 2D shapes - Play simple games that involve use of number, pattern, shape and language	- Follow instructions that involve positional language - Give directions that include positional language
Sorting and data	Measure	Problem-solving
- Sort objects such as playing cards, number cards, coloured objects, 2D and 3D shapes according to criteria - Read information from a simple block graph - Make a simple block graph using blocks or bricks	- Use comparative language, such as bigger/smaller, shorter/ longer, heavier/lighter to compare quantities. - Tell the time using o'clock - Use sand timers to measure minutes	- Use knowledge and skills of counting to solve simple problems, e.g. counting pairs of socks - Use knowledge and skills of songs and rhymes to join in with a modified song or rhyme, e.g. Three Little Dickie Birds - Use knowledge and skills of number and calculating to solve simple problems, e.g. sharing nine cakes between three friends - Use knowledge and skills of shape, position, sorting and measure to solve simple problems, e.g. building a room with construction bricks

Maths Makes Sense 1 – 2 End-of-block objectives

	Maths Makes Sense 1	Maths Makes Sense 2
BLOCK 1	• Draw straight lines by joining named dots using a ruler, e.g. draw line AB • Draw open or closed shapes by joining named dots using a ruler, e.g. draw closed shape ABCD.	• Read information from grids to find the number of and the length of sides of shapes, the number of sticks needed to make them and the perimeter of closed shapes • Identify a line of symmetry in 2D shapes • Use the vocabulary 'line of symmetry' and 'not a line of symmetry'.
BLOCK 2	• Read instructions for making a shape from a grid, e.g. five sticks, five sides, open, and use dm sticks to make the correct open or closed shape • Find and record the perimeter of closed shapes made with dm sticks, e.g. 5 dm • Measure a named straight lines, e.g. line AB, in centimetres with a ruler • Record the length of a named straight line, e.g. line AB in centimetres, e.g. 4 cm.	• Measure the lengths of sides of 2D shapes in millimetres, e.g. AB = 45 mm • Draw and name diagonals of 2D shapes and measure them in millimetres, e.g. 'miss-one-corner' diagonal AB = 49 mm • Draw the symbol for a turn • Recognise quarter turns in 2D shapes as right angles and draw the symbol for a right angle.
BLOCK 3	• Using a labelled diagram of a 2D shape, select the correct number of dm sticks and make the shape • Turn through one full turn, a quarter, a half and three-quarters of one full turn, two full turns and three full turns.	• Recognise and name 2D faces in 3D shapes • Recognise and name 2D faces in pictures of 3D shapes • Use the vocabulary <i>side</i> and <i>corner</i> for 2D faces • Use the vocabulary <i>edge</i> and <i>vertex</i> for 3D shapes.
BLOCK 4	• Name 2D shapes (triangle, quadrilateral, pentagon, hexagon, circle, ellipse) and for each polygon identify the number of sides • Use a dm stick to represent a <i>turn through</i> a half, a quarter or three-quarters of a full turn, from one direction to another, e.g. from direction SB to direction SC.	• Judge whether there is a line of symmetry or not on a 2D shape • Draw an arc to show turning through an angle and draw a right angle symbol to show turning through a right angle • Name and label faces in 3D shapes.
BLOCK 5	• Recognise the difference between, and use actions for, 1D, 2D and 3D shapes • Identify 2D faces on 3D shapes, and name them as triangles, quadrilaterals, pentagons or hexagons.	• Recognise 2D shapes and polygons and name individual polygons • Recognise and copy the names of 'special' triangles and quadrilaterals, e.g. equilateral, isosceles and right-angled triangles, squares and rectangles.
BLOCK 6	• Identify the 2D shapes that make up the faces of 3D shapes (no curved faces).	• Recognise squares, rectangles, isosceles triangles and equilateral triangles in different orientations • Recognise 3D shapes as 'polyhedra' or 'not polyhedra' • Recognise prisms and pyramids • Use nets to make 3D shapes, and identify which nets make cubes.

Maths Makes Sense 3 – 4 End-of-block objectives

	Maths Makes Sense 3	Maths Makes Sense 4
BLOCK 1	- Distinguish between a line through two points A and B and a line segment AB and know that the length of a line is 'infinity' and that a line segment has a length that can be measured - Use a ruler to draw named straight line segments, e.g. AB and measure and write the length using cm and mm - Name triangles, quadrilaterals (rectangles and squares), pentagons, hexagons, heptagons and octagons - Recognise, name and use clockwise and anti-clockwise turns and draw an arc to show those turns.	On a pair of axes, draw the image of an object in a vertical, horizontal or oblique mirror line and label the image accurately, e.g. A in the object is labelled A' in the image.
BLOCK 2	- Draw a pair of axes (one quadrant) and label the axes 'x axis' and 'y axis' - Plot points specified by their names and their coordinates, e.g. A (3, 5) - Plot and label specified points, to draw polygons and measure sides and diagonals.	- Use a protractor to draw acute angles - Say whether a drawn angle is acute, obtuse or reflex.
BLOCK 3	- Know the measure in degrees (360°, 270°, 180°, 90°) of a full turn, a half turn, a three-quarter turn, a quarter turn - Use angle templates to draw specified angles (multiples of 10°) using a named centre of rotation - Use a set square as the angle template for a right angle.	- Use the vocabulary <i>arc</i>, <i>chord</i>, <i>circumference</i>, <i>radius</i> and <i>diameter</i> correctly - Follow instructions to use compasses to draw a circle, together with a hexagon and triangle within the circle, e.g. draw a circle with centre C and a radius of 3 cm.
BLOCK 4	- Recognise parallel lines and not parallel lines - Draw a line segment specified by, e.g. AB with coordinates for A and B, and draw a line segment parallel to AB - Draw a line segment specified by, e.g. AB with coordinates for A and B, and draw a line segment perpendicular to AB - For two drawn lines described as being parallel, draw the arrow symbols and know that the arrows 'speak to us' to indicate they are parallel - Recognise the shape and say the name <i>parallelogram</i>.	- Draw a pair of axes and label them with positive and negative numbers - Follow instructions to draw circles and polygons on a pair of axes (four quadrants) - Name lines of symmetry.
BLOCK 5	- Use compasses and a ruler to copy triangles - Compare triangles to say whether or not they are congruent - Draw a triangle specified by coordinates - On axes, draw a triangle congruent to another triangle.	Use compasses and a ruler to draw triangles with given lengths of sides, e.g. Draw triangle ABC, AB = 5 cm, BC = 5 cm, CA = 5 cm.
BLOCK 6	- Recognise and identify a pyramid or prism from its net - For a 2D drawing, identify which 3D shape it represents - Draw a triangle specified by coordinates and describe it as scalene, equilateral or isosceles.	- Use a protractor to measure acute and obtuse angles in degrees - Use the inside and outside protractors to draw specified acute and obtuse angles with centre of rotation C.

Maths Makes Sense 5 – 6 End-of-block objectives

	Maths Makes Sense 5	Maths Makes Sense 6
BLOCK 1	- Name the images of objects that are points, line segments or polygons in a symmetrical shape - Know the line of symmetry is the perpendicular bisector in a symmetrical shape - Name two congruent shapes in a shape with an axis of symmetry.	- Find the sum of the exterior angles of a polygon - Find the sum of the interior angles of a polygon.
BLOCK 2	- Name and draw acute angles, obtuse angles, reflex angles and right angles - Name and calculate vertically opposite angles and supplementary angles - Use a protractor to draw acute angles, obtuse angles and right angles.	- Recognise reflection, translation, enlargement and rotation as transformations - For an object and its image, recognise and name the transformation.
BLOCK 3	- Use a calculator to calculate the circumference of a circle using $C = \pi \times d$ - Use a calculator to calculate the area of a circle using $A = \pi \times r^2$.	- Use a protractor to measure the size of an angle in degrees; use a ruler to measure the length of a line, in millimetres - Draw the image of a polygon in a mirror line - Complete the drawing of a named, partially-drawn shape on a pair of axes - Calculate the size of the two equal angles in an isosceles triangle - Sort quadrilaterals according to their properties - Complete the coordinates of the corners of a named shape using knowledge of its properties - Find the angle of rotation for an object and image polygon.
BLOCK 4	- Recognise corresponding angles and know they have the same value - Recognise vertically opposite angles and know they have the same value - Recognise opposite interior angles in a parallelogram and know they have the same value.	- Draw the lines of symmetry of any polygon - Write the number of lines of symmetry for any polygon - Identify and write the order of rotational symmetry for any polygon.
BLOCK 5	- Draw a convex polygon - Draw and mark the exterior angles for a convex polygon - Show that the sum of the exterior angles of a polygon is 360°.	- Calculate an exterior angle of a regular polygon - Calculate an interior angle of a regular polygon - Calculate the third angle in a triangle.
BLOCK 6	- Recognise, name and sketch polygons (decagon, heptagon, hexagon, nonagon, octagon, pentagon, quadrilateral, triangle) - Recognise, name and sketch a <i>equilateral</i> triangle, <i>isosceles</i> triangle, <i>right-angled</i> triangle, <i>scalene</i> triangle - Recognise, name and sketch a parallelogram, rectangle, rhombus, square, trapezium - Recognise the various special triangles and quadrilaterals, use the special name and recognise them as the more general polygons.	- Draw the perpendicular bisector of a line segment - Draw the bisector of an angle - Draw the circum-circle of a triangle - Draw the in-circle of a triangle.