

## Year 6 Maths Medium Term Plan 2017-2018

Term 1 and 2	Term 3 and 4	Term 5 and 6
<p><b>Block 1 - Number</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>● 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> <li>● solve number and practical problems that involve all of the above</li> </ul>	<p><b>Block 1 - 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 up to three decimal places</li> <li>● convert between miles and kilometers.</li> <li>● solve problems involving the calculation and conversion of units of measure, using decimal notation to three decimal places where appropriate</li> <li>● recognize that shapes with the same areas can have different perimeters and vice versa</li> <li>● calculate the area of parallelograms and triangles</li> <li>● recognize 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 meters (m<sup>3</sup>) and extending to other units, [for example, mm<sup>3</sup> and km<sup>3</sup>]</li> </ul>	<p><b>Block 1 – Number Addition, subtraction , multiplication, 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, multiplication and division</li> <li>● multiply multi-digit numbers up to 4 digits by a two-digit whole number using the efficient 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> <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> </ul>
<p><b>Block 2 - Addition and subtraction</b></p> <ul style="list-style-type: none"> <li>● perform mental calculations, including with mixed operations and large numbers</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>Block 2 – 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>Block 2 - 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>Block 3 - Multiplication and division</b></p> <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> <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>● perform mental calculations, including with mixed operations and large numbers</li> </ul>	<p><b>Block 3 Number – 4 rules</b></p> <ul style="list-style-type: none"> <li>● perform mental calculations, including with mixed operations and large numbers</li> <li>● solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why</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>● 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 perform mental calculations, including with mixed operations and large numbers</li> <li>● solve problems involving addition, subtraction, multiplication and division</li> </ul>	<p><b>Block 3 - 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> <li>● recognize that shapes with the same areas can have different perimeters and vice versa</li> <li>● calculate the area of parallelograms and triangles</li> <li>● recognize when it is necessary 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 meters (m<sup>3</sup>) and extending to other units, [for example, mm<sup>3</sup> and km<sup>3</sup>]</li> </ul>
<p><b>Block 4 - Fractions</b></p> <ul style="list-style-type: none"> <li>● Equivalent fractions</li> <li>● Comparing fractions</li> <li>● Mixed numbers</li> <li>● Addition and subtraction of fractions</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> <li>● solve problems which require answers to be rounded to specified degrees of accuracy</li> </ul>	<p><b>Block 4 - Fractions, Decimals and %</b></p> <ul style="list-style-type: none"> <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> <li>● use common factors to simplify fractions; use common multiples to express fractions in the same denomination</li> <li>● compare and order fractions, including fractions &gt;1</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 problems which require answers to be</li> </ul>	<p><b>Block 4 – Fractions Decimals and %</b></p> <ul style="list-style-type: none"> <li>● use common factors to simplify fractions; use common multiples to express fractions in the same denomination</li> <li>● compare and order fractions, including fractions &gt;1</li> <li>● 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>]</li> <li>● recall and use equivalences between simple fractions, decimals and percentages, including in different contexts</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</li> </ul>

	<p>rounded to specified degrees of accuracy</p> <ul style="list-style-type: none"> <li>● 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>]</li> <li>● recall and use equivalences between simple fractions, decimals and percentages, including in different context</li> </ul>	<p>to three decimal places</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>Block 5- Factors, Multiples, Order of operations</b></p> <ul style="list-style-type: none"> <li>● identify common factors, common multiples and prime numbers</li> <li>● use knowledge of the order of operations to carry out calculations involving the four operations</li> </ul>	<p><b>Block 5 – Factors, Multiples, Order of operations</b></p> <ul style="list-style-type: none"> <li>● identify common factors, common multiples and prime numbers</li> <li>● use their knowledge of the order of operations to carry out calculations involving the four operations</li> </ul>	<p><b>Block 5 – Factors, Multiples, Order of operations</b></p> <ul style="list-style-type: none"> <li>● identify common factors, common multiples and prime numbers</li> <li>● use knowledge of the order of operations to carry out calculations involving the four operations</li> </ul>
<p><b>Block 6 - Four Rules, Estimation</b></p> <ul style="list-style-type: none"> <li>● solve problems involving addition, subtraction, multiplication and division</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>Block 6 – 4 Rules, estimation</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> <li>● use negative numbers in context, and calculate intervals across zero</li> </ul>	<p><b>Block 6 – 4 Rules, estimation</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>Block 7 - Decimals, %, Fractions</b></p> <ul style="list-style-type: none"> <li>● solve problems which require answers to be rounded to specified degrees of accuracy</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>● 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>Block 7 - 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>Block 7 Geometry Position, Direction, Motion</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>Block 8 - 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> </ul>	<p><b>Block 8 - 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> <li>● solve problems involving similar shapes where the scale factor is known or can be found.</li> </ul>	<p><b>Block 8 - 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> <li>● solve problems involving similar shapes where the scale factor is known or can be found.</li> </ul>
<p><b>Block 9 – 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>Block 9 – 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>Block 9 – 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>Block 10 - Geometry</b></p> <ul style="list-style-type: none"> <li>● draw 2-D shapes using given dimensions and angles</li> <li>● recognize, 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>● recognize angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles</li> </ul>	<p><b>Block 10 – Geometry Properties of shapes</b></p> <ul style="list-style-type: none"> <li>● draw 2-D shapes using given dimensions and angles</li> <li>● recognize, 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>● recognize angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles</li> </ul>	<p><b>Block 10 Geometry Properties of Shape</b></p> <ul style="list-style-type: none"> <li>● draw 2-D shapes using given dimensions and angles</li> <li>● recognize, 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>● recognize angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles</li> </ul>