



## Maths Milestones



Year Group	Maths
End of EYFS	<ul style="list-style-type: none"><li>• Learn new vocabulary.</li><li>• Use new vocabulary throughout the day.</li><li>• Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary.</li><li>• Count objects, actions and sounds.</li><li>• Count beyond ten.</li><li>• Verbally count beyond 20, recognising the pattern of the counting system.</li><li>• Subitise.</li><li>• Link the number symbol (numeral) with its cardinal number value.</li><li>• Subitise (recognising quantities without counting) up to 5.</li><li>• Link the number symbol (numeral) with its cardinal number value.</li><li>• Compare numbers.</li><li>• Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity.</li><li>• Understand the 'one more than/one less than' relationship between consecutive numbers.</li><li>• Explore the composition of numbers to 10.</li><li>• Have a deep understanding of numbers to 10, including the composition of each number.</li><li>• Automatically recall number bonds for numbers 0-5 and some to 10.</li><li>• 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.</li><li>• Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed evenly</li><li>• Compare length, weight and capacity.</li><li>• Select, rotate and manipulate shapes in order to develop spatial reasoning skills.</li><li>• Compose and decompose shapes so that children can recognise a shape can have other shapes within it, just as numbers can.</li><li>• Draw information from a simple map.</li><li>• Continue, copy and create repeating patterns.</li></ul>
End of Year 1	<ul style="list-style-type: none"><li>• Count to and across 100, forward and backward, beginning with 0 or 1, or from any given number.</li><li>• Count in multiples of 2, 5 and 10.</li><li>• Carry out + and - to 20.</li><li>• Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations.</li><li>• Measure and record lengths and heights, mass/weight, capacity and volume, and time (hours, minutes and seconds).</li><li>• Recognise and know the value of different denominations of coins and notes.</li></ul>

End of Year 2	<ul style="list-style-type: none"> <li>• Recognise the place value of each digit in a two-digit number (tens, ones)</li> <li>• Compare and order numbers from 0 up to 100; use &lt;, &gt; and = signs</li> <li>• Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot</li> <li>• Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems</li> <li>• Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot</li> <li>• Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers</li> <li>• Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs</li> <li>• Write simple fractions e.g. <math>\frac{1}{2}</math> of 6 = 3 and recognise the equivalence of two quarters and one half</li> <li>• Choose and use appropriate standard units to estimate and measure capacity (litres/ml) to the nearest appropriate unit using measuring vessels</li> <li>• 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</li> <li>• Find combinations of coins to equal the same amounts of money and use symbols for pounds (£) and pence (p)</li> <li>• Identify and describe the properties of 2-D shapes, including the number of sides and symmetry in a vertical line</li> <li>• Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces</li> <li>• Use mathematical vocabulary to describe position, direction and movement, including distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise), and movement in a straight line</li> <li>• Interpret and construct simple pictograms, tally charts, block diagrams and simple tables</li> </ul>
End of Year 3	<ul style="list-style-type: none"> <li>• Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.</li> <li>• Solve problems, including missing number problems, involving multiplication and division.</li> <li>• Solve simple measure and money problems involving fractions.</li> <li>• Add and subtract amounts of money to give change, using both £ and p in practical contexts. Add and subtract units of length (m/cm/mm), mass (kg/g) and capacity (l/ml).</li> </ul>
End of Year 4	<ul style="list-style-type: none"> <li>• Solve addition and subtraction two-step problems in context, deciding which operations and methods to use and why.</li> <li>• Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit.</li> <li>• Solve simple measure and money problems involving fractions and decimals to two decimal places.</li> <li>• Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.</li> <li>• Compare and classify geometric shapes, including quadrilaterals and triangles based on their properties and sizes.</li> <li>• Solve comparison sum and difference problems using information presented in bar charts, pictograms tables and other graphs.</li> </ul>

End of Year 5	<ul style="list-style-type: none"> <li>• Solve addition and subtraction multi-step operations and knowing methods to use and why.</li> <li>• Solve problems involving multiplication and division including: factors, squares, multiples and cubes, scaling by simple fractions and problems involving simple rates.</li> <li>• Solve problems which require knowledge of decimal and percentage equivalents.</li> <li>• Use all four operations to solve problems involving measures, money, length, mass, volume and capacity using decimal notation, including scaling.</li> <li>• Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language.</li> <li>• Solve comparison, sum and difference problems using information presented in a line graph.</li> </ul>
End of Year 6	<ul style="list-style-type: none"> <li>• Round any whole number to a required degree of accuracy</li> <li>• Use negative numbers in context, and calculate intervals across zero</li> <li>• Perform mental calculations, including with mixed operations and large numbers</li> <li>• Perform mental calculations, including with mixed operations and large numbers</li> <li>• Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context</li> <li>• Use their knowledge of the order of operations to carry out calculations involving the four operations</li> <li>• Multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. <math>\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}</math> ) Divide proper fractions by whole numbers (e.g. <math>\frac{1}{3} \div 2 = \frac{1}{6}</math>)</li> <li>• Multiply 1 digit numbers with up to 2 decimal places by whole numbers</li> <li>• Use common factors to simplify fractions; use common multiples to express fractions in the same denomination</li> <li>• Recall and use equivalences between simple fractions, decimals and percentages including in different contexts.</li> <li>• Associate a fraction with division to calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. <math>\frac{3}{8}</math> )</li> <li>• Express missing number problems algebraically Use simple formulae Generate and describe linear number sequences</li> <li>• Find pairs of numbers that satisfy an equation with two unknowns Enumerate possible combinations of 2 variants</li> <li>• Calculate the area of parallelograms and triangles</li> <li>• Convert between miles and kilometres</li> <li>• Illustrate and name parts of circles, including radius, diameter and circumference</li> <li>• Find unknown angles in any triangles, quadrilaterals, and regular polygons</li> <li>• Describe positions on the full coordinate grid (all four quadrants)</li> <li>• Interpret and construct pie charts</li> </ul>