

### Year 6 Objectives

| <u>Autumn Term</u>                                                                                                                                                                                                                                                                                                                                                                                                  | <u>Number: Addition, Subtraction, Multiplication, Division</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <u>Number: Fractions</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <u>Geometry: Position and Direction</u>                                                                                                                                                                                   |
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| <p><u>Number: Place Value</u></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 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>•Multiply multi-digit number up to 4 digits by a 2-digit number using the formal written method of long multiplication.</li> <li>•Divide numbers up to 4 digits by a 2-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 2-digit number using the formal written method of short division, interpreting remainders.</li> <li>•Perform mental calculations, including with mixed operations and large numbers.</li> <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> | <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 <math>&gt;1</math>.</li> <li>•Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions.</li> <li>•Multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. <math>\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}</math>).</li> <li>•Divide proper fractions by whole numbers (e.g. <math>\frac{1}{3} \div 2 = \frac{1}{6}</math>).</li> <li>•Associate a fraction with division to calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. <math>\frac{3}{8}</math>).</li> <li>•Identify the value of each digit to three decimal places and multiply and divide numbers by 10, 100 and 1000 where the answers are 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> | <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> |

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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <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>                                                                                      | <ul style="list-style-type: none"><li>•Solve problems which require answers to be rounded to specified degrees of accuracy.</li><li>•Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts</li></ul>                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                             |
| <u>Spring Term</u><br><u>Number: Decimals</u> <ul style="list-style-type: none"><li>•Identify the value of each digit in numbers given to 3 dp and multiply numbers by 10, 100 and 1,000 giving answers up to 3 dp.</li><li>•Multiply one-digit numbers with up to 2 decimal places by whole numbers.</li><li>•Use written division methods in cases where the answer has up to 2 decimal places.</li><li>•Solve problems which require answers to be</li></ul> | <u>Number: Percentages</u> <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>•Recall and use equivalences between simple fractions, decimals and percentages including in different contexts.</li></ul> | <u>Number: Algebra</u> <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> | <u>Measurement: Converting Units</u> <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 unit, and vice versa, using</li></ul> | <u>Measurement: Perimeter, Area and Volume</u> <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 and volume of shapes.</li><li>•Calculate the area of parallelograms and triangles.</li><li>•Calculate, estimate and compare volume of cubes and cuboids using</li></ul> | <u>Number: Ratio</u> <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 similar shapes where the scale factor is known or can be found.</li></ul> |

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| rounded to specified degrees of accuracy.                                                                                                                                                                                                                                                                                                                                                                        |  |                                                                                                                                                                                                                                                                                            | decimal notation to up to 3 dp.<br>•Convert between miles and kilometres. | standard units, including cm <sup>3</sup> , m <sup>3</sup> and extending to other units (mm <sup>3</sup> , km <sup>3</sup> ). | •Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples. |
| <u>Summer Term</u><br><u>Geometry: Properties of Shape</u><br><br>•Draw 2-D shapes using given dimensions and angles.<br>•Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals and regular polygons.<br>•Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles. |  | <u>Statistics</u><br><br>•Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius.<br>•Interpret and construct pie charts and line graphs and use these to solve problems.<br>•Calculate the mean as an average. |                                                                           | <u>Problem Solving and Investigations</u><br><br>•All NC objectives                                                           |                                                                                                    |