

## Year 6 Maths Overview 2018-2019



<b>HT1</b> <b>8 weeks</b>	<b>HT2</b> <b>7 weeks</b>	<b>HT3</b> <b>6 weeks</b>	<b>HT4</b> <b>5 weeks</b>	<b>HT5</b> <b>6 weeks</b>	<b>HT6</b> <b>7 weeks</b>
Place value (3 weeks)  Addition, Subtraction, Multiplication & Division – formal written methods and word problems (4 weeks)  Addition, Subtraction, Multiplication & Division – factors, multiples, prime numbers, square and cube numbers (1 week)	Properties of Shapes – 2D, 3D. area and perimeter (3 week)  Properties of Shapes – angles. (1 week)  Fractions (Including decimals & %) (3 weeks)	Measurement (2 weeks)  Statistics (1 week)  Position and directions (1 weeks)  Ratio and Proportion (1 week)  Algebra (1 week)	Go through each area of maths and re-cap using example past papers	Go through each area of maths and re-cap using example past papers	White Rose problem solving  Dragon's Den  Financial Capability

Place value	Addition, Subtraction, Multiplication & Division	Properties of Shapes	Measurement	Fractions (Including decimals & %)	Ratio and Proportion
<ul style="list-style-type: none"> <li>❖ Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit.</li> <li>❖ <b>Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000.</b></li> <li>❖ <u>Round any whole number to a required degree of accuracy. Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000.</u></li> <li>❖ <u>Use negative numbers in context and calculate across zero.</u></li> <li>❖ Solve number and practical problems that involve all of the above.</li> <li>❖ <b>Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.</b></li> </ul>	<ul style="list-style-type: none"> <li>❖ <b>Add and subtract whole numbers with more than 4 digits.</b></li> <li>❖ <b>Add and subtract whole numbers with more than 4 digits including using formal written methods.</b></li> <li>❖ <u>Multiply multi-digit numbers up to 4 digits by a two-digit number.</u></li> <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>❖ <b><u>Divide numbers up to 4 digits by a two-digit number and interpret remainders as whole number remainders, fractions, or by rounding as appropriate for the context.</u></b></li> <li>❖ Divide numbers up</li> </ul>	<ul style="list-style-type: none"> <li>❖ <b>Identify</b> and draw 2-D shapes using given dimensions and angles.</li> <li>❖ <b>Identify</b>, recognise, describe and h simple 3-D shapes including making nets.</li> <li>❖ <u>Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals and regular polygons.</u></li> <li>❖ Illustrate and name parts of a circle, including radius, diameter and circumferences and know that the diameter is twice the radius.</li> <li>❖ Recognise angles where they meet at a point, are on a straight line, or are vertically opposite and find missing</li> </ul>	<ul style="list-style-type: none"> <li>❖ Solve problems involving calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate.</li> <li>❖ <u>Use, read, write and convert between standard units, (km-m,cm-m,cm-mm,g-kg,l-ml) converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places.</u></li> <li>❖ <b>Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints and miles to kilometres.</b></li> </ul>	<ul style="list-style-type: none"> <li>❖ Use common factors to simplify fractions; use common multiples to express fractions in the same denominator.</li> <li>❖ Compare and order fractions, including fractions &gt;1 <b>and fractions whose denominator are all multiples of the same number.</b></li> <li>❖ <b>Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths.</b></li> <li>❖ <b>Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements .1 as a mixed number.</b></li> <li>❖ Add and subtract fractions with different denominators and</li> </ul>	<ul style="list-style-type: none"> <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>❖ <u>Solve problems involving the calculation of percentages and the use of percentages for comparison.</u></li> <li>❖ Solve problems involving similar shapes where the scale factor is known or can be found.</li> <li>❖ <u>Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples</u></li> </ul> <p style="text-align: center;">Algebra (1 week)</p> <ul style="list-style-type: none"> <li>❖ <u>Use simple formulae.</u></li> <li>❖ Generate and describe linear</li> </ul>

	<p>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.</p> <ul style="list-style-type: none"> <li>❖ Perform mental calculations, including with mixed operations and large numbers and all 4 operations.</li> <li>❖ Identify common factors, common multiples and prime numbers. Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers.</li> <li>❖ Use their knowledge of the order of operations to carry out calculations involving four operations.</li> <li>❖ <u>Solve addition and subtraction multi-step problems in contexts, deciding</u></li> </ul>	<p>angles.</p> <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, angles at a point on a straight line and <math>\frac{1}{2}</math> turn, other multiples of 90.</li> <li>❖ Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.</li> </ul> <p>Position and directions (1 week)</p> <ul style="list-style-type: none"> <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>❖ <u>Describe positions on the full</u></li> </ul>	<ul style="list-style-type: none"> <li>❖ <u>Solve problems involving converting between units of time.</u></li> <li>❖ Use all four operations to solve problems involving measure [for example length, mass, volume, money] using decimal notation including scaling.</li> <li>❖ Measure and calculate the perimeter of composite rectilinear shapes in cm and m.</li> <li>❖ Estimate the area of irregular shapes.</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 squares, parallelograms and triangles.</li> <li>❖ Calculate, estimate</li> </ul>	<p>mixed numbers, using the concept of equivalent fractions.</p> <ul style="list-style-type: none"> <li>❖ Multiply simple pairs of proper fractions, writing the answer in its simplest form [for example <math>\frac{1}{3} \times \frac{1}{2} = \frac{1}{6}</math>]</li> <li>❖ Associate a fraction with division and calculate decimal fraction equivalents for a simple fraction.</li> <li>❖ Identify the value of each digit in numbers given to three decimal place and multiply and divide numbers by 10, 100, 1000 giving answers up to three decimal places.</li> <li>❖ Multiply one-digit numbers with up to two decimal places by whole numbers.</li> <li>❖ <u>Use written division methods in cases where the answer has up to two decimal places.</u></li> <li>❖ <u>Solve problems which require answers to be rounded to specified degrees of accuracy.</u></li> <li>❖ <u>Recall and use</u></li> </ul>	<p>number sequences.</p> <ul style="list-style-type: none"> <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> <p style="text-align: center;">❖</p>
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	<p><u>which operations and methods to use and why.</u></p> <ul style="list-style-type: none"> <li>❖ Solve problems involving addition, subtraction, multiplication and division and a combination of these including the meaning of the equals sign</li> <li>❖ Recognise and use square numbers and cube numbers and the notation for squared and cubed.</li> <li>❖ Solve problems involving multiplication and division including using their knowledge of factors, multiples, squares and cubes.</li> <li>❖ Solve problems involving multiplication and division including scaling by simple fraction and problems involving simple rates.</li> <li>❖ <u>Use estimation to check answers and determine in the context of a problem</u></li> </ul>	<p><u>coordinate grid (all four quadrants)</u></p> <ul style="list-style-type: none"> <li>❖ Draw and translate simple shapes on the coordinate plane and reflect them in the axes.</li> </ul> <p>Statistics (1 week)</p> <ul style="list-style-type: none"> <li>❖ <u>Interpret pie charts and line graphs and use these to solve comparison, sum and difference problems.</u></li> <li>❖ Construct pie charts and line graphs</li> <li>❖ <u>Calculate and interpret the mean as an average</u> Complete, read and interpret information in tables including time tables.</li> </ul>	<p>and compare volumes 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</p>	<p><u>equivalences between simple fractions, decimals and percentages including different contexts.</u></p>	
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	<u>an appropriate degree of accuracy</u>				
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