

## Maths Planning Overview – Year 6

Term 1	Term 2	Term 3
<p><b>Number and place value</b></p> <ul style="list-style-type: none"> <li>● <u>read, write, order and compare numbers up to 10 000 000 and determine the value of each digit</u></li> <li>● <u>round any whole number to a required degree of accuracy</u></li> <li>● <u>solve number and practical problems that involve all of the above</u></li> </ul> <p><b>Fractions (including decimals and percentages)</b></p> <ul style="list-style-type: none"> <li>● <u>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</u></li> </ul> <p><b>Measurement</b></p> <ul style="list-style-type: none"> <li>● <u>use, read, write and convert between standard units, converting measurements of length, mass 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>● <u>convert between miles and kilometres.</u></li> </ul> <p><b>Addition, subtraction, multiplication and division</b></p> <ul style="list-style-type: none"> <li>● <u>perform mental calculations, including with mixed operations and large numbers</u></li> <li>● <u>use their knowledge of the order of operations to carry out calculations involving the four operations</u></li> <li>● <u>solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why</u></li> <li>● <u>solve problems involving addition, subtraction</u></li> <li>● <u>use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy</u></li> </ul> <p><b>Fractions (including decimals and percentages)</b></p> <ul style="list-style-type: none"> <li>● <u>solve problems which require answers to be rounded to specified degrees of accuracy</u></li> </ul> <p><b>Algebra</b></p> <ul style="list-style-type: none"> <li>● <u>use simple formulae</u></li> <li>● <u>generate and describe linear number sequences</u></li> <li>● <u>express missing number problems algebraically</u></li> <li>● <u>find pairs of numbers that satisfy an equation with two unknowns</u></li> <li>● <u>enumerate possibilities of combinations of two variables</u></li> </ul> <p><b>Measurement</b></p>	<p><b>Fractions (including decimals and percentages)</b></p> <ul style="list-style-type: none"> <li>● <u>use common factors to simplify fractions; use common multiples to express fractions in the same denomination</u></li> <li>● <u>compare and order fractions, including fractions <math>&gt;1</math></u></li> <li>● <u>associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, <math>\frac{3}{8}</math>]</u></li> <li>● <u>recall and use equivalences between simple fractions, decimals and percentages, including in different contexts</u></li> <li>● <u>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</u></li> </ul> <p><b>Algebra</b></p> <ul style="list-style-type: none"> <li>● <u>use simple formulae</u></li> <li>● <u>generate and describe linear number sequences</u></li> <li>● <u>express missing number problems algebraically</u></li> <li>● <u>find pairs of numbers that satisfy an equation with two unknowns</u></li> </ul> <p><b>Measurement</b></p> <ul style="list-style-type: none"> <li>● <u>solve problems involving the calculation and conversion of units of measure, using decimal notation to three decimal places where appropriate</u></li> <li>● <u>use, read, write and convert between standard units, converting measurements of length, mass and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to three decimal places</u></li> </ul> <p><b>Statistics</b></p> <ul style="list-style-type: none"> <li>● <u>interpret and construct pie charts and line graphs and use these to solve problems.</u></li> </ul> <p><b>Addition, subtraction, multiplication and division</b></p> <ul style="list-style-type: none"> <li>● <u>multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication</u></li> <li>● <u>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</u></li> </ul>	<p><b>Addition, subtraction, multiplication and division</b></p> <ul style="list-style-type: none"> <li>● <i>perform mental calculations, including with mixed operations and large numbers</i></li> <li>● <i>use their knowledge of the order of operations to carry out calculations involving the four operations</i></li> <li>● <i>solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why</i></li> <li>● <i>solve problems involving addition, subtraction, multiplication and division</i></li> <li>● <i>use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy</i></li> </ul> <p><b>Fractions (including decimal and percentages)</b></p> <ul style="list-style-type: none"> <li>● <u>add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions</u></li> <li>● <i>solve problems which require answers to be rounded to specified degrees of accuracy</i></li> </ul> <p><b>Algebra</b></p> <ul style="list-style-type: none"> <li>● <u>use simple formulae</u></li> <li>● <u>generate and describe linear number sequences</u></li> <li>● <u>express missing number problems algebraically</u></li> <li>● <u>find pairs of numbers that satisfy an equation with two unknowns</u></li> <li>● <u>enumerate possibilities of combinations of two variables</u></li> </ul> <p><b>Measurement</b></p> <ul style="list-style-type: none"> <li>● <i>solve problems involving the calculation and conversion of units of measure, using decimal notation to three decimal places where appropriate</i></li> <li>● <i>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 unit, and vice versa, using decimal notation to three decimal places</i></li> </ul> <p><b>Statistics</b></p> <ul style="list-style-type: none"> <li>● <i>interpret and construct pie charts and line graphs and use these to solve problems</i></li> <li>● <i>calculate and interpret the mean as an average.</i></li> </ul> <p><b>Fractions (including decimals and percentages)</b></p> <ul style="list-style-type: none"> <li>● <i>use common factors to simplify fractions; use common multiples to express fractions in the same denomination</i></li> <li>● <i>compare and order fractions, including fractions <math>&gt;1</math></i></li> </ul>

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<ul style="list-style-type: none"> <li>● <u>solve problems involving the calculation and conversion of units of measure, using decimal notation to three decimal places where appropriate</u></li> <li>● <i>use, read, write and convert between standard units, converting measurements of length, mass and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to three decimal places</i></li> </ul> <p><b>Statistics</b></p> <ul style="list-style-type: none"> <li>● <u>interpret and construct pie charts and line graphs and use these to solve problems.</u></li> </ul> <p><b>Addition, subtraction, multiplication and division</b></p> <ul style="list-style-type: none"> <li>● <u>multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication</u></li> <li>● <u>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</u></li> <li>● <u>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</u></li> <li>● <i>perform mental calculations, including with mixed operations and large numbers</i></li> <li>● <u>identify common factors, common multiples and prime numbers</u></li> <li>● <i>use their knowledge of the order of operations to carry out calculations involving the four operations</i></li> <li>● <u>solve problems involving addition, subtraction, multiplication and division</u></li> <li>● <i>use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy</i></li> </ul> <p><b>Fractions (including decimals and percentages)</b></p> <ul style="list-style-type: none"> <li>● <u>multiply one-digit numbers with up to two decimal places by whole numbers</u></li> <li>● <u>use written division methods in cases where the answer has up to two decimal places</u></li> </ul> <p><b>Ratio and proportion</b></p> <ul style="list-style-type: none"> <li>● <u>solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison</u></li> </ul>	<ul style="list-style-type: none"> <li>● <i>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 perform mental calculations, including with mixed operations and large numbers</i></li> <li>● <i>perform mental calculations, including with mixed operations and large numbers</i></li> <li>● <i>identify common factors, common multiples and prime numbers</i></li> <li>● <i>use their knowledge of the order of operations to carry out calculations involving the four operations</i></li> <li>● <i>solve problems involving 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and multiples</u></li> </ul> <p><b>Algebra</b></p> <ul style="list-style-type: none"> <li>● <i>use simple formulae</i></li> <li>● <i>generate and describe linear number sequences</i></li> <li>● <i>express missing number problems algebraically</i></li> <li>● <i>find pairs of numbers that satisfy an equation with two unknowns</i></li> <li>● <i>enumerate possibilities of combinations of two variables</i></li> </ul> <p><b>Measurement</b></p> <ul style="list-style-type: none"> <li>● <i>solve problems involving the calculation and conversion of units of measure, using decimal notation to three decimal places where appropriate</i></li> <li>● <i>use, read, write and convert between standard units, converting measurements of length, mass and time from</i></li> </ul>	<ul style="list-style-type: none"> <li>● <i>associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, <math>\frac{3}{8}</math>]</i></li> <li>● <i>recall 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<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> <p><b>Measurement</b></p> <ul style="list-style-type: none"> <li>● solve problems involving the calculation and conversion of units of measure, using decimal notation to three decimal places where appropriate</li> <li>● use, read, write and convert between standard units, converting measurements of length, mass and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to three decimal places</li> </ul> <p><b>Statistics</b></p> <ul style="list-style-type: none"> <li>● interpret and construct pie charts and line graphs and use these to solve problems</li> <li>● calculate and interpret the mean as an average.</li> </ul> <p><b>Geometry: properties of shapes</b></p> <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>● illustrate and name parts of circles, including radius, diameter and circumference 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 angles</li> </ul> <p><b>Algebra</b></p> <ul style="list-style-type: none"> <li>● use simple formulae</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> <p><b>Measurement</b></p> <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> </ul>	<p>a smaller unit of measure to a larger unit, and vice versa, using decimal notation to three decimal places</p> <ul style="list-style-type: none"> <li>● convert between miles and kilometres</li> </ul> <p><b>Statistics</b></p> <ul style="list-style-type: none"> <li>● interpret and construct pie charts and line graphs and use these to solve problems</li> </ul> <p>calculate and interpret the mean as an average.</p> <p><b>Geometry: properties of shapes</b></p> <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>● illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius</li> </ul> <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>Algebra</b></p> <ul style="list-style-type: none"> <li>● use simple formulae</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> <p><b>Measurement</b></p> <ul style="list-style-type: none"> <li>● calculate the area of parallelograms and triangles</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 centimeters (cm<sup>3</sup>) and cubic metres (m<sup>3</sup>) and extending to other units, [for example, mm<sup>3</sup> and km<sup>3</sup>]</li> </ul> <p><b>Ratio and proportion</b></p> <ul style="list-style-type: none"> <li>● Solve problems involving similar shapes where the scale factor is known or can be found.</li> </ul> <p><b>Number and place value</b></p>	<ul style="list-style-type: none"> <li>● use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy</li> </ul> <p><b>Fractions (including decimals and percentages)</b></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}{4} \times \frac{1}{2} = \frac{1}{8}</math>]</li> <li>● divide proper fractions by whole numbers [for example, <math>\frac{1}{3} \div 2 = \frac{1}{6}</math>]</li> <li>● multiply one-digit numbers with up to two decimal places by whole numbers</li> <li>● use written division methods in cases where the answer has up to two decimal places</li> </ul> <p><b>Ratio and proportion</b></p> <ul style="list-style-type: none"> <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 the relative sizes of two quantities, where missing values can be found by using multiplication and division facts</li> <li>● solve problems involving unequal sharing and grouping using knowledge of fractions and multiples</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> <p><b>Measurement</b></p> <ul style="list-style-type: none"> <li>● solve problems involving the calculation and conversion of units of measure, using decimal notation to three decimal places where appropriate</li> <li>● use, read, write and convert between standard units, converting measurements of length, mass and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to three decimal places</li> </ul> <p><b>Statistics</b></p> <ul style="list-style-type: none"> <li>● interpret and construct pie charts and line graphs and use these to solve problems</li> </ul> <p>calculate and interpret the mean as an average.</p> <p><b>Geometry: properties of shapes</b></p> <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> </ul>
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<ul style="list-style-type: none"> <li>● <u>recognise when it is possible to use the formulae for area and volume of shapes.</u></li> </ul> <p><b>Number and place value</b></p> <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>● round any whole number to a required degree of accuracy</li> <li>● <u>use negative numbers in context, and calculate intervals across zero</u></li> <li>● solve number problems and practical problems that involve all of the above</li> </ul> <p><b>Fractions (including decimals and percentages)</b></p> <ul style="list-style-type: none"> <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> </ul> <p><b>Measurement</b></p> <ul style="list-style-type: none"> <li>● use, read, write and convert between standard units, converting measurements of length, mass and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to three decimal places.</li> </ul> <p><b>Number and place value</b></p> <ul style="list-style-type: none"> <li>● use negative numbers in context, and calculate intervals across zero</li> </ul> <p><b>Addition, subtraction, multiplication and division</b></p> <ul style="list-style-type: none"> <li>● perform mental calculations, including with mixed operations and large numbers</li> <li>● use their knowledge of the order of operations to carry out calculations involving the four operations</li> <li>● solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why</li> <li>● solve problems involving addition, subtraction</li> <li>● use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy</li> </ul> <p><b>Fractions (including decimals and percentages)</b></p> <ul style="list-style-type: none"> <li>● solve problems which require answers to be rounded to specified degrees of accuracy</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> </ul>	<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>● round any whole number to a required degree of accuracy</li> <li>● use negative numbers in context, and calculate intervals across zero</li> <li>● solve number problems and practical problems that involve all of the above</li> </ul> <p><b>Fractions (including decimals and percentages)</b></p> <ul style="list-style-type: none"> <li>● use common factors to simplify fractions; 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<ul style="list-style-type: none"><li>● <i>find pairs of numbers that satisfy an equation with two unknowns</i></li><li>● <i>enumerate possibilities of combinations of two variables</i></li></ul> <p><b>Measurement</b></p> <ul style="list-style-type: none"><li>● <i>solve problems involving the calculation and conversion of units of measure, using decimal notation to three decimal places where appropriate</i></li><li>● <i>use, read, write and convert between standard units, converting measurements of length, mass and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to three decimal places</i></li></ul> <p><b>Statistics</b></p> <ul style="list-style-type: none"><li>● <i>interpret and construct pie charts and line graphs and use these to solve problems.</i></li></ul>		
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