



Term	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
NC Topics/units Covered	<p>Number – place value Number – addition, subtraction, multiplication and division</p>	<p>Number – fractions Geometry – position and directions</p>	<p>Number – decimals Number – percentages Number – algebra</p>	<p>Measurement – converting units Measurement – perimeter, area and volume Number - ratio</p>	<p>Geometry – properties of shapes Problem solving</p>	<p>Statistics Investigations</p>
Ongoing	<p>Add/subtract 1,000,000 to a number (up to 999,9999) Add/subtract multiples of 10, 100, 1,000, 10,000, 100,000 and 1,000,000 to a number (up to 9,999,999) Add and subtract using negative numbers through zero Use BIDMAS to identify the correct order of operations Multiply a 4-digit number by a 2-digit number using the formal method of multiplication Multiply one digit numbers with up to two decimal places by whole numbers Multiply a tenths number that is less than one by a multiple of 10 or 100 (e.g. 0.4×60) Divide numbers up to 4 digits by a 2-digit number using the formal written method of long division (where the dividend may include a fraction) Divide numbers up to 4 digits by a 1-digit number using the formal written method of short division (where the dividend may include a fraction) Add and subtract fractions with different denominators (using two or three fractions) Add and subtract a mixed number to a fraction where there are different denominators Multiply pairs of proper fractions writing the answer in its simplest form Divide proper fractions by whole numbers Find a multiple of 5% of a number Find 1% of a number Find a multiple of 1% of a number (up to 10%)</p>					
NC	<p><u>Number – place value</u> Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit. Round any whole number to a required degree of accuracy. Use negative numbers in context, and calculate intervals across zero.</p>	<p><u>Number – fractions</u> Use common factors to simplify fractions; use common multiples to express fractions in the same denomination Compare and order fractions, including fractions >1 Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions</p>	<p><u>Number – decimals</u> Identify the value of each digit in numbers given to 3 decimal places and multiply numbers by 10, 100 and 1,000 giving answers up to 3 decimal places. Multiply one-digit numbers with up to 2 decimal places by whole numbers. Use written division methods in cases</p>	<p><u>Measurement – converting units</u> Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate. Use, read, write and convert between standard units, converting measurements of length, mass, volume</p>	<p><u>Geometry – properties of shapes</u> Draw 2-D shapes using given dimensions and angles. Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals and regular polygons. Recognise angles where they meet at a</p>	<p><u>Statistics</u> Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius. Interpret and construct pie charts and line graphs and use these to solve problems. Calculate the mean as an average.</p>

	<p>Solve number and practical problems that involve all of the above.</p> <p><u>Number – addition, subtraction, multiplication and division</u></p> <p>Solve addition and subtraction multi step problems in contexts, deciding which operations and methods to use and why.</p> <p>Multiply multi-digit number up to 4 digits by a 2-digit number using the formal written method of long multiplication.</p> <p>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.</p> <p>Divide numbers up to 4 digits by a 2-digit number using the formal written method of short division, interpreting remainders according to the context.</p> <p>Perform mental calculations, including with mixed operations and large numbers.</p>	<p>Multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$]</p> <p>Divide proper fractions by whole numbers [for example, $\frac{1}{3} \div 2 = \frac{1}{6}$]</p> <p>Associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, $\frac{3}{8}$]</p> <p>Identify the value of each digit in numbers given to 3 decimal places and multiply and divide numbers by 10, 100 and 1,000 giving answers up to 3 decimal places</p> <p>Multiply one-digit numbers with up to 2 decimal places by whole numbers</p> <p>Use written division methods in cases where the answer has up to 2 decimal places</p> <p>Solve problems which require answers to be rounded to specified degrees of accuracy</p> <p>Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts</p>	<p>where the answer has up to 2 decimal places. Solve problems which require answers to be rounded to specified degrees of accuracy.</p> <p><u>Number – percentages</u></p> <p>Solve problems involving the calculation of percentages [for example, of measures and such as 15% of 360] and the use of percentages for comparison.</p> <p>Recall and use equivalences between simple fractions, decimals and percentages including in different contexts.</p> <p><u>Number – algebra</u></p> <p>Use simple formulae. Generate and describe linear number sequences.</p> <p>Express missing number problems algebraically.</p> <p>Find pairs of numbers that satisfy an equation with two unknowns.</p> <p>Enumerate possibilities of combinations of two variables.</p>	<p>and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to 3dp.</p> <p>Convert between miles and kilometres.</p> <p><u>Measurement – perimeter, area and volume</u></p> <p>Recognise that shapes with the same areas can have different perimeters and vice versa.</p> <p>Recognise when it is possible to use formulae for area and volume of shapes.</p> <p>Calculate the area of parallelograms and triangles.</p> <p>Calculate, estimate and compare volume of cubes and cuboids using standard units, including cm³, m³ and extending to other units (mm³, km³)</p> <p><u>Number – ratio</u></p> <p>Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts.</p> <p>Solve problems involving similar shapes where the scale factor is known or can be found.</p>	<p>point, are on a straight line, or are vertically opposite, and find missing angles.</p>	
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	<p>Identify common factors, common multiples and prime numbers.</p> <p>Use their knowledge of the order of operations to carry out calculations involving the four operations.</p> <p>Solve problems involving addition, subtraction, multiplication and division.</p> <p>Use estimation to check answers to calculations and determine in the context of a problem, an appropriate degree of accuracy.</p>	<p><u>Geometry – position and direction</u></p> <p>Describe positions on the full coordinate grid (all four quadrants).</p> <p>Draw and translate simple shapes on the coordinate plane, and reflect them in the axes.</p>		<p>Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.</p>		
White Rose Units	Autumn Blocks 1 and 2	Autumn Blocks 3 and 4	Spring Blocks 1, 2 and 3	Spring Blocks 4, 5 and 6	Summer Block 1	Summer Blocks 2, 3, 4 and 5
Resources/ equipment	100 squares, dienes, place value grids	Fraction walls, rulers, mirrors	Fraction walls	Rulers	Shapes, rulers, angle measurers	Angle measurers
General resources	Number squares, dienes apparatus, number lines, number fans, bead strings, counters, dice (large and small),					