

## Year 6 Mathematics Medium Term Plan – Autumn Term

	Weekly focus	Outcomes to achieve
Week 1	Mental Strategies  Settling in period	<ul style="list-style-type: none"> <li>• Most suitable method to solve a calculation</li> <li>• Assessment of current cohort</li> </ul>
Week 2	Place value including decimals	<ul style="list-style-type: none"> <li>• Identify, represent and estimate numbers using the number line.</li> <li>• Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit.</li> <li>• Round any whole number to a required degree of accuracy.</li> <li>• Use negative numbers in context, and calculate intervals across zero.</li> <li>• Count forwards or backwards in steps of integers, decimals or powers of 10 for any number.</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 or less than a given number.</li> <li>• Recall and use addition and subtraction facts for 1 (with decimal numbers to two decimal places).</li> <li>• Round decimals with three places to the nearest whole number or one or two decimal places.</li> <li>• Identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving - answers up to three decimal places.</li> <li>• Solve number and practical problems that involve all of the above.</li> </ul>
Week 3	Mental and written addition	<ul style="list-style-type: none"> <li>• Perform mental calculations, including with mixed operations and large numbers and decimals.</li> <li>• Identify, represent and estimate numbers using the number line.</li> <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>• Solve addition multi-step problems in contexts, deciding which operations and methods to use and why.</li> <li>• Solve problems involving addition.</li> <li>• Express missing number problems algebraically.</li> <li>• Find pairs of numbers that satisfy an equation with two unknowns.</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>• Add whole numbers and decimals using formal written methods (columnar addition).</li> <li>• Solve problems which require answers to be rounded to specified degrees of accuracy.</li> </ul>

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Week 4	Mental and written multiplication in the context of time	<ul style="list-style-type: none"> <li>• Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication.</li> <li>• Multiply one-digit numbers with up to two decimal places by whole numbers.</li> <li>• Perform mental calculations, including with mixed operations and large numbers and decimals.</li> <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>• Solve problems involving addition, subtraction, multiplication and division.</li> <li>• Express missing number problems algebraically.</li> <li>• Find pairs of numbers that satisfy an equation with two unknowns.</li> <li>• Use, read, write and convert between standard units, converting measurements of time from a smaller unit to a larger unit, and vice versa.</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>• Solve problems which require answers to be rounded to specified degrees of accuracy.</li> </ul>
Week 5	2D and 3D shape	<ul style="list-style-type: none"> <li>• Draw 2-D shapes using given dimensions and angles.</li> <li>• Recognise, describe and build simple 3-D shapes, including making nets.</li> <li>• Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons.</li> <li>• Continue to complete and interpret information in a variety of sorting diagrams (including those used to sort properties of numbers and shapes).</li> </ul>
Week 6	PGL WEEK	
Week 7	<p style="text-align: center;"><u>Maths Week Activities</u></p> <ul style="list-style-type: none"> <li>• Happy Puzzle Company</li> <li>• Practical problem solving</li> <li>• Group maths investigations</li> </ul>	

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Week 8	Mental and written subtraction	<ul style="list-style-type: none"> <li>• Perform mental calculations, including with mixed operations and large numbers and decimals.</li> <li>• Identify, represent and estimate numbers using the number line.</li> <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>• Solve subtraction multi-step problems in contexts, deciding which operations and methods to use and why.</li> <li>• Solve problems involving subtraction.</li> <li>• Express missing number problems algebraically.</li> <li>• Find pairs of numbers that satisfy an equation with two unknowns.</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>• Subtract whole numbers and decimals using formal written methods (columnar subtraction).</li> <li>• Solve problems which require answers to be rounded to specified degrees of accuracy.</li> </ul>
MID-TERM BREAK		
Week 10	Mental and written division	<ul style="list-style-type: none"> <li>• Perform mental calculations, including with mixed operations and large numbers and decimals.</li> <li>• Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context.</li> <li>• Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context.</li> <li>• Use written division methods in cases where the answer has up to two decimal places.</li> </ul>

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		<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>• Solve problems involving division.</li> <li>• Solve problems which require answers to be rounded to specified degrees of accuracy.</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> </ul>
week 11	Fractions	<ul style="list-style-type: none"> <li>• Identify common factors, common multiples and prime numbers.</li> <li>• Compare and order fractions, including fractions <math>&gt;1</math> (including on a number line).</li> <li>• Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions.</li> <li>• Associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. <math>\frac{3}{8}</math>).</li> <li>• Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.</li> <li>• Solve problems involving fractions.</li> </ul>
Week 12	Fractions, percentages, ratio and proportion	<ul style="list-style-type: none"> <li>• Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.</li> <li>• Find simple percentages of amounts.</li> <li>• Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts.</li> <li>• Solve problems involving the calculation of percentages (for example, of measures, and such as 15% of 360) and the use of percentages for comparison.</li> <li>• Solve problems involving similar shapes where the scale factor is known or can be found.</li> <li>• Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.</li> </ul>
Week 13	Geometry – angles Statistics – pie charts	<ul style="list-style-type: none"> <li>• Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.</li> <li>• Interpret and construct pie charts and line graphs and use these to solve problems.</li> </ul>

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		<ul style="list-style-type: none"> <li>• Solve comparison, sum and difference problems using information presented in all types of graph.</li> </ul>
Week 14 28 <sup>th</sup> Nov	Measurement – length, including perimeter and mass	<ul style="list-style-type: none"> <li>• Solve problems involving the calculation and conversion of units of measure (including money and time), using decimal notation up to three decimal places where appropriate.</li> <li>• Use, read, write and convert between standard units, converting measurements of length and mass, from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places.</li> <li>• Convert between miles and kilometres.</li> </ul>
Week 15 5 <sup>th</sup> Dec	Measurement – area and volume	<ul style="list-style-type: none"> <li>• Recognise that shapes with the same areas can have different perimeters and vice versa.</li> <li>• Calculate the area of parallelograms and triangles.</li> <li>• Use, read and write standard units using decimal notation to up to three decimal places.</li> <li>• Recognise when it is possible to use the formulae for area and volume of shapes.</li> <li>• Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (<math>\text{cm}^3</math>) and cubic metres (<math>\text{m}^3</math>) and extending to other units (for example, <math>\text{mm}^3</math> and <math>\text{km}^3</math>).</li> </ul>
Week 16 12 <sup>th</sup> Dec	Assessment Week	
Week 17 19 <sup>th</sup> Dec	Christmas Maths Problem Solving	