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AUTUMN TERM	**Block 1** **Weeks 1-2** **PLACE VALUE**	**Block 2** **Weeks 3-7** **ADDITION AND SUBTRACTION** **MULTIPLICATION AND DIVISION**	**Block 3** **Week 8-11** **FRACTIONS A AND FRACTIONS B**	**Block 4** **Week 12** **CONVERTING UNITS**
Small Step Objective from White Rose	▪ Numbers to 1,000,000 ▪ Numbers to 10,000,000 ▪ Read and write numbers to 10,000,000 Powers of 10 ▪ Number line to 10,000,000 ▪ Compare and order any integers ▪ Round any integer ▪ Negative numbers	▪ Add and subtract integers ▪ Common factors ▪ Common multiples ▪ Rules of divisibility ▪ Primes to 100 ▪ Square and cube numbers ▪ Multiply up to a 4-digit number by a 2-digit number ▪ Solve problems with multiplication Short division ▪ Division using factors ▪ Introduction to long division ▪ Long division with remainders ▪ Solve problems with division ▪ Solve multi-step problems ▪ Order of operations ▪ Mental calculations and estimation ▪ Reason from known facts	▪ Equivalent fractions and simplifying ▪ Equivalent fractions on a number line ▪ Compare and order (denominator) ▪ Compare and order (numerator) ▪ Add and subtract simple fractions ▪ Add and subtract any two fractions ▪ Add mixed numbers ▪ Subtract mixed numbers ▪ Multi-step problems ▪ Multiply fractions by integers ▪ Multiply fractions by fractions ▪ Divide a fraction by an integer ▪ Divide any fraction by an integer ▪ Mixed questions with fractions ▪ Fraction of an amount ▪ Fraction of an amount – find the whole	▪ Metric measures ▪ Convert metric measures ▪ Calculate with metric measures ▪ Miles and kilometres ▪ Imperial measures
National Curriculum Reference	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 Solve number and practical problems that involve all of the above. Solve number and practical problems that involve all of	Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why Perform mental calculations, including with mixed operations and large numbers Use their knowledge of the order of operations to carry out calculations involving the four operations Solve problems involving addition, subtraction, multiplication and division	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 Multiply simple pairs of proper fractions, writing the answer in its Simplest form [for example, 1/4 x 1/2 = 1/8]	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 and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places

	the above.	Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy. Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication 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 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 Identify common factors, common multiples and prime numbers Perform mental calculations, including with mixed operations and large numbers Use my knowledge of the order of operations to carry out calculations involving the four operations Solve problems involving addition, subtraction, multiplication and division Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.	Divide proper fractions by whole numbers [for example, 1/3 ÷ 2 = 1/6] Associate a fraction with division and calculate decimal fraction Equivalents [for example, 0.375] for a simple fraction [for example, 3/8] 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 Multiply one-digit numbers with up to two decimal places by Whole numbers Use written division methods in cases where the answer has up to Two decimal places Solve problems which require answers to be rounded to specified Degrees of accuracy Recall and use equivalences between simple fractions, decimals And percentages, including in different contexts.	Convert between miles and kilometres

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SPRING TERM	**Block 1** **Week 1-2** RATIO	**Block 2** **Weeks 3-4** ALGEBRA	**Block 3** **Weeks 5-6** DECIMALS	**Block 4** **Weeks 7-8** FRACTIONS, DECIMALS AND PERCENTAGES	**Block 5** **Weeks 9-10** AREA, PERIMETER AND VOLUME	**Block 6** **Weeks 11-12** STATISTICS
Small Step Objective from White Rose	▪ Add or multiply? ▪ Use ratio language ▪ Introduction to the ratio symbol ▪ Ratio and fractions ▪ Scale drawing ▪ Use scale factors ▪ Similar shapes ▪ Ratio problems ▪ Proportion problems ▪ Recipes	▪ 1-step function machines ▪ 2-step function machines ▪ Form expressions ▪ Substitution ▪ Formulae ▪ Form equations ▪ Solve 1-step equations ▪ Solve 2-step equations	▪ Place value within 1 ▪ Place value – integers and decimals ▪ Round decimals ▪ Add and subtract decimals ▪ Multiply by 10, 100 and 1,000 ▪ Divide by 10, 100 and 1,000 ▪ Multiply decimals by integers ▪ Divide decimals by integers ▪ Multiply and divide decimals in context	▪ Decimal and fraction equivalents ▪ Fractions as division ▪ Understand percentages ▪ Fractions to percentages ▪ Equivalent fractions, decimals and percentages ▪ Order fractions, decimals and percentages ▪ Percentage of an amount – one step ▪ Percentage of an amount – multi-step ▪ Percentages – missing values	▪ Shapes – same area ▪ Area and perimeter ▪ Area of a triangle – counting squares ▪ Area of a right-angled triangle ▪ Area of any triangle ▪ Area of a parallelogram ▪ Volume – counting cubes ▪ Volume of a cuboid	▪ Line graphs ▪ Dual bar charts Read and interpret pie charts ▪ Pie charts with percentages ▪ Draw pie charts ▪ The mean
National curriculum reference	Solve problems involving the relative sizes of two quantities where Missing values can be found by using integer multiplication and division facts	Use simple formulae Generate and describe linear number sequences Express missing number problems algebraically	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	Recall and use equivalences between simple fractions, decimals And percentages, including in different contexts. Solve problems involving the calculation of percentages [for example, of measures,	Recognise that shapes with the same areas can have different Perimeters and vice versa Recognise when it is possible to use formulae for area and volume	Interpret and construct pie charts and line graphs and use these to solve problems Calculate and interpret the mean as an average.

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	Solve problems involving similar shapes where the scale factor is known or can be found Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.	Find pairs of numbers that satisfy an equation with two unknowns Enumerate possibilities of combinations of two variables	Multiply one-digit numbers with up to two decimal places by Whole numbers Use written division methods in cases where the answer has up to Two decimal places Solve problems which require answers to be rounded to specified Degrees of accuracy	and such as 15% of 360] and the use of percentages for comparison	Of shapes Calculate the area of parallelograms and triangles Calculate, estimate and compare volume of cubes and cuboids using Standard units, including cubic centimetres (cm3) and cubic metres (m3), and extending to other units [for example, mm3 and km3].	

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SUMMER TERM	**Block 1** **Week 1-3** SHAPE	**Block 2** **Week 4** POSITION AND DIRECTION	**Block 3** CONSOLIDATION PROBLEM SOLVING & THEMED PROJECTS
Small Step Objective from White Rose	• Measure and classify angles Calculate angles • Vertically opposite angles • Angles in a triangle • Angles in a triangle – special cases • Angles in a triangle – missing angles • Angles in a quadrilateral • Angles in polygons • Circles Step • Draw shapes accurately • Nets of 3-D shapes	• The first quadrant • Read and plot points in four quadrants • Solve problems with coordinates • Translations • Reflections	ALL
National curriculum reference	Draw 2-d shapes using given dimensions and angles Recognise, describe and build simple 3-d shapes, including making nets Compare and classify geometric shapes based on their properties And sizes and find unknown angles in any triangles, quadrilaterals, And regular polygons Illustrate and name parts of circles, including radius, diameter And circumference and know that the diameter is twice the radius Recognise angles where they meet at a point, are on a straight line, Or are vertically opposite, and find missing angles.	Describe positions on the full coordinate grid (all four quadrants) Draw and translate simple shapes on the coordinate plane, and Reflect them in the axes.	ALL

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