

# Progressive Maths Curriculum

Foundation Stage	Year 1	Year 2
<p><b>Numbers</b></p> <ul style="list-style-type: none"> <li>• uses some number names and number language spontaneously</li> <li>• uses some number names accurately in play</li> <li>• recites numbers in order to 10</li> <li>• knows that numbers identify how many objects are in a set</li> <li>• beginning to represent numbers using fingers, marks on paper or pictures</li> <li>• sometimes matches numeral and quantity correctly</li> <li>• shows curiosity about numbers by offering comments or asking questions</li> <li>• compares two groups of objects, saying when they have the same number</li> <li>• shows an interest in number problems</li> <li>• separates a group of three or four objects in different ways, beginning to recognise that the total is still the same</li> <li>• shows an interest in numerals in the environment</li> <li>• shows an interest in representing numbers</li> <li>• realises not only objects, but anything can be counted, including steps, claps or jumps</li> <li>• recognise some numerals of personal significance</li> <li>• recognises numerals 1 to 5</li> <li>• counts up to three or four objects by saying one number name for each item</li> <li>• counts actions or objects which cannot be moved</li> <li>• counts objects to 10, and beginning to count beyond 10</li> <li>• counts out up to six objects from a larger group</li> <li>• selects the correct numeral to represent 1 to 5, then 1 to 10 objects</li> <li>• counts an irregular arrangement of up to ten objects</li> <li>• estimates how many objects they can see and checks by counting them</li> <li>• uses the language of 'more' and 'fewer' to compare two sets of objects</li> <li>• finds the total number of items in two groups by counting all of them</li> <li>• says the number that is one more than a given number</li> <li>• finds one more or one less from a group of up to five objects, then ten objects</li> <li>• in practical activities and discussion, beginning to use the vocabulary involved in adding and subtracting</li> <li>• records, using marks that they can interpret and explain</li> <li>• begins to identify own mathematical problems based on own interests and fascinations</li> </ul> <ul style="list-style-type: none"> <li>• children count reliably with numbers from 1 to 20, place them in order and say which number is one more or one less than a given number</li> <li>• using quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer</li> <li>• they solve problems, including doubling, halving and sharing</li> </ul>	<p><b>Number and place value</b></p> <ul style="list-style-type: none"> <li>• counting in steps of 1, 2, 5 and 10 forwards and backwards from different starting points within 100</li> <li>• reading and writing numbers to 100 in digits, and numbers to 20 in words as well</li> <li>• identifying one more and one less than a number within 100</li> <li>• identifying and representing numbers using objects and pictorial representations including the number line</li> <li>• using the language of: equal to, fewer, more than, less than, most and least</li> </ul> <p><b>Calculation</b></p> <ul style="list-style-type: none"> <li>• reading, writing, interpreting and solving mathematical statements involving addition, subtraction, multiplication and division</li> <li>• representing and using number bonds and related subtraction facts within 20</li> </ul> <p><b>Fractions</b></p> <ul style="list-style-type: none"> <li>• recognising, finding and naming a half as one of two equal parts of an object, shape or quantity, and a quarter as one of four equal parts of an object, shape or quantity</li> </ul>	<p><b>Number and Place Value</b></p> <ul style="list-style-type: none"> <li>• count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward</li> <li>• recognise the place value of each digit in a two-digit number</li> <li>• identify, represent and estimate numbers using different representations, including the number line</li> <li>• compare and order numbers from 0 up to 100; use &lt;, &gt; and = signs</li> <li>• read and write numbers to at least 100 in numerals and in words</li> <li>• use place value and number facts to solve problems</li> </ul> <p><b>Addition and Subtraction</b></p> <p>solve problems with addition and subtraction:</p> <ul style="list-style-type: none"> <li>• using concrete objects and pictorial representations, including those involving numbers, quantities and measures</li> <li>• applying their increasing knowledge of mental and written methods</li> </ul> <ul style="list-style-type: none"> <li>• recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100</li> <li>• add and subtract numbers using concrete objects, pictorial representations, and mentally, including: <ul style="list-style-type: none"> <li>• a two-digit number and ones</li> <li>• a two-digit number and tens</li> <li>• two two-digit numbers</li> <li>• adding three one-digit numbers</li> </ul> </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 solve missing number problems</li> </ul> <p><b>Multiplication and Division</b></p> <ul style="list-style-type: none"> <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 (x), division (÷) and equals (=) signs</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>• solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts</li> </ul> <p><b>Fractions</b></p> <ul style="list-style-type: none"> <li>• recognise, find, name and write fractions <math>\frac{1}{3}</math>, <math>\frac{1}{4}</math>, <math>\frac{2}{4}</math> and <math>\frac{3}{4}</math> of a length, shape, objects or quantity</li> <li>• write simple fractions for example, <math>\frac{1}{2}</math> of 6 = 3 and recognise the equivalence of <math>\frac{2}{4}</math> and <math>\frac{1}{2}</math></li> </ul>

<p><b>Shape, space and measures</b></p> <ul style="list-style-type: none"> <li>• shows an interest in shape and space by playing with shapes or making arrangements with objects</li> <li>• shows awareness of similarities of shapes in the environment</li> <li>• uses positional language</li> <li>• shows interest in shape by sustained construction activity or by talking about shapes or arrangements</li> <li>• shows interest in shapes in the environment</li> <li>• uses shapes appropriately for tasks</li> <li>• beginning to talk about the shapes of everyday objects, e.g. 'round' and 'tall'</li> <li>• beginning to use mathematical names for 'solid' 3D shapes and 'flat' 2-D shapes, and mathematical terms to describe shapes</li> <li>• selects a particular named shape</li> <li>• can describe their relative position such as 'behind' or 'next to'</li> <li>• orders two or three items by length or height</li> <li>• orders two items by weight or capacity</li> <li>• uses familiar objects and common shapes to create and recreate patterns and build models</li> <li>• uses everyday language related to time</li> <li>• beginning to use everyday language related to money</li> <li>• orders and sequences familiar events</li> <li>• measures short periods of time in simple ways</li> </ul> <ul style="list-style-type: none"> <li>• children use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and to solve problems</li> <li>• they recognise, create and describe patterns</li> <li>• they explore characteristics of everyday objects and shapes and use mathematical language to describe them</li> </ul>	<p><b>Geometry – Properties of shapes</b></p> <ul style="list-style-type: none"> <li>• recognise and name common 2D and 3D shapes including rectangles, squares, circles, triangles, cuboids, cubes, pyramids and spheres</li> </ul> <p><b>Geometry – Position and direction</b></p> <ul style="list-style-type: none"> <li>• describe position, directions and movements, including half, quarter and three-quarter turns</li> </ul>	<p><b>Geometry – Properties of Shape</b></p> <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 and describe the properties of 3-D shapes, including the number of edges, vertices and faces</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 and 3-D shapes and everyday objects</li> </ul> <p><b>Geometry – Position and Direction</b></p> <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>
	<p><b>Measurement</b></p> <ul style="list-style-type: none"> <li>• comparing, describing and solving practical problems for length, height, mass, weight, capacity, volume and time, and using related vocabulary</li> <li>• measuring and beginning to record length, height, mass, weight, capacity, volume and time</li> <li>• recognising and knowing the value of different denominations of coins and notes</li> <li>• sequencing events in chronological order and using related vocabulary</li> <li>• telling the time to the hour and half past the hour and draw the hands on a clock face to show these times</li> </ul>	<p><b>Measurement</b></p> <ul style="list-style-type: none"> <li>• 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</li> <li>• compare and order lengths, mass, volume/capacity and record the results using &gt;, &lt; and =</li> <li>• recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value</li> <li>• find different combinations of coins that equal the same amounts of money</li> <li>• solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change</li> <li>• compare and sequence intervals of time</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>• know the number of minutes in an hour and the number of hours in a day</li> </ul>
		<p><b>Statistics</b></p> <ul style="list-style-type: none"> <li>• interpret and construct simple pictograms, tally charts, block diagrams and simple tables</li> <li>• ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity</li> <li>• ask and answer questions about totalling and comparing categorical data</li> </ul>