

Cycle 1				
Autumn Themes	Cross curricular maths	Maths Units	Skills	Non-negotiables
New Beginnings (2 weeks)	Data collection across school Venn diagrams / Carroll diagrams	Place Value – games focus / dice games Read, write, order and compare numbers to 10,000,000 and determine the value of each digit	Tables and Division Round any whole number to a required degree of accuracy Equivalent Fractions, Decimals & Percentages	
Forces (2 weeks) Air resistance & Gravity	Measures - distance vs speed Mass Kg Weight Newtons Conversions between units of metric measurements	Calculations week - (ability groups x 3) addition & subtraction Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why Solve problems involving the calculation and conversion of units of measure, using decimal notation up to 3 dec. places where approp. Tables and Division - language (factors & multiple)	Counting Decimal counting and decimal number bonds to 1 in tenths and hundredths Mixed numbers and improper fractions & convert Identify common factors, common multiples, common prime numbers	Yr 6 Compare and order numbers up to 10,000,000
Food around the World (3 weeks)	Weights and Measures Money and shopping	Number patterns, sequences & relationships;	Learn common metric conversions	Yr 6 Identify common factors, common multiples &

	<p>www.</p> <p>Negative numbers in context (warmer climates grow certain crops / compare climates)</p> <p>Ratio and Proportion Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts</p> <p>Time durations</p> <p>Interpret and construct pie charts and use these to solve problems</p>	<p>investigations; algebraic expressions</p> <p>Calculations week - (ability groups x 3) Multiplication & division Long multiplication up to ThHTU x TU</p> <p>Multiply one digit numbers with up to two decimal places by whole numbers.</p> <p>Divide numbers up to 4 digits by two digit whole nos using formal written long division methods. Show remainders as whole numbers, fractions or rounding to fit context.</p> <p>Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.</p> <p>Fractions calculations (all four operations)</p>	<p>Tables Facts x6 x7 x8 and related division facts</p> <p>Use negative numbers in context and calculate intervals across 0.</p> <p>Solve time duration problems using time lines</p> <p>Multiple fractions of amounts</p> <p>Simple percentages of amounts (50% 25% 75%)</p>	<p>prime numbers.</p> <p>Yr 6 12 x 12</p> <p>Yr 6 Solve Real Life problems involving ratio and proportion</p> <p>Yr 6 Round any whole number to a required degree of accuracy.</p> <p>Yr 6 Add & subtract fractions with different denominators & mixed numbers.</p> <p>Yr 6 Multiply simple pairs of proper fractions, writing the answer in the simplest form.</p> <p>Yr 6 Divide proper fractions by whole numbers.</p>
World War 2 (4 weeks)	<p>Imperial and Metric measures – learn some common conversions Miles and kilometres, pints and litres; convert between</p>	<p>Area and perimeter x 2 weeks Recognise that shapes with the same area can have different perimeters and vice</p>	<p>Closely related facts</p> <p>Solve problems involving the calculation of percentages</p>	<p>Yr 6 Use closely related facts e.g. 12 x 13</p>

	<p>them</p> <p>Rationing Air raid shelters-confined space</p> <p>Coordinates-battleships etc Position and direction</p>	<p>versa</p> <p>Recognise when it is possible to use formulae for area and volume of shapes</p> <p>Calculate area of compound shapes, parallelograms and triangles</p> <p>Capacity x 1 week</p> <p>Length x 1 week</p> <p>Solve number problems including negative numbers, rounding, writing and ordering numbers to 10,000,000</p>	<p>such as 15% of 360</p> <p>Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples</p> <p>Read, write and convert between standard units converting length, mass, volume and time from smaller units to larger units and vice versa.</p>	Yr 6 Compare and order numbers up to 10,000,000
Anti – bullying (1 week)	Team Board games - reinforce calculations	<p>Ratio and Proportion</p> <p>Solving fraction and percentage of amount problems</p>	Unitary fractions of amounts	
Light and Dark (2 weeks)	<p>Measuring in Shadows experiment</p> <p>AA Angles when light is reflected off a mirror</p> <p>Interpret and construct line graphs and use these to solve problems</p>	<p>Data handling – interpreting graphs</p> <p>Assessment week</p>	Roman numerals	<i>Yr 6 Generate and justify estimates using them to check calculations</i>
Scratch (2 weeks)	<p>Algebra</p> <p>Use simple formulae</p>	Revisit Calculation methods (compact method where	Perform mental calculations,	Yr 6 Solve simple algebraic expressions and equations

	<p>Data Handling Collect, analyse, evaluate and present data and information (6) using a range of different digital devices</p> <p>Inverse operations; BODMAS (order of calcs); use of brackets; Sequences and Patterns (Brackets for repeat sequences)</p>	<p>possible) and solving one step and two step word problems</p> <p>Formal written methods for short multiplication and division</p> <p>Algebra Generate and describe linear number sequences Express missing number problems algebraically Find pairs of numbers that satisfy an equation with two unknowns Enumerate possibilities of combinations of two variables</p>	<p>including mixed operations and with large numbers</p> <p>e.g. $3 \times 400 / 2 + 12$.</p>	
--	---	---	--	--

Spring Themes	Cross curricular maths	Maths Units	Skills	Non-negotiables
Going for Goals (1 week)	<p>Data handling</p> <p>Mental Tests – improving my performance – continuous throughout the term.</p>	<p>Place Value</p> <p>Word problems linked to fractions, decimals and percentages</p>	<p>Use their knowledge of the order of operations to carry out calculations involving four operations.</p> <p>Mental Test papers</p>	Yr 6 Know BODMAS to solve problems

<p>Exploring Earth and Beyond (4 weeks)</p>	<p>Coordinates 4 quadrants Describe positions on the full coordinate (all 4 quadrants)</p> <p>Position and direction & compass points</p>	<p>Calculations – inverse operations / solving missing number calculations using factors, inverse, commutivity</p> <p>Division -written methods Line method and bus-stop method Different types of remainders</p> <p>Use written division methods in cases where the answer has up to two decimal places.</p>	<p>Mental Test papers</p> <p>Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius</p> <p>Recognise angles where they meet at a point, are on a straight line or are vertically opposite and find missing angles</p>	<p>Yr 6 Multiply: 4-digit by 2-digit</p> <p>Yr 6 Divide: 4-digit by 2-digit Express remainder as a decimal to 2dp or a fraction</p>
<p>The Mayan Civilisation (2 weeks)</p>	<p>Journeys - distances / costs Value for money / Percentages savings Different counting systems</p>	<p>Solve problems which require answers to be rounded to specified degrees of difficulty</p> <p>Draw and translate simple shapes on the co-ordinate plane and reflect them in the axes.</p>	<p>Mental Test papers</p> <p>Recall and use equivalences between simple fractions, decimals and percentages including different contexts.</p>	
<p>Local Heritage project (4 weeks)</p>	<p>Shape and space - map reading with coordinates /</p>	<p>Draw 2D shapes using given dimensions and angles</p> <p>Recognise, describe and build simple 3D shapes including making nets</p> <p>Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals</p>	<p>Mental Test papers</p> <p>Missing angles problems mentally</p>	

		and regular polygons Recall and use equivalences between simple fractions, decimals and percentages including in different contexts		
Forces (water resistance) (2 weeks)	Measures Measuring throw lengths Finding averages of throw lengths Line graph: length of wing on spinner, against time taken to fall to the ground Speed and Distance problems Shape and Space	Data Handling Line graphs and pie charts revision Calculate and interpret the mean as an average Calculate and estimate the volume of cubes and cuboids using standard units including cm and cubic cm and mm and km cubed.	Mental Test papers	

