

## Year 5

Topic Area	Autumn	Spring	Summer
Number and place value	<ul style="list-style-type: none"> <li>To read and write numbers up to 1 000 000.</li> <li>To determine the place value of digits up to 1 000 000.</li> <li>To order and compare numbers up to 1 000 000.</li> <li>To round any number up to 1 000 000 to the nearest 10, 100, 1 000, 10 000 and 100 000.</li> <li>To count forwards and backwards in steps of 10 for any given number up to 1 000 000.</li> <li>To identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.</li> <li>To read Roman numerals to 1000 (M) and recognise years written in Roman numerals.</li> <li>To know and use the vocabulary of prime numbers, prime factors and composite (non-prime numbers).</li> <li>To establish where a number up to 100 is prime and recall prime numbers up to 19.</li> <li>To count forwards and backwards in steps of powers of 10 for any given number up to 1 000 000.</li> </ul>	<ul style="list-style-type: none"> <li>To count forwards and backwards in steps of powers of 10 for any given number up to 1 000 000.</li> <li>To identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.</li> <li>To know and use the vocabulary of prime numbers, prime factors and composite (non-prime numbers).</li> <li>To establish where a number up to 100 is prime and recall prime numbers up to 19.</li> <li>Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000.</li> <li>To interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero.</li> <li>To round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000</li> </ul>	<ul style="list-style-type: none"> <li>To recognise the place value of each digit up to 1 000 000.</li> <li>To compare and order numbers from 0 up to 1 000 000 and use <math>&lt;</math>, <math>&gt;</math> and <math>=</math> signs.</li> <li></li> </ul>
Addition and Subtraction	<ul style="list-style-type: none"> <li>To add and subtract numbers mentally with increasingly large numbers</li> <li>To add whole numbers with more than 4 digits including decimals. (written methods).</li> <li>To subtract whole numbers with more than 4 digits, including decimals. (written methods).</li> </ul>	<ul style="list-style-type: none"> <li>To add and subtract whole numbers with more than 4 digits, including formal written methods (columnar addition and subtraction).</li> <li>To solve addition and subtraction multi-step problems in contexts deciding which operation to use and why.</li> </ul>	<ul style="list-style-type: none"> <li>To interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero.</li> <li>To estimate, compare and calculate different measures.</li> </ul>

<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Multiplication and division</p>	<ul style="list-style-type: none"> <li>To multiply and divide number whole numbers and those involving decimals by 10, 100 and 1000.</li> </ul>	<ul style="list-style-type: none"> <li>To multiply numbers up to 4 digits by a one-digit or two-digit number using a formal written method, including long multiplication for two-digit numbers.</li> <li>To divide numbers up to 4 digits by a one digit number using the formal written method of short division and interpret remainders appropriately for context.</li> <li>To use all four operations to solve problems involving money using decimal notation, including scaling.</li> </ul>	<ul style="list-style-type: none"> <li>To multiply and divide numbers mentally drawing upon known facts.</li> <li>To solve problems involving multiplication using their knowledge of factors and multiples, squares and cubes.</li> <li>To use factors and multiples.</li> <li>To solve problems involving multiplication using their knowledge of factors and multiples, squares and cubes.</li> <li>To multiply and divide numbers mentally drawing upon known facts.</li> </ul>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Fractions including decimals</p>	<ul style="list-style-type: none"> <li>To read, write and order decimals with up to 3 places.</li> <li>To recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents.</li> <li>To solve problems involving number up to three decimal places.</li> </ul>	<ul style="list-style-type: none"> <li>To round decimals with two decimal places to the nearest whole number and to one decimal place.</li> <li>To read and write decimal numbers as fractions.</li> <li>To recognise the per-cent symbol (%) and understand that per cent relates to the 'number of parts per hundred', and write percentages as a fraction with the denominator as 100 and as a decimal.</li> <li>To solve problems which require knowing percentage and decimal equivalents of <math>\frac{1}{2}</math>, <math>\frac{1}{5}</math>, <math>\frac{2}{5}</math>, <math>\frac{4}{5}</math> and those fractions with a denominator of a multiple of 10 or 25.</li> </ul>	<ul style="list-style-type: none"> <li>To identify, name and write equivalent fractions of a given fraction, represented visually using tenths and hundredths.</li> <li>To compare and order fractions whose denominators are all multiples of the same number.</li> <li>To add and subtract fractions with the same denominator and denominators that are multiples of the same number.</li> <li>To recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements.</li> <li>To multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.</li> </ul>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Measurement</p>	<ul style="list-style-type: none"> <li>Solve problems involving converting between units of time</li> <li>To read and interpret timetables.</li> <li>Problem solving activities for the last week before half term involving aspects studies this term or anything else you feel is of an appropriate level for your class.</li> <li>To use all four operations to solve problems involving measure.</li> <li>To measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres.</li> <li>To measure and calculate the area of composite shapes.</li> </ul>	<ul style="list-style-type: none"> <li>To convert between different units of measure: gram and kilogram.</li> <li>To use all four operations to solve problems involving measure.</li> <li>To solve number and practical problems that involve place value, ordering and comparing numbers to at least 1 000 000.</li> </ul>	<ul style="list-style-type: none"> <li>To estimate volume and capacity.</li> <li>To convert between metric measures of volume (litre and millilitre).</li> <li>To solve problems involving capacity and volume.</li> <li>To 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>To 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>To understand and use approximate equivalences between metric units and common imperial units such</li> </ul>

	<ul style="list-style-type: none"> <li>• To use the properties of rectangles to deduce related facts and find missing lengths and angles.</li> <li>• To use all four operations to solve problems involving measure.</li> <li>• To calculate and compare the area of rectangles (including squares), and including standard units, square centimetres and square metres (m) and estimate the area of irregular shapes.</li> </ul>		<p>as inches, pounds and pints.</p>
<p>Geometry: properties of shapes and position and direction</p>	<ul style="list-style-type: none"> <li>• To distinguish between regular and irregular polygons based on reasoning about equal sides and angles.</li> </ul>	<ul style="list-style-type: none"> <li>• To know that angles are measured in degrees: estimate and compare acute, obtuse and reflex angles.</li> <li>• To identify, describe and represent the position of a shape following a reflection.</li> <li>• To rotate a 2D shape 90 degrees given the centre of rotation.</li> </ul>	<ul style="list-style-type: none"> <li>• To use the properties of rectangles to deduce related facts and find missing lengths and angles.</li> <li>• To identify, describe and represent the position of a shape following a reflection.</li> <li>• To identify, describe and represent the position of a shape following a reflection or translation, using appropriate language, and know that the shape has not changed.</li> </ul>

## Statistics

- To interpret and present data using appropriate graphical methods, including bar charts.
- To solve comparison, sum and difference problems using information presented in a line graph.

- To compare, read and interpret information in tables.

To solve comparison, sum and difference problems using information presented in a line graph.