Maths Progression Map

	EYFS	Year 1	Year 2
Number and Place Value	**Early Learning Goals** **Number:** • Have a deep understanding of number to 10, including the composition of each number. • Subitise (recognise quantities without counting) up to 5. **Numerical Patterns:** • Verbally count beyond 20, recognising the pattern of the counting system • Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other number.	• count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number • count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens • given a number, identify one more and one less • identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least • read and write numbers from 1 to 20 in numerals and words.	• count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward • recognise the place value of each digit in a two-digit number (tens, ones) • identify, represent and estimate numbers using different representations, including the number line • compare and order numbers from 0 up to 100; use <, > and = signs • read and write numbers to at least 100 in numerals and in words • use place value and number facts to solve problems.
Addition and Subtraction	**Early Learning Goals** **Number:** • Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts. **Numerical Patterns:** • Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other number. • Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.	• read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs • represent and use number bonds and related subtraction facts within 20 • add and subtract one-digit and two-digit numbers to 20, including zero • solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = □ – 9.	• solve problems with addition and subtraction: • using concrete objects and pictorial representations, including those involving numbers, quantities and measures • applying their increasing knowledge of mental and written methods • recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 • add and subtract numbers using concrete objects, pictorial representations, and mentally, including: • a two-digit number and ones • a two-digit number and tens • two two-digit numbers • adding three one-digit numbers • show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot • recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.
Multiplication and Division	**Early Learning Goals** **Numerical Patterns:** • Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.	• solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.	• recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers • calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs • show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot • solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.
Fractions		• recognise, find and name a half as one of two equal parts of an object, shape or quantity • recognise, find and name a quarter as one of four equal parts of an object, shape or quantity	• recognise, find, name and write fractions ⅓, $\frac{1}{4}$, 2/4 and $\frac{3}{4}$ of a length, shape, set of objects or quantity • write simple fractions e.g. $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of two quarters and one half.

| Measurement, Shape, Space | There are no early learning goals that relate directly to shape, space and measure objectives. However, children will have experienced rich opportunities to develop spatial reasoning skills in shape, space and measure

Development Matters: 3 and 4 year olds
• Talk about and explore 2D and 3D shapes (for example circles, rectangles, triangles and cuboids) using informal and mathematical language – sides, corners, straight, flat round
• Understand position through words alone – for example the bag is under the table.
• Make comparisons between objects relating to size, length, weight and capacity
• Select shapes appropriately flat surfaces for building, triangular prisms for a roof etc
• Talk about and identify patterns around them. For example, stripes on clothes. Use informal language like spotty, blobs etc, Extend and create ABBBA patterns. Notice and correct an error in a repeating pattern, begin to describe a sequence of events, real or fictional, using words such as first, then

Development Matters: Reception
• Select, rotate and manipulate shapes to develop spatial reasoning skills
• Compose and decompose shapes so that children recognise a shape, can have other shapes within it, just as numbers can
• Continue, copy and create repeating patterns
• Compare length, weight and capacity | **Measurement**
• compare, describe and solve practical problems for:
• lengths and heights [for example, long/short, longer/shorter, tall/short, double/half]
• mass/weight [for example, heavy/light, heavier than, lighter than]
• capacity and volume [for example, full/empty, more than, less than, half, half full, quarter]
• time [for example, quicker, slower, earlier, later]
• measure and begin to record the following:
• lengths and heights
• mass/weight
• capacity and volume
• time (hours, minutes, seconds)
• recognise and know the value of different denominations of coins and notes
• sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening]
• recognise and use language relating to dates, including days of the week, weeks, months and years
• tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.
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Shape
• recognise and name common 2-D and 3-D shapes, including:
• 2-D shapes [for example, rectangles (including squares), circles and triangles]
• 3-D shapes [for example, cuboids (including cubes), pyramids and spheres].

Position and Direction
• describe position, direction and movement, including whole, half, quarter and three-quarter turns. | **Measurement**
• choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels
• compare and order lengths, mass, volume/capacity and record the results using >, < and =
• recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value
• find different combinations of coins that equal the same amounts of money
• solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change
• compare and sequence intervals of time
• tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times
• know the number of minutes in an hour and the number of hours in a day.

Shape
• identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line
• identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces
• identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid]
• compare and sort common 2-D and 3-D shapes and everyday objects.

Position and Direction
• order and arrange combinations of mathematical objects in patterns and sequences
• 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). |
| **Statistics and Probability** | | | • interpret and construct simple pictograms, tally charts, block diagrams and simple tables
• ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity
• ask and answer questions about totalling and comparing categorical data. |