



# Maths – Year 6



<u>Honesty</u>		<u>Love</u>	<u>Forgiveness</u>	<u>Respect</u>	<u>Cultural Capital Opportunities</u>		
					Cake sales / managing a budget Fundraising for end of year budget Creating data forms using information from P.E lessons (bleep test) Using maths in DT / Art		
<u>A Love Of Language</u>		<u>Aspirations</u>	<u>Bringing Learning To Life</u>	<u>Emotional Well-Being</u>	<u>Resilience</u>	<u>Valuing Our Diversity</u>	<u>Respect and Responsibility</u>
<u>Reading:</u>  <u>Listening:</u>  <u>Speaking:</u>  <u>Writing:</u>		Which jobs could this concept be applied to?  Which areas of maths do we need for jobs which we would like to have?	Ratio – cooking Pie charts – using data from P.E Using real life context in learning Money Timetables – transition for high school		Knowing that not every concept will be learned quickly or easily  To attempt a problem through more than one strategy will help to understand the problem.	Everyone has a different skill / interest in different areas of maths.	In order to gain success in life we need to have simple maths skills.  To be responsible for money and information which is shared.
What will they learn?			In what order?				
Key Concepts	Key Skills	Autumn	Spring	Summer	End points		

<p>To know and use numbers</p> <p>To add and subtract</p> <p>To multiply and divide</p> <p>To use fractions</p> <p>To understand the properties of shape</p> <p>To describe position, direction and movement</p> <p>To use measures</p> <p>To use statistics</p> <p>To use algebra</p>	<p><b>To know and use numbers :</b></p> <p><b>Daily diet of :</b></p> <p><b>Representing</b></p> <p><b>Comparing</b></p> <p><b>Place value</b></p> <p><b>Solving problems</b></p> <p><b>Complexity</b></p> <p><b>Methods</b></p> <p><b>Checking</b></p> <p><b>Using number facts</b></p>	<ul style="list-style-type: none"> <li>• to use basic multiplication facts for applying to all KS2 plus 15x, 20x, 25x, 75x tables</li> <li>• Identify common factors, common multiples and prime numbers</li> <li>• To multiply using 0.1, 0.10 0.100 of amounts.</li> <li>• Find 0.001, 0.01, 0.1, 1, 10 and powers of 10 more and less than a given number.</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>• Round any whole number to a required degree of accuracy</li> <li>• Identify the value of each digit to three decimal places</li> <li>• Find pairs of numbers that satisfy number</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Revision of previous plus</a></li> <li>• Find pairs of numbers that satisfy number sentences involving two unknowns.</li> <li>• Enumerate all possibilities of combinations of two variables</li> <li>• Identify common factors, common multiples and prime numbers</li> <li>• Use negative numbers in context, and calculate intervals across zero.</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Revision of previous plus</a></li> <li>• Solve number problems and practical problems that involve all elements of place value</li> </ul>	
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		<p>sentences involving two unknowns.</p> <ul style="list-style-type: none"> <li>Enumerate all possibilities of combinations of two variables</li> </ul>			
	<b>Multiplication and division</b>	<ul style="list-style-type: none"> <li>Revise identify and use vocabulary multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.</li> <li>multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000</li> <li>solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign</li> </ul>	<ul style="list-style-type: none"> <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>multiply and divide numbers mentally drawing upon known facts</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> </ul>	<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>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> </ul>	

			<ul style="list-style-type: none"> <li>recognise and use square numbers and cube numbers, and the notation for squared (<sup>2</sup>) and cubed (<sup>3</sup>)</li> </ul>		
	<b>To add and subtract</b>	<ul style="list-style-type: none"> <li>Revise calculation policy which has been completed in Year 5</li> </ul>	<ul style="list-style-type: none"> <li>Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)</li> <li>Add and subtract numbers mentally with increasingly large numbers</li> </ul>	<ul style="list-style-type: none"> <li>Solve addition and subtraction multi step problems in contexts, deciding which operations and methods to use and why.</li> <li>Use their knowledge of the order of operations to carry out calculations involving the four operations.</li> <li>Solve problems involving addition, subtraction, multiplication and division.</li> </ul>	<u>Summer:</u>

	<p><b>To use fractions</b></p>	<ul style="list-style-type: none"> <li>• Find simple percentages of amounts</li> <li>• Use common factors to simplify fractions;</li> <li>• Use common multiples to express fractions in the same denomination compare and order fractions, including fractions &gt;1</li> <li>• Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions</li> </ul>	<ul style="list-style-type: none"> <li>• Associate a fraction with division to calculate decimal equivalents (e.g. 0.375) for a simple fraction (e.g. 3/8)</li> <li>• Solve problems which require answers to be rounded to specified degrees of accuracy recall and use equivalences between simple fractions, decimals and percentages, including in different contexts</li> <li>• Divide proper fractions by whole numbers (e.g. <math>1/3 \div 2 = 1/6</math>).</li> <li>• Use common factors to simplify fractions;</li> </ul>	<ul style="list-style-type: none"> <li>• Solve problems involving the calculation of percentages and the use of percentages for comparison.</li> <li>• Solve problems which require answers to be rounded to specified degrees of accuracy recall and use equivalences between simple fractions, decimals and percentages, including in different contexts</li> <li>•</li> </ul>	
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			<ul style="list-style-type: none"> <li>• Use common multiples to express fractions in the same denomination compare and order fractions, including fractions <math>&gt;1</math></li> </ul>		
	<b>To describe position, direction and movement</b>		<ul style="list-style-type: none"> <li>• Draw and translate simple shapes on the co-ordinate plane, and reflect them in the axes</li> </ul>		
	<b>To use measures</b>	<ul style="list-style-type: none"> <li>• Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate.</li> <li>• Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger</li> </ul>	<ul style="list-style-type: none"> <li>• Convert between miles and kilometres</li> <li>• Recognise that shapes with the same areas can have different perimeters and vice versa.</li> <li>• Recognise when it is possible to use formulae for area and volume of shapes.</li> <li>• Calculate the area of parallelograms and triangles.</li> </ul>	<ul style="list-style-type: none"> <li>• Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate.</li> <li>• Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller</li> </ul>	

		<p>unit, and vice versa, using decimal notation to up to 3dp.</p> <ul style="list-style-type: none"> <li>• Calculate, estimate and compare volume of cubes and cuboids using standard units, including cm<sup>3</sup>, m<sup>3</sup> and extending to other units (mm<sup>3</sup>, km<sup>3</sup>)</li> </ul>	<ul style="list-style-type: none"> <li>• Complete, read and interpret information in tables, including timetables.</li> </ul>	<p>unit of measure to a larger unit, and vice versa, using decimal notation to up to 3dp.</p>	
	<b>To use algebra</b>	<ul style="list-style-type: none"> <li>• Find pairs of numbers that satisfy number sentences involving two unknowns.</li> </ul>	<ul style="list-style-type: none"> <li>• Solve problems involving the relative sizes of two quantities, where missing values can be found using integer multiplication and division facts.</li> </ul>	<ul style="list-style-type: none"> <li>• Express missing number problems algebraically</li> <li>• Use simple formulae expressed in words generate and describe linear number sequences</li> </ul>	
	<b>To use statistics</b>	<ul style="list-style-type: none"> <li>• Calculate and interpret the mean as an average</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Interpret and construct pie charts and line graphs and use these to solve problems.</li> </ul>	<ul style="list-style-type: none"> <li>• Solve comparison, sum and difference problems using information presented in line graphs</li> </ul>	

	<p>To understand the properties of shape</p>	<ul style="list-style-type: none"> <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>• Draw 2-D shapes using given dimensions and angles.</li> <li>• Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.</li> </ul>	<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>• 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>	<ul style="list-style-type: none"> <li>• Solve problems involving similar shapes where the scale factor is known or can be found.</li> <li>• Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius.</li> </ul>	
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