

Year 6 Key Learning Objectives- Key: Assessed objectives/ additional (non-statutory). Key Learning Focus * recall facts		
Number-Place Value	Number- Addition and Subtraction	Number- Multiplication and Division
<ul style="list-style-type: none"> <li>Count forwards or backwards in steps of integers, decimals, powers of 10</li> <li><b>Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit</b></li> <li><b>Identify the value of each digit to three decimal places</b></li> <li>Identify, represent and estimate numbers using the number line</li> <li>Order and compare numbers including integers, decimals and negative numbers</li> <li>Find 0.001, 0.01, 0.1, 1, 10 and powers of 10 more/less than a given number</li> <li><b>Round any whole number to a required degree of accuracy</b></li> <li>Round decimals with three decimal places to the nearest whole number or one or two decimal places</li> <li><b>Multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places</b></li> <li><b>Use negative numbers in context, and calculate intervals across zero</b></li> <li>Describe and extend number sequences including those with multiplication and division steps, inconsistent steps, alternating steps and those where the step size is a decimal</li> </ul> <p><b>Solve number and practical problems that involve all of the above</b></p>	<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 in the calculation</li> <li>Recall and use addition and subtraction facts for 1 (with decimals to two decimal places)</li> <li><b>Perform mental calculations including with mixed operations and large numbers and decimals</b></li> <li><b>Add and subtract whole numbers and decimals using formal written methods (columnar addition and subtraction)</b></li> <li>Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy</li> <li>Use knowledge of the order of operations to carry out calculations</li> <li>Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why</li> </ul> <p><b>Solve problems involving all four operations, including those with missing numbers</b></p>	<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><b>Identify common factors, common multiples and prime numbers*</b></li> <li>Use partitioning to double or halve any number*</li> <li>Prime/ composite/square and prime numbers*</li> <li><b>Perform mental calculations, including with mixed operations and large numbers</b></li> <li><b>Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication</b></li> <li><b>Multiply one-digit numbers with up to two decimal places by whole numbers</b></li> <li><b>Divide numbers up to 4 digits by a two-digit whole number using the formal written methods of short or long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context</b></li> <li>Use written division methods in cases where the answer has up to two decimal places</li> <li>Use estimation and inverse to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy</li> <li>Use knowledge of the order of operations to carry out calculations</li> </ul> <p><b>Solve problems involving all four operations, including those with missing numbers</b></p>
Number- Fractions, Decimals and Percentages	Geometry- Properties of Shapes	Measurement
<ul style="list-style-type: none"> <li><b>Compare and order fractions, including fractions &gt; 1 (including on a number line)</b></li> <li><b>Use common factors to simplify fractions; use common multiples to express fractions in the same denomination</b></li> <li><b>Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts *</b></li> <li><b>Associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375 and <math>\frac{3}{8}</math>)</b></li> </ul>	<ul style="list-style-type: none"> <li><b>Compare/classify geometric shapes based on the properties and sizes</b></li> <li><b>Draw 2-D shapes using given dimensions and angles</b></li> <li><b>Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius</b></li> <li><b>Recognise, describe and build simple 3-D shapes, making nets</b></li> <li><b>Recognise angles where they meet at a point, are on a straight</b></li> </ul>	<ul style="list-style-type: none"> <li><b>Use, read and write standard units of length, mass, volume and time using decimal notation to three decimal places</b></li> <li><b>Convert between standard units of length, mass, volume and time using decimal notation to three decimal places*</b></li> <li><b>Convert between miles and kilometres</b></li> <li><b>Recognise that shapes with the same areas can have different perimeters and vice versa</b></li> <li><b>Calculate the area of parallelograms and triangles</b></li> </ul>

<ul style="list-style-type: none"> <li>• Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions</li> <li>• Multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. <math>\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}</math>)</li> <li>• Divide proper fractions by whole numbers (e.g. <math>\frac{1}{3} \div 2 = \frac{1}{6}</math>)</li> <li>• Find simple percentages of amounts</li> <li>• Solve problems involving fractions</li> <li>• Solve problems which require answers to be rounded to specified degrees of accuracy</li> </ul> <p>Solve problems involving the calculation of percentages (e.g. of measures and such as 15% of 260) and the use of percentages for comparison</p>	<ul style="list-style-type: none"> <li>• line, or are vertically opposite, and find missing angles</li> </ul> <p>Find unknown angles in triangles, quadrilaterals,</p> <p><b>Geometry- Position and Direction</b></p> <ul style="list-style-type: none"> <li>• Describe positions on the full coordinate grid (all four quadrants)</li> <li>• Draw and translate simple shapes on the coordinate plane, and reflect them in the axes</li> </ul> <p><b>Statistics</b></p> <ul style="list-style-type: none"> <li>• Continue to complete and interpret information in a variety of sorting diagrams (including sorting properties of numbers and shapes)</li> <li>• Interpret and construct pie charts and line graphs and use these to solve problems</li> <li>• Solve comparison, sum and difference problems using information presented in all types of graph</li> <li>• Calculate and interpret the mean as an average</li> </ul> <p><b>Algebra</b></p> <ul style="list-style-type: none"> <li>• Use simple formulae</li> <li>• Generate and describe linear number sequences</li> <li>• Express missing number problems algebraically</li> <li>• Find pairs of numbers that satisfy an equation with two unknowns</li> <li>• Enumerate possibilities of combinations of two variables</li> </ul>	<ul style="list-style-type: none"> <li>• Recognise when it is possible to use formulae for area and volume of shapes</li> <li>• Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm<sup>3</sup>) and cubic metres (m<sup>3</sup>), and extending to other units (e.g. mm<sup>3</sup> and km<sup>3</sup>)</li> <li>• Time intervals using digital and analogue clock *</li> <li>• Calculate differences in temperature, including those that involved a positive and negative temperature</li> </ul> <p>Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate</p>
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Year6- Key Learning		
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<ul style="list-style-type: none"> <li>• <b>Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit</b></li> <li>• <b>Identify the value of each digit to three decimal places</b></li> <li>• <i>Order and compare numbers including integers, decimals and negative numbers</i></li> <li>• <b>Round any whole number to a required degree of accuracy</b></li> <li>• <b>Multiply and divide numbers by 10, 100 and 1000</b></li> <li>• <b>Use negative numbers in context, and calculate intervals across zero</b></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method)</i></li> <li>• <b>Add and subtract whole numbers and decimals using formal written methods (columnar addition and subtraction)</b></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method)</i></li> <li>• <b>Identify common factors, common multiples and prime numbers</b></li> <li>• <i>Use partitioning to double or halve any number *</i></li> <li>• <b>Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication</b></li> <li>• <b>Divide numbers up to 4 digits by a two-digit whole number</b></li> <li>• <b>Use knowledge of the order of operations to carry out calculations</b></li> <li>• <i>Prime/ composite/square and prime numbers *</i></li> </ul>
Number- Fractions		Measures
<ul style="list-style-type: none"> <li>• <b>Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts*</b></li> <li>• <b>Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions</b></li> <li>• <b>Multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. <math>\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}</math>)</b></li> <li>• <i>Find simple percentages of amounts</i></li> </ul>		<ul style="list-style-type: none"> <li>• <b>Time intervals using digital and analogue clock *</b></li> <li>• <b>Use, read and write standard units of length, mass, volume and time using decimal notation to three decimal places</b></li> <li>• <b>Convert between standard units of length, mass, volume and time using decimal notation to three decimal places*</b></li> <li>• </li> </ul>