



**MATHS LONG TERM PLANNING – YEAR 5**

<p><b><u>Number – place value</u></b></p> <ul style="list-style-type: none"><li>• Read, write, order and compare numbers to at least 1000000 and determine the value of each digit.</li><li>• Count forwards or backwards in steps of powers of 10 for any given number up to 1000000.</li><li>• Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers including through zero.</li><li>• Round any number up to 1000000 to the nearest 10, 100, 1000, 10000 and 100000</li><li>• Solve number problems and practical problems that involve all of the above.</li><li>• Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.</li></ul>	<p><b><u>Number- addition and subtraction</u></b></p> <ul style="list-style-type: none"><li>• Add and subtract numbers mentally with increasingly large numbers.</li><li>• Add and subtract whole numbers with more than 4 digits, 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></ul>	<p><b><u>Number – multiplication and division</u></b></p> <ul style="list-style-type: none"><li>• Multiply and divide numbers mentally drawing upon known facts.</li><li>• Multiply and divide whole numbers by 10, 100 and 1000.</li><li>• Multiply numbers up to 4 digits by a one or two digit number using a formal written method, including long multiplication for 2 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>• Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.</li><li>• Recognise and use square numbers and cube numbers and the notation for squared (2) and cubed (3)</li><li>• Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes.</li><li>• Solve problems involving addition and subtraction, multiplication and division and a combination of these, including understanding the use of the equals sign.</li></ul>
<p><b><u>Number: Fractions</u></b></p> <ul style="list-style-type: none"><li>• Compare and order fractions whose denominators are multiples of the same number.</li><li>• Identify, name and write equivalent fractions of a given fraction, represented visually including tenths and hundredths.</li><li>• Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements <math>&gt;1</math> as a mixed number</li><li>• Add and subtract fractions with the same denominator and denominators that are multiples of the same number.</li></ul>	<p><b><u>Number: Decimals</u></b></p> <ul style="list-style-type: none"><li>• Read, write, order and compare numbers with up to three decimal places.</li><li>• Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents.</li><li>• Round decimals with two decimal places to the nearest whole number and to one decimal place.</li><li>• Solve problems involving number up to three decimal places.</li><li>• Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.</li></ul>	<p><b><u>Number: Percentages</u></b></p> <ul style="list-style-type: none"><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 which require knowing percentage and decimal equivalents of , , , and those fractions with a denominator of a multiple of 10 or 25.</li></ul> <p><b><u>Number- Prime Numbers</u></b></p> <ul style="list-style-type: none"><li>• Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers.</li></ul>



<ul style="list-style-type: none"> <li>• Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.</li> <li>• Read and write decimal numbers as fractions</li> <li>• Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.</li> </ul>		<ul style="list-style-type: none"> <li>• Establish whether a number up to 100 is prime and recall prime numbers up to 19</li> </ul>
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<u>Statistics</u>	<u>Geometry</u>	<u>Measurement</u>
<ul style="list-style-type: none"> <li>• Solve comparison, sum and difference problems using information presented in a line graph.</li> <li>• Complete, read and interpret information in tables including timetables.</li> </ul>	<ul style="list-style-type: none"> <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> <li>• Identify: angles at a point and one whole turn (total 360°), angles at a point on a straight line and <math>\frac{1}{2}</math> a turn (total 180°) other multiples of 90°</li> <li>• Geometry- position and direction</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> <li>• Identify 3D shapes, including cubes and other cuboids, from 2D representations.</li> <li>• Use the properties of rectangles to deduce related facts and find missing lengths and angles.</li> <li>• Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.</li> </ul>	<ul style="list-style-type: none"> <li>• Convert between different units of metric measure (for example, km and m; cm and m; cm and mm; g and kg; l and ml)</li> <li>• Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints.</li> <li>• Solve problems involving converting between units of time.</li> <li>• Measure and calculate the perimeter of composite rectilinear shapes in cm and m.</li> <li>• Calculate and compare the area of rectangles (including squares), and including using standard units, cm<sup>2</sup>, m<sup>2</sup> estimate the area of irregular shapes.</li> <li>• Estimate volume [for example using 1cm<sup>3</sup> blocks to build cuboids (including cubes)] and capacity [for example, using water]</li> <li>•</li> </ul>

Terms 1 and 2

Terms 3 and 4

Terms 5 and 6