



# Moorside Primary School

## Maths Year 5 Overview

Number – number and place value	Number-addition and subtraction	Number- multiplication and division
<ul style="list-style-type: none"> <li>-Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000</li> <li>-Count forwards and backwards in decimal steps</li> <li>-Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit</li> <li>-Read, write, order and compare numbers with up to 3 decimal places</li> <li>-Identify the value of each digit to three decimal places</li> <li>-Identify represent and estimate numbers using the number line</li> <li>-Find 0.01, 0.1, 1, 10, 100, 100 and other powers of 10 more or less than a given number</li> <li>-Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000</li> <li>-Round decimals with two decimal places to the nearest whole number and to one decimal place</li> <li>-Multiply/divide whole numbers and decimals by 10, 100 and 1000</li> <li>-Interpret negative numbers in context, count on and back with positive and negative whole numbers, including through zero</li> <li>-Describe and extend number sequences including those with multiplication/division steps and where the step size is a decimal</li> <li>-Read Roman numerals to 1000 (M); recognise years written as such</li> <li>-Solve number and practical problems that involve all of the above</li> </ul>	<ul style="list-style-type: none"> <li>-Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method)</li> <li>-Select a mental strategy appropriate for the numbers involved in the calculation</li> <li>-Recall and use addition and subtraction facts for 1 and 10 (with decimal numbers to one decimal place)</li> <li>-Derive and use addition and subtraction facts for 1 (with decimal numbers to two decimal places)</li> <li>-Add and subtract numbers mentally with increasingly large numbers and decimals to two decimal places</li> <li>-Add and subtract whole numbers with more than 4 digits and decimals with two decimal places, including using formal written methods (columnar addition and subtraction)</li> <li>-Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy</li> <li>-Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why</li> <li>-Solve addition and subtraction problems involving missing numbers</li> </ul>	<ul style="list-style-type: none"> <li>-Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method)</li> <li>-Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers</li> <li>-Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers</li> <li>-Establish whether a number up to 100 is prime and recall prime numbers up to 19</li> <li>-Recognise and use square (2) and cube (3) numbers, and notation</li> <li>-Use partitioning to double or halve any number, including decimals to two decimal places</li> <li>-Multiply and divide numbers mentally drawing upon known facts</li> <li>-Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes</li> <li>-Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers</li> <li>-Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context</li> <li>-Use estimation/inverse to check answers to calculations; determine, in the context of a problem, an appropriate degree of accuracy</li> <li>-Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign</li> <li>-Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates</li> </ul>
<b>Number- fractions, decimals and percentages</b>	<b>Geometry- Properties of shapes</b>	<b>Measurement</b>
<ul style="list-style-type: none"> <li>-Recognise mixed numbers and improper fractions and convert from one form to the other</li> <li>-Read and write decimal numbers as fractions (e.g. <math>0.71 = \frac{71}{100}</math>)</li> <li>-Count on and back in mixed number steps such as <math>1 \frac{1}{2}</math></li> <li>-Compare and order fractions whose denominators are all multiples of the same number (including on a number line)</li> <li>-Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths</li> </ul>	<ul style="list-style-type: none"> <li>-Distinguish between regular and irregular polygons based on reasoning about equal sides and angles</li> <li>-Use the properties of rectangles to deduce related facts and find missing lengths and angles</li> <li>-Identify 3-D shapes from 2-D representations</li> <li>-Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles</li> <li>-Draw given angles, and measure them in degrees (°)</li> </ul>	<ul style="list-style-type: none"> <li>-Use, read and write standard units of length and mass</li> <li>-Estimate (and calculate) volume (e.g., using <math>1 \text{ cm}^3</math> blocks to build cuboids (including cubes) and capacity (e.g. using water)</li> <li>-Understand the difference between liquid volume and solid volume</li> <li>-Continue to order temperatures including those below <math>0^\circ\text{C}</math></li> <li>-Convert between different units of metric measure</li> </ul>

<ul style="list-style-type: none"> <li>-Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents</li> <li>-Add and subtract fractions with denominators that are the same and that are multiples of the same number (using diagrams)</li> <li>-Write statements <math>&gt; 1</math> as a mixed number (e.g. <math>\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}</math>)</li> <li>-Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams</li> <li>-Recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal</li> <li>-Solve problems involving fractions and decimals to three places</li> <li>-Solve problems which require knowing percentage and decimal equivalents of <math>\frac{1}{4}</math>, <math>\frac{1}{5}</math>, <math>\frac{2}{5}</math> and fractions with a denominator of a multiple of 10 or 25</li> </ul>	<ul style="list-style-type: none"> <li>-Identify: angles at a point and one whole turn (total 360°) - angles at a point on a straight line and half a turn (total 180°) - other multiples of 90°</li> </ul>	<ul style="list-style-type: none"> <li>-Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints</li> <li>-Measure/calculate the perimeter of composite rectilinear shapes</li> <li>-Calculate and compare the area of rectangle, use standard units square centimetres (cm<sup>2</sup>) and square metres (m<sup>2</sup>) and estimate the area of irregular shapes</li> <li>-Continue to read, write and convert time between analogue and digital 12 and 24-hour clocks</li> <li>-Solve problems involving converting between units of time</li> <li>-Use all four operations to solve problems involving measure using decimal notation, including scaling</li> </ul>
<p>Statistics</p>	<p>Geometry-position and direction</p>	
<ul style="list-style-type: none"> <li>-Complete and interpret information in a variety of sorting diagrams (including those used to sort properties of numbers and shapes)</li> <li>-Complete, read and interpret information in tables and timetables</li> <li>-Solve comparison, sum and difference problems using information presented in all types of graph including a line graph</li> <li>-Calculate and interpret the mode, median and range</li> </ul>	<ul style="list-style-type: none"> <li>-Describe positions on the first quadrant of a coordinate grid</li> <li>-Plot specified points and complete shapes</li> <li>-Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed</li> </ul>	