

**MATHEMATICS Curriculum Progression at Merebrook Infant School**

	EYFS		Year 1	Year 2	Year 3
	30-50 months	40 – 60 + months			
<b>Number and Place Value</b>	<p>Uses some number names and number language spontaneously.</p> <ul style="list-style-type: none"> <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 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> </ul>	<p>Recognise some numerals of personal significance.</p> <ul style="list-style-type: none"> <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>•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> </ul>	<p>Count to and across 100, forwards and backwards, beginning with 0 or 1 or from any given number,</p> <p>Count, read and write numbers to 100 in numerals, count in multiples of twos, fives and tens</p> <p>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.</p> <p>Read and write numbers from 1 to 20 in numerals and words.</p> <p>Given a number, identify one more and one less</p>	<p>Count in steps of 2, 3 and 5 from 0, and in tens from any number, forward or backward.</p> <p>Recognise the place value of each digit in a two-digit number (tens, ones)</p> <p>Identify represent and estimate numbers using different representations, including number line</p> <p>Compare and order numbers from 0 up to 100 use &lt;, &gt; and = signs</p> <p>Read and write numbers to at least 100 in numerals and in words</p> <p>Use place value and number facts to solve problems.</p>	<p>Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number.</p> <p>Recognise the place value of each digit in a three-digit number, (Hundreds, tens, ones)</p> <p>Identify, represent and estimate numbers using different representations.</p> <p>Compare and order up to 1000.</p> <p>Read and write numbers up to 1000 in numerals and in words</p> <p>Solve number problems and practical problems involving these ideas.</p>

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Addition and Subtraction	<p>Shows an interest in number problems.</p> <ul style="list-style-type: none"> <li>•Separates a group of three or four objects in different ways, beginning to recognise that the total is still the same.</li> </ul>	<p>Finds the total number of items in two groups by counting all of them.</p> <p>In practical activities and discussion, beginning to use the vocabulary involved in adding and subtracting.</p> <ul style="list-style-type: none"> <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>	<p>Read, write and interpret mathematical statements involving addition (+), subtraction (-), and equals (=) signs</p> <p>Represent and use number bonds and related subtraction facts within 20</p> <p>Add and subtract one-digit and two-digit numbers to 20, including zero</p> <p>Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, recognising coins and notes and missing number problems such as <math>7 - \square = 9</math></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> </ul> <p>Applying their increasing knowledge of mental and written methods.</p> <p>Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100.</p> <p>Add and subtract numbers using concrete objects, pictorial representations, and mentally, including:</p> <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> <p>Show addition of two numbers can be done in any order (commutative) and subtraction of one number from another number.</p> <p>Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing numbers problems.</p>	<p>Add and subtract numbers mentally, including</p> <ul style="list-style-type: none"> <li>A three-digit number and ones</li> <li>A three-digit number and tens</li> <li>A three-digit number and hundreds</li> </ul> <p>Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction.</p> <p>Estimate the answer to a calculation and use inverse operations to check answers.</p> <p>Solve problems including missing number problems, using number facts, place value and more complex addition and subtraction</p>
Multiplication and Division			<p>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.</p>	<p>Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers</p> <p>Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (÷) and equals (=) signs.</p> <p>Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot</p> <p>Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods and multiplication and division facts, including problems in contexts.</p>	<p>Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables</p> <p>Write and calculate mathematical statements for multiplication and division using multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods.</p> <p>Solve problems including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects.</p>

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Fractions			<p>Recognise, find and name a half as one of two equal parts of an object, shape or quantity</p> <p>Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.</p>	<p>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, set of objects or quantity</p> <p>Write simple fractions e.g. <math>\frac{1}{2}</math> of 6 = 3 and recognise the equivalence of <math>\frac{2}{4}</math> and <math>\frac{1}{2}</math></p>	<p>Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and dividing one-digit numbers or quantities by 10. Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.</p> <p>Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators.</p> <p>Recognise and show, using diagram, equivalent fractions with small denominators.</p> <p>Add and subtract fractions with same denominator within one whole</p> <p>Compare and order unit fractions with the same denominator.</p> <p>Solve problems</p>
Measurement	<p>Beginning to talk about the shapes of everyday objects, e.g. 'round' and 'tall'.</p>	<p>Orders two or three items by length or height.</p> <ul style="list-style-type: none"> <li>•Orders two items by weight or capacity.</li> </ul> <p>Uses everyday language related to time. •Beginning to use everyday language related to money.</p> <ul style="list-style-type: none"> <li>•Orders and sequences familiar events. •Measures short periods of time in simple ways.</li> </ul>	<p>Compare, describe and solve practical problems for:</p> <ul style="list-style-type: none"> <li>-lengths, heights (for example, long/short, longer/shorter, tall/short, double/half)</li> <li>-Mass/weight (for example heavy/light, heavier than, lighter than)</li> <li>-Capacity and volume (for example, full/empty, more than, less than, half, half full, quarter)</li> <li>-Time (for example, quicker, slower, earlier, later)</li> </ul> <p>Measure and begin to record the following-</p> <ul style="list-style-type: none"> <li>-lengths and heights</li> <li>-Mass/weight</li> <li>- capacity and volume</li> <li>-time (hours, minutes, seconds)</li> </ul> <p>Recognise and know the value of different denominations of coins and notes</p> <p>Sequence events in chronological order using language (for example, before, and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening</p> <p>Recognise and use language relating to dates, inc. days of the week, weeks, months and years</p> <p>Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.</p>	<p>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</p> <p>Compare and order lengths, mass, volume/capacity and record the results using &gt;, &lt; and =</p> <p>Recognise and use symbols for pounds (£) and pence (p) combine amounts to make particular value.</p> <p>Find different combinations of coins that equal the same amounts of money.</p> <p>Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.</p> <p>Compare and sequence intervals of time</p> <p>Tell and write the time to five minutes, including quarter past/to the hour and draw hands on a clock face to show these times</p> <p>Know the number of minutes in an hour and the number of hours in a day.</p>	<p>Measure, compare, add and subtract: lengths (m/cm/mm);mass (kg/g); volume/capacity (l/ml)</p> <p>Measure the perimeter of simple 2-D shapes</p> <p>Add and subtract amounts of money to give change (£ and p)</p> <p>Tell and write the time for an analogue clock, including using Roman numerals from I to XII and 12-hour and 24-hour clocks.</p> <p>Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds , minutes and hours; use appropriate vocabulary.</p> <p>Know the number of seconds in a minute and the number of days in each month, year and leap year.</p> <p>Compare durations of events</p>

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<b>Geometry: Properties of shape</b>	<p>Shows an interest in shape and space by playing with shapes or making arrangements with objects.</p> <ul style="list-style-type: none"> <li>Shows awareness of similarities of shapes in the environment.</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> </ul>	<p>Beginning to use mathematical names for 'solid' 3D shapes and 'flat' 2D shapes, and mathematical terms to describe shapes.</p> <ul style="list-style-type: none"> <li>Selects a particular named shape.</li> </ul>	<p>Recognise and name 2-D and 3-D shapes, including:</p> <p>2-D shapes (e.g. rectangles (including squares), circles and triangles)</p> <p>3-D shapes (e.g. Cuboids (including cubes), pyramids and spheres.</p>	<p>Recognise and name common 2-D and 3-D shapes, including:</p> <p>2-D shapes (e.g. rectangles (including squares), circles and triangles)</p> <p>3-D shapes (e.g. cuboids (including cubes), pyramids and spheres)</p>	<p>Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them</p> <p>Recognise angles as a property of shape or a description of a turn</p> <p>Identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four make a complete turn; identify whether angles are greater than or less than a right angle.</p> <p>Identify horizontal and vertical lines and pairs if perpendicular and parallel lines.</p>
<b>Geometry: Position &amp; Direction</b>	<ul style="list-style-type: none"> <li>Uses shapes appropriately for tasks.</li> <li>Uses positional language.</li> </ul>	<p>Can describe their relative position such as 'behind' or 'next to'.</p>	<p>Describe position, directions and movements, including half, quarter and three quarter turns</p>	<p>Order and arrange combinations of mathematical objects in patterns</p> <p>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 straight line</p>	<p>Recognise angles as a property of shape and as an amount of rotation</p> <p>Identify right angles, recognise that 2 right angles make half a turn and 4 make a whole turn. Identify angles that are greater than a right angle.</p> <p>(This section is not statutory as it is included within the properties of shape)</p>
<b>Statistics</b>				<p>Interpret and construct simple pictograms, tally charts, block diagrams and simple tables</p> <p>Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity</p> <p>Ask and answer questions about totalling and comparing categorical data.</p>	<p>Interpret and present data using bar charts, pictograms and tables.</p> <p>Solve one-step and two-step questions (For example, 'How many more?' and 'how many fewer?') using information presented in scaled bar charts and pictograms and tables.</p>