

## Year 5 and Year 6 Maths Curriculum Overview

Term 1	Place Value Counting Read, write and compare	Place Value Decimals	Mental addition and subtraction	Addition and subtraction (integers/ decimals for MA)	Number properties	Mental Multiplication and division link to volume	Multiplication and division
<b>Y5</b>	<ul style="list-style-type: none"> <li>Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit</li> <li>Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000</li> <li>Multiply and divide whole numbers by 10, 100 and 1000</li> <li>Link with convert between different units of metric measure (for example, kilometre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)</li> </ul>	<ul style="list-style-type: none"> <li>Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents</li> <li>Read, write, order and compare numbers with up to three decimal places</li> <li>Multiply and divide decimals by 10, 100 and 1000</li> <li>Link with convert between different units of metric measure (for example, kilometre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)</li> </ul>	<ul style="list-style-type: none"> <li>Add and subtract numbers mentally with increasingly large numbers</li> <li>Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy</li> <li>Solve addition and subtraction problems mentally</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>Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy</li> <li>Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.</li> <li>Include decimal addition and subtraction and measures problems</li> </ul>	<ul style="list-style-type: none"> <li>Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers</li> <li>Establish whether a number up to 100 is prime and recall prime numbers up to 19</li> <li>Recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3)</li> </ul>	<ul style="list-style-type: none"> <li>Revise multiply 3 single digit numbers</li> <li>Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers</li> <li>Multiply and divide numbers mentally drawing upon known facts</li> <li>Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes</li> <li>Link Cube numbers to volume</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>Solve problems involving multiplication including using their knowledge of factors and multiples, squares and cubes</li> </ul>
<b>Y6</b>	<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>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 up to three decimal places</li> <li>Solve number and practical problems that involve all of the above.</li> </ul>	<ul style="list-style-type: none"> <li>Revise ordering of decimals</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 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 unit, and vice versa, using decimal notation to up to three decimal places</li> </ul>	<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> </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>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> <li>Decimal addition/subtraction 1 and 2 decimal places</li> </ul>	<ul style="list-style-type: none"> <li>Revise squares, cubes</li> <li>Identify common factors, common multiples and prime numbers</li> <li>Problem solve with above</li> </ul>	<ul style="list-style-type: none"> <li>Revise Y5</li> <li>Perform mental calculations, including with mixed operations and large numbers</li> <li>Calculate, estimate and compare volume 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 [for example, mm<sup>3</sup> and km<sup>3</sup>].</li> <li>Recognise when it is possible to use formulae for volume of shapes</li> </ul>	<ul style="list-style-type: none"> <li>Multiply numbers up to 4 digits by a two-digit number using a formal written method, including long multiplication</li> <li>Multiply one-digit numbers with up to two decimal places by whole numbers</li> <li>Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy</li> </ul>

Term 2	Multiplication (Area)	Geometry Angles	Geometry Properties of 2-D Shapes Include perimeter	Addition and subtraction through Statistics	Fractions	Fractions	Assess and Review
Y5	<ul style="list-style-type: none"> <li>Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm<sup>2</sup>) and square metres (m<sup>2</sup>)</li> <li>Areas of rectangles mixed units cm/mm etc</li> <li>Use the properties of rectangles to deduce related facts and find missing lengths</li> </ul>	<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 (total 360°) angles at a point on a straight line and a turn (total 180°), other multiples of 90°</li> </ul>	<ul style="list-style-type: none"> <li>Distinguish between regular and irregular polygons based on reasoning about equal sides and angles</li> <li>Use the properties of rectangles to deduce related facts and find missing lengths and angles</li> <li>Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres</li> </ul>	<ul style="list-style-type: none"> <li>Solve comparison, sum and difference problems using information presented in a line graph</li> </ul>	<ul style="list-style-type: none"> <li>Compare and order fractions whose denominators are all multiples of the same number</li> <li>Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths</li> <li>Read and write decimal numbers as fractions</li> <li>Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements &gt; 1 as a mixed number</li> </ul>	<ul style="list-style-type: none"> <li>Add and subtract fractions with the same denominator and denominators that are multiples of the same number</li> </ul>	Review and consolidate term 1 and 2 check against ARE
Y6	<ul style="list-style-type: none"> <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 of shapes</li> <li>Area of rectangles with mixed measures</li> <li>Area of rectangles with missing sides</li> <li>Area of rectangles</li> </ul>	<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>Draw 2-D shapes using given dimensions and angles</li> </ul>	<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>Recognise that shapes with the same areas can have different perimeters and vice versa</li> </ul>	<ul style="list-style-type: none"> <li>Interpret pie charts and line graphs and use these to solve problems</li> <li>Construct line graphs and use these to solve problems</li> </ul>	<ul style="list-style-type: none"> <li>Compare and order fractions, including fractions &gt; 1</li> <li>Use common factors to simplify fractions; use common multiples to express fractions in the same denomination</li> <li>Associate a fraction with division and calculate decimal fraction equivalents</li> <li>Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.</li> </ul>	<ul style="list-style-type: none"> <li>Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions</li> <li>Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams (Y5 revision)</li> </ul>	Review and consolidate term 1 and 2 Check against ARE

Term 3	Place Value Negative Numbers Roman Numerals Rounding	Addition and subtraction Decimals and measures	Multiplication and Division	Multiplication and Division Problem Solving and decimals	Geometry 3-D and Coordinates	Fractions, decimals and %
Y5	<ul style="list-style-type: none"> <li>Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000</li> <li>Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero</li> <li>Solve number problems and practical problems that involve all of the above read</li> <li>Round decimals with two decimal places to the nearest whole number and to one decimal place</li> </ul>	<ul style="list-style-type: none"> <li>Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.</li> <li>Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)</li> <li>Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy</li> <li>Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.</li> </ul>	<ul style="list-style-type: none"> <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>Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.</li> <li>Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)</li> </ul>	<ul style="list-style-type: none"> <li>Identify 3-D shapes, including cubes and other cuboids, from 2-D representations identify,</li> <li>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> </ul>	<ul style="list-style-type: none"> <li>Recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal</li> <li>Solve problems which require knowing percentage and decimal equivalents of <math>\frac{1}{2}</math>, <math>\frac{1}{4}</math>, <math>\frac{1}{5}</math>, <math>\frac{2}{5}</math>, <math>\frac{4}{5}</math> and those fractions with a denominator of a multiple of 10 or 25.</li> </ul>
Y6	<ul style="list-style-type: none"> <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 and practical problems that involve all of the above.</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>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 unit, and vice versa, using decimal notation to up to three decimal places</li> <li>Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.</li> </ul>	<ul style="list-style-type: none"> <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>	<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>Calculate mean as an average (link to division)</li> <li>Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate</li> </ul>	<ul style="list-style-type: none"> <li>Recognise, describe, and build simple 3-D shapes, including making nets</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><b>Revise finding %</b></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> </ul>

Term 4	Fractions, decimals, %	Fractions consolidation Y5 Ratio and proportion Y6	Time and Measures – 4 rules	Missing information Y5 Algebra Y6 Roman Numerals	Area and perimeter Revisit Properties	Review and Assess
Y5	<ul style="list-style-type: none"> <li>Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams</li> </ul>	<ul style="list-style-type: none"> <li>Revisit and consolidate fractions through problem solving</li> </ul>	<ul style="list-style-type: none"> <li>Complete, read and interpret information in tables, including timetables.</li> <li>Solve problems involving converting between units of time</li> <li>Revise 12 hour and 24 hour time</li> <li>Revise time conversion and facts</li> <li><b>Roman Numerals</b></li> </ul>	<ul style="list-style-type: none"> <li>Find missing lengths and angles revision problems linked to area and perimeter</li> <li>Empty boxes in calculations</li> </ul>	<ul style="list-style-type: none"> <li>Problem solving with shapes</li> <li>Revisit missing angles and lengths</li> </ul>	<ul style="list-style-type: none"> <li>Review and assess terms 3 and 4 check against ARE</li> </ul>
Y6	<ul style="list-style-type: none"> <li>Multiply simple pairs of proper fractions, writing the answer in its simplest form revise</li> <li>Divide proper fractions by whole numbers</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>Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.</li> <li>Include fractions linked to pie charts</li> </ul>	<ul style="list-style-type: none"> <li>Multi step measures problems links to 4 rules, including conversion of measures</li> <li>Time problems</li> <li>Revise 12 hour and 24 hour time</li> <li>Revise time conversion and facts</li> <li>Roman numerals to 1000 (M) and recognise years written in Roman numerals.</li> </ul>	<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>Missing numbers,</li> <li>Equivalent expressions (for example, <math>a + b = b + a</math>)</li> </ul>	<ul style="list-style-type: none"> <li>Area of triangles and Parallelograms</li> <li>Revisit area of rectangles</li> <li>Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius</li> </ul>	<ul style="list-style-type: none"> <li>Review and assess terms 3 and 4 check against ARE</li> </ul>

### Notes for terms 5 and 6.

- By end of term 4 all of the maths curriculum should be taught to Y6, most to Y5.
- Term 5 should be gaps and consolidation
- Term 6 problem solving and transition to next year group

T6	Place Value	Calculation & Measures	Calculation & Measures	Fractions, decimals and %	Geometry	Statistics	Transition x 2 weeks
Y5	Problem solving with place value and number properties	Problem solving with 4 rules applied to measures and missing boxes, known facts	Problem solving with 4 rules applied to measures and missing boxes, known facts	Problem solving with fractions, decimals and %	Problem solving geometry	Problem solving statistics	Y5 non negotiables for Y6 – skill and application
Y6	Problem solving with place value and number properties	Problem solving with 4 rules applied to measures and missing boxes, known facts	Problem solving with 4 rules applied to measures and missing boxes, known facts	Problem solving with fractions, decimals and %	Problem solving geometry	Problem solving statistics	Y6 non negotiables for Y7, skill and application