



## Roe Green Infant School Maths – Skills Progression



	Reception	Year 1	Year 2	Year 3
Number and Place Value	<ul style="list-style-type: none"> <li>Recognising, writing and ordering number numbers 0 - 10</li> <li>Counting to 20 and beyond</li> <li>Comparing quantity and using the correct mathematical terms – fewer, less than, more than, same as</li> <li>Say one more/ one less than a given a number</li> <li>Solve problems which include doubling, halving and sharing.</li> </ul>	<ul style="list-style-type: none"> <li>count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number</li> <li>count, read and write numbers to 100 in numerals</li> <li>count in multiples of twos, fives and tens</li> <li>identify and represent numbers using objects and pictorial representations including the number line, &amp; use language of: equal to, more than, less than (fewer), most, least</li> <li>read and write numbers from 1 to 20 in numerals and words</li> <li>read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs</li> <li>given a number, identify one more and one less</li> <li>represent and use number bonds and related subtraction facts within 20</li> </ul>	<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>compare and order numbers from 0 up to 100; use &lt;, &gt; and = signs</li> <li>identify, represent and estimate numbers using different representations, including the number line</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>	<ul style="list-style-type: none"> <li>count from 0 in multiples of 4, 8, 50 and 100;</li> <li>find 10 or 100 more or less than a given number. Count in 10s and 100s</li> <li>recognise the place value of each digit in a three-digit number</li> <li>compare and order numbers up to 1000</li> <li>identify, represent and estimate numbers using different representations</li> <li>read and write numbers up to 1000 in numerals and in words</li> </ul>

Addition and Subtraction	<ul style="list-style-type: none"> <li>• Add and subtract two single digit numbers.</li> <li>• Count on or back to find the answer.</li> </ul>	<ul style="list-style-type: none"> <li>• Add and subtract one-digit and two-digit numbers to 20, including zero</li> <li>• solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as <math>7 = \square - 9</math>.</li> </ul>	<ul style="list-style-type: none"> <li>• add and subtract numbers using concrete objects, pictorial representations, and mentally, including: <math>TO+O</math>, <math>TO+T</math>, <math>TO+TO</math> and <math>O+O+O</math></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>• solve problems with addition and subtraction, using concrete, pictorial and abstract representations</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>	<ul style="list-style-type: none"> <li>• Use doubling linked to 2,4,8 times table</li> <li>• add and subtract numbers mentally, including: <math>HTO+O</math>, <math>HTO+T</math> and <math>HTO+H</math></li> <li>• add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction</li> <li>• estimate the answer to a calculation and use inverse operations to check answers</li> <li>• solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction</li> </ul>
Multiplication and Division		<ul style="list-style-type: none"> <li>• 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.</li> </ul>	<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 (<math>\times</math>), division (<math>\div</math>) and equals (<math>=</math>) 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>	<ul style="list-style-type: none"> <li>• recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables</li> <li>• write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental methods</li> <li>• Progress to formal written methods calculations as above</li> <li>• solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which <math>n</math> objects are connected to <math>m</math> objects.</li> </ul>

Fractions		<ul style="list-style-type: none"> <li>recognise, find and name a half as one of two equal parts of an object, shape or quantity</li> <li>recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.</li> </ul>	<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, set of 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>	<ul style="list-style-type: none"> <li>count up and down in tenths;</li> <li>recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10</li> <li>compare and order unit fractions, and fractions with the same denominators</li> <li>recognise and show, using diagrams, equivalent fractions with small denominators</li> <li>recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators</li> <li>recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators</li> <li>add and subtract fractions with the same denominator within one whole [for example, <math>\frac{5}{7} + \frac{1}{7} = \frac{6}{7}</math>]</li> <li>solve problems using all fraction knowledge</li> </ul>
Time	<ul style="list-style-type: none"> <li>Use everyday Language related to time.</li> <li>Order and sequence familiar events.</li> <li>Measures short periods of time in simple ways.</li> </ul>	<ul style="list-style-type: none"> <li>Sequence events in chronological order using language.</li> <li>Recognise and use language related to dates, including days of the week, months and years.</li> <li>Tell the time to the hour and half past and draw the hands on a clock face to show these times.</li> </ul>	<ul style="list-style-type: none"> <li>Compare and sequence interval times.</li> <li>Tell and write the time to five minutes, including quarter to/past 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>	<ul style="list-style-type: none"> <li>Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks</li> <li>Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight</li> <li>Know the number of seconds in a minute and the number of days in each month, year and leap year</li> <li>compare durations of events</li> </ul>

Money	<ul style="list-style-type: none"> <li>Beginning to use everyday language relates to money.</li> </ul>	<ul style="list-style-type: none"> <li>Recognise and know the value of different denominations of coins and notes</li> </ul>	<ul style="list-style-type: none"> <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> </ul>	<ul style="list-style-type: none"> <li>Add and subtract amounts of money to give change, using both £ and p in practical contexts</li> </ul>
2D shapes	<ul style="list-style-type: none"> <li>Beginning to use mathematical names for 'flat' 2D shapes and begin to use mathematical terms to describe shapes</li> <li>Selects a particular shape named shape</li> <li>Uses familiar objects and common shapes to create and recreate patterns and build models</li> </ul>	<ul style="list-style-type: none"> <li>Recognise and name common 2-D shapes (e.g. Square, circle, triangle) •</li> </ul>	<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>Compare and sort common 2-D and 3-D shapes and everyday objects.</li> </ul>	<ul style="list-style-type: none"> <li>Draw 2-D shapes</li> </ul>
3D shapes	<ul style="list-style-type: none"> <li>Beginning to use mathematical names for 'solid' 3D shapes and begin to use mathematical terms to describe shapes.</li> <li>Selects a particular shape named shape</li> </ul>	<ul style="list-style-type: none"> <li>Recognise and name common 3-D shapes (e.g. Cubes, cuboids, pyramids &amp; spheres)</li> </ul>	<ul style="list-style-type: none"> <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.</li> <li>Compare and sort common 2-D and 3-D shapes and everyday objects.</li> </ul>	<ul style="list-style-type: none"> <li>Make 3-D shapes using modelling materials</li> <li>Recognise 3-D shapes in different orientations and describe them</li> </ul>

Measure	<ul style="list-style-type: none"> <li>Orders two or three items by length and height.</li> <li>Orders two or three objects by weight or capacity.</li> </ul>	<ul style="list-style-type: none"> <li>Compare, describe and solve practical problems for: length/height, weight/mass, capacity/volume &amp; time</li> <li>Measure and begin to record length/height, weight/mass, capacity/volume &amp; time</li> </ul>	<ul style="list-style-type: none"> <li>Choose and use appropriate standard units to estimate and measure length/height (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> </ul>	<ul style="list-style-type: none"> <li>Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)</li> </ul>
Mensuration				<ul style="list-style-type: none"> <li>Measure the perimeter of simple 2-D shapes</li> </ul>
Position & Direction	<ul style="list-style-type: none"> <li>Can describe their relative position such as 'behind' or 'next to'.</li> </ul>	<ul style="list-style-type: none"> <li>Describe position, direction and movement, including whole, half, quarter and three-quarter turns.</li> </ul>	<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 <math>\frac{3}{4}</math> turns</li> </ul>	

Angles				<ul style="list-style-type: none"> <li>Recognise angles as a property of shape or a description of a turn</li> <li>Identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn</li> <li>Identify whether angles are greater or less than right angle</li> </ul>
Interpreting Data		<ul style="list-style-type: none"> <li>Interpret and construct simple pictograms, tally charts, block diagrams and simple tables</li> </ul>	<ul style="list-style-type: none"> <li>Interpret and present data using bar charts, pictograms and tables</li> </ul>	<ul style="list-style-type: none"> <li>Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs</li> </ul>
Decimals				
Percentages				
Ration & Proportion				
Algebra				