

Autumn 1		Autumn 2		
Number and Place Value (3 weeks)	Four operations (4 weeks)	Fractions (4 weeks)	Decimals & percentages (3 weeks)	
<ul> <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> <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> <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> <li>solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why</li> </ul>	<ul> <li>use common factors to simplify fractions</li> <li>use common multiples to express fractions in the same denomination</li> <li>compare and order fractions, including fractions &gt; 1</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</li> <li>divide proper fractions by whole numbers [for example, <sup>1</sup>/<sub>3</sub> ÷ 2 = <sup>1</sup>/<sub>6</sub> ]</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> <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> <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>	



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Vocabulary: Ten million Millions Thousands Tens Ones zero Place Value Greater Than Less Than Rounded Partition	<ul> <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, levels of accuracy.</li> <li>Vocabulary: Add Total Make Sum Plus Altogether Difference Subtract Less Minus Take away Column addition Column subtraction Inverse Multiplication Division</li> </ul>	Vocabular Numerator Der Proper frac Improper fra Mixed num Factor Highest common Lowest common Common denor	nominator tion action ber n multiple multiple	Vocabulary: Decimals Percentages Decimal Fraction Decimal Place Sharing Partitioning Tenths Hundredths Thousandth Grouping Exchanging Sharing % Per cent = out of 100 Percentage Discount
	Formal methods Divide	Common denor Common nume		Equivalent fraction
	Multiply Operations Factors Multiples			Equivalent Decimal Convert Compare Order
	Spring 1		Spring 2	
(Week 1: Consolidation of Fractions, decimals and percentages) Ratio (2 weeks)	Number - Algebra (2 weeks)	Measurement Converting units (1 week)	Measurement Perimeter Area & Volume (2 weeks)	Geometry- Properties of shape (3 weeks)
<ul> <li>solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts</li> </ul>	<ul> <li>use simple formulae expressed in words</li> <li>generate and describe linear number sequences</li> <li>express missing number problems algebraically</li> </ul>	<ul> <li>solve problems involving the calculation and conversion of units of measure, using decimal notation up to</li> </ul>	<ul> <li>recognise that shape with the same area can have different perimeters and vice versa</li> </ul>	is dimensions and angles
	• find pairs of numbers that satisfy an equation	three decimal places	• recognise when it is	



<ul> <li>solve problems involving the calculation of percentages [for example, of measures, such as 15% of 360] and the use of percentages for comparison</li> <li>solve problems involving similar shapes where the scale factor is known or can be found</li> <li>solve problems involving unequal sharing and grouping using knowledge of fractions and multiples</li> </ul>	<ul> <li>with two unknowns</li> <li>enumerate possibilities of combinations of two variables</li> </ul>	<ul> <li>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>convert between miles and kilometres</li> </ul>	<ul> <li>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 standard units, including cubic centimetres (cm3 ) and cubic metres (m3 ), and extending to other units [for example, mm3 and km3 ].</li> </ul>	<ul> <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>recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.</li> </ul>
<b>Vocabulary:</b> Ratio Proportion Part Whole Scale Factor Enlargement Similar shapes Length Width	<b>Vocabulary:</b> Term to Term rule Variable Unknown Expression Equation Formula One step- equation 2 step equation Enumerate Substitution	Vocabulary: Mass Gram Kilogram Capacity Volume Millilitre Litre Millimetre Ounce Inch foot Gallon Mile Kilometre Stone Pint Pound	<b>Vocabulary:</b> Perimeter Area Volume Cubic unit Cuboid Width Length Height Rectilinear Parallelogram	Vocabulary: 2D Shape 3D Shape Corners Sides Vertices Edges Faces Net Angles Acute Obtuse Right angle Reflex Rotation Degrees Opposite Circumference Radius Diameter



Summer 1			Summer 2		
Geometry- Position and direction (2 weeks)	Statistics (2 weeks)	Consolid -ation (SATs)	Consolidation	Consolidation	
<ul> <li>describe positions on the full coordinate grid (all four quadrants)</li> <li>draw and translate simple shapes on the coordinate plane</li> <li>reflect shapes using both the x and y-axis</li> </ul>	<ul> <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>		Themed work Projects Revisit and revise.	Themed work Projects Revisit and revise	
Vocabulary: Coordinate x-axis y-axis Quadrants Positive Negative Translate Reflect Symmetrical	<b>Vocabulary:</b> Bar chart Pictogram Frequency table Tally chart Pie chart Discrete data Continuous data Line graph Sum Difference Comparison Interpret Mean Average				

