Class 4 – Maths Planning: 2023-24

White Rose Scheme for mixed years 5/6 planning used as basis to ensure coverage:

re-organised and tailored for Wreningham requirements.

	Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7		Wk 8	Wk 9	Wk 10	Wk 11	Wk 12	Wk 13	Wk14
Autumn 5&6	Place Value		Four Operations						Fractions				Assmnt	RES	Area
Year 3 used for support group	Place Value		Addition and Subtraction						Multiplication and Division				Assmnt	RES	Consolidation
	Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7		Wk 8	Wk 9	Wk 10	Wk 11	Wk 12		
Spring 5&6	Perimeter Area Volume		Measurement- Converting		Decimals and Percentages			Year 6 Algebra Year 5 Decimal		Stats	Coords	Shape – properties angles			
Year 3 used for support group	Length and perimeter		Measurement and money		Place Value recap		Fractions			Statistics then Coords		Properties of shape			
	Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7		Wk 8	Wk 9	Wk 10	Wk 11	Wk 12	Wk 13	Wk14
Summer 5&6	Ratio Y6 Fractions Y5	Fractions	Measurement Perimeter, area volume	SATS Assmnt	Year 6 Algebra 2 Year 5 Intro Algebra			Statistics – Recording, drawing, interpreting		Fractions, Decimals and Percentages		Negative Numbers	Converting numbers	Problem Solving projects	
Year 3 used for support group	Fractions			Time				Place value consolidation – reasoning focus		Multiplication and division recap		Mass and capacity		4 operations consolidation	

Further details of objectives covered can be found in table below.

Maths Area	National Curriculum Requirements Year 5	National Curriculum Requirements Year 6
Number and Place Value	read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers through zero round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 solve number problems and practical problems that involve all of the above read Roman numerals to 1000 (M) and recognise years written in Roman numerals.	read write, order and compare numbers up to 10,000,000 and determine the value of each digit use negative numbers in context, and calculate intervals across 0 round any whole number to a required degree of accuracy solve problems that require answers to be rounded to specifies degrees of accuracy. solve number and practical problems that involve all of the above.
Multiplication and Division	See ongoing number objectives	
Measuring and calculating through shape	measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm^2) and square metres (m^2) and estimate the area of irregular shapes use the properties of rectangles to deduce related facts and missing lengths and angles distinguish between regular and irregular polygons based on reasoning about equal sides 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 that shapes with the same area can have different perimeters and vice versa recognise when it is possible to use formulae for area and volume of shapes calculate the area of parallelograms and triangles.

Maths Area	National Curriculum Requirements Year 5	National Curriculum Requirements Year 6
Fractions, decimals and percentages	compare and order fractions whose denominators are all multiples of the same number identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, $^{2}/_{5}$+ $^{4}/_{5}$ = $^{6}/_{5}$ or 1 $^{1}/_{5}$	use common factors to simplify fractions; use common multiples to express fractions in the same denomination compare and order fractions, including fractions > 1 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.
Addition and Subtraction	See ongoing number objectives	
Statistics	solve comparison, sum and difference problems using information presented in a line graph complete, read and interpret information in tables, including timetables. solve problems involving converting between units of time	interpret and construct pie charts and line graphs and use these to solve problems calculate and interpret the mean as an average.

Maths Area	National Curriculum Requirements Year 5	National Curriculum Requirements Year 6
Fractions, decimals and percentages	recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents round decimals with two decimal places to the nearest whole number and to one decimal place read, write, order and compare numbers with up to three decimal places solve problems involving number up to three decimal places recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal solve problems which require knowing percentage and decimal equivalents of $^1/_2$, ¼, $^1/_5$, $^2/_5$, $^4/_5$ and those fractions with a denominator of a multiple of 10 or 25.	As for Yr 5
Multiplication and Division	See ongoing number objectives	
Geometry	know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles draw given angles, and measure them in degrees (º) Be able to identify: angles at a point and one whole turn (total 360º) angles at a point on a straight line and ½ a turn (total 180º) other multiples of 90º	recognise angles where they meet at a point, are on a straight line or vertically opposite, and find missing angles.

Maths Area	National Curriculum Requirements Year 5	National Curriculum Requirements Year 6
Fractions, decimals and percentages	add and subtract fractions with the same denominator and denominators that are multiples of the same number multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams read and write decimal numbers as fractions [for example, 0.71 = $^{71}/_{100}$]	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 divide proper fractions by whole numbers associate a fraction with division and calculate decimal fraction equivalents
Addition and Subtraction	See ongoing number objectives	
Geometry: position and direction	identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed.	describe positions on the full co-ordinate grid (all four quadrants) draw and translate simple shapes on the co-ordinate plane, and reflect them in the axes.

Maths Area	National Curriculum Requirements Year 5	National Curriculum Requirements Year 6
Calculations(Yr 5) Algebra Ratio and Proportion (Yr 6)	See ongoing number objectives	use simple formulae 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 . solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison 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.

Maths Area	National Curriculum Requirements Year 5	National Curriculum Requirements Year 6
Geometry: properties of shape	identify 3-D shapes, including cubes and other cuboids, from 2-D representations estimate volume [for example, using 1 cm^3 blocks to build cuboids (including cubes)] and capacity [for example, using water] solve problems involving measure (length, mass, volume) using decimal notation, including scaling and convert between different units of metric measure (centimetre and millimetre, litre and millilitre)	recognise, describe and build simple 3-D shapes, including making nets draw 2-D shapes using given dimensions and angles calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm^3) and cubic metres (m^3), and extending to other units [for example, mm^3 and km^3]. illustrate and name parts circles including radius, diameter, and circumference and know that the diameter is twice the radius

Maths Area	National Curriculum Requirements Year 5
Measurement	use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling. convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints
Number	**Multiplication and Division** identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers establish whether a number up to 100 is prime and recall prime numbers up to 19 multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers multiply and divide numbers mentally drawing upon known facts divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3) solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates. **Addition and Subtraction** add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) add and subtract numbers mentally with increasingly large numbers use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.

Maths Area	National Curriculum Requirements Year 6
Measurement	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 convert between miles and kilometres
Number: Addition Subtraction Multiplication Division	multiply multi digit numbers up to 4 digit by 2 digit whole number using the formal written method of long multiplication divide numbers up to 4 digit by a 2 digit whole number using the formal written methods of long division, and interpret remainders as whole number remainders, fractions or by rounding as appropriate for the context divide numbers up to 4 digit by a 2 digit whole number using the formal written methods of short division where appropriate, interpreting remainders according to the context perform mental calculations, including with mixed operations and large numbers. identify common factors, common multiples and prime numbers use their knowledge of the order of operations to carry out calculations involving the four operations solve addition and subtraction multi-step problems in context, deciding which operations and methods to use and why solve problems using 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.
Algebra	use simple formulae 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
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 solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison 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.