



Year 5 Maths Long Term Map

Autumn	Number Place value	Number Addition and subtraction	Number Multiplication and division A	Number Fractions A		
Spring	Number Multiplication and division B	Number Fractions B	Number Decimals and percentages	Measurement Perimeter and area	Statistics	
Summer	Geometry Shape	Geometry Position and direction	Number Decimals	Number Negative numbers	Measurement Converting units	Measurement Volume

White Rose Steps		
Number: Place Value	Can you...	National Curriculum Objectives
Step 1: Roman Numerals to 1,000	Can you read and write Roman Numerals to 1,000 (M)?	<ul style="list-style-type: none"> Read Roman numerals to 1,000 (M) and recognise years written in Roman numerals 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
Step 2: Numbers to 10,000	Can you identify place value and represent numbers up to 10,000?	
Step 3: Numbers to 100,000	Can you identify place value and represent numbers up to 100,000?	
Step 4: Numbers to 1,000,000	Can you identify place value and represent numbers up to 1,000,000?	
Step 5: Read and write numbers to 1,000,000	Can you read and write numbers to 1,000,000?	<ul style="list-style-type: none"> Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit Solve number problems and practical problems involving the above
Step 6: Powers of 10	Can you use place value to calculate with powers of 10?	
Step 7: 10/100/1,000/10,000/100,000 more or less	Can you find numbers 10, 100, 1,000, 10,000, 100,000 more or less than a given number?	<ul style="list-style-type: none"> Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000 Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit
Step 8: Partition numbers to 1,000,000	Can you partition numbers up to 1,000,000?	
Step 9: Number line to 1,000,000	Can you recognise the value of different intervals on number lines up to 1,000,000?	<ul style="list-style-type: none"> 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
Step 10: Compare and order numbers to 100,000	Can you compare and order numbers to 100,000?	
Step 11: Compare and order numbers to 1,000,000	Can you compare and order numbers to 1,000,000?	<ul style="list-style-type: none"> Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit Round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000
Step 12: Round to the nearest 10, 100 or 1,000	Can you round to the nearest 10, 100 or 1,000?	
Step 13: Round within 100,000	Can you round any number within 100,000 to a required degree of accuracy?	
Step 14: Round within 1,000,000	Can you round any number within 1,000,000 to a required degree of accuracy?	

Number: Addition and Subtraction		
Step 1: Mental Strategies	Can you add and subtract numbers mentally with increasingly large numbers?	<ul style="list-style-type: none"> Add and subtract numbers mentally with increasingly large numbers
Step 2: Add whole numbers with more than four digits	Can you add whole numbers with more than four digits?	<ul style="list-style-type: none"> Add and subtract whole numbers with more than four digits, including using formal written methods (columnar addition and subtraction) Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
Step 3: Subtract whole numbers with more than four digits	Can you subtract whole numbers with more than four digits?	
Step 4: Round to check answers	Can you round any number up to 1,000,000 to check answers to calculations?	<ul style="list-style-type: none"> Round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000 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
Step 5: Inverse operations (addition and subtraction)	Can you solve multi-step problems using the inverse operations?	<ul style="list-style-type: none"> Add and subtract whole numbers with more than four digits, including using formal written methods (columnar addition and subtraction) Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
Step 6: Multi-step addition and subtraction problems	Can you solve multi-step addition and subtraction problems?	
Step 7: Compare calculations	Can you solve multi-step problems by comparing calculations?	<ul style="list-style-type: none"> Add and subtract numbers mentally with increasingly large numbers
Step 8: Find missing numbers	Can you solve multi-step problems by finding missing numbers?	<ul style="list-style-type: none"> Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
Number: Multiplication and Division A		
Step 1: Multiples	Can you solve problems involving multiples?	<ul style="list-style-type: none"> Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers Solve problems involving multiplication and division, including using their knowledge of factors and multiples, squares and cubes
Step 2: Common multiples	Can you solve problems involving common multiples?	
Step 3: Factors	Can you solve problems involving factors?	
Step 4: Common factors	Can you solve problems involving common factors?	<ul style="list-style-type: none"> 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
Step 5: Prime numbers	Can you solve problems involving prime numbers?	
Step 6: Square numbers	Can you solve problems involving square numbers?	<ul style="list-style-type: none"> 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
Step 7: Cube numbers	Can you solve problems involving cube numbers?	

Step 8: Multiply 10, 100 and 1,000	Can you multiply whole numbers by 10, 100 and 1,000?	<ul style="list-style-type: none"> • Multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000 • Multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000 • Multiply and divide numbers mentally, drawing upon known facts
Step 9: Divide 10, 100 and 1,000	Can you divide whole numbers by 10, 100 and 1,000?	
Step 10: Multiples of 10, 100 and 1,000	Can you multiply and divide numbers mentally by drawing upon known facts?	
Number: Fractions A		
Step 1: Find fractions equivalent to a unit fraction	Can you find fractions equivalent to a unit fraction?	<ul style="list-style-type: none"> • Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths
Step 2: Find fractions equivalent to a non-unit fraction	Can you find fractions equivalent to a non-unit fraction?	
Step 3: Recognise equivalent fractions	Can you recognise equivalent fractions?	
Step 4: Convert improper fractions to mixed numbers	Can you Convert improper fractions to mixed numbers?	<ul style="list-style-type: none"> • Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number
Step 5: Convert mixed numbers to improper fractions	Can you convert mixed numbers to improper fractions?	
Step 6: Compare fractions less than 1	Can you compare fractions less than 1?	<ul style="list-style-type: none"> • 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
Step 7: Order fractions less than 1	Can you order fractions less than 1?	
Step 8: Compare and order fractions greater than 1	Can you compare and order fractions greater than 1?	<ul style="list-style-type: none"> • Compare and order fractions whose denominators are all multiples of the same number • Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number
Step 9: Add and subtract fractions with the same denominator	Can you add and subtract fractions with the same denominator?	
Step 10: Add fractions within 1	Can you add fractions within 1?	<ul style="list-style-type: none"> • Add and subtract fractions with the same denominator, and denominators that are multiples of the same number • Add and subtract fractions with the same denominator, and denominators that are multiples of the same number
Step 11: Add fractions with a total greater than 1	Can you add fractions with a total greater than 1?	
Step 12: Add to a mixed number	Can you add fractions to a mixed number?	
Step 13: Add two mixed numbers	Can you add two mixed numbers?	

		<ul style="list-style-type: none"> Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number
Step 14: Subtract fractions	Can you subtract fractions with the same denominator, and denominators that are multiples of the same number?	<ul style="list-style-type: none"> Add and subtract fractions with the same denominator, and denominators that are multiples of the same number
Step 15: Subtract from a mixed number	Can you subtract amounts from a mixed number?	<ul style="list-style-type: none"> Add and subtract fractions with the same denominator, and denominators that are multiples of the same number Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number
Step 16: Subtract from a mixed number - breaking the whole	Can you subtract from a mixed number - breaking the whole?	
Step 17: Subtract two mixed numbers	Can you subtract two mixed numbers?	
Number: Multiplication and Division B		
Step 1: Multiply up to a 4-digit number by a 1-digit number	Can you multiply up to a 4-digit number by a 1-digit number?	<ul style="list-style-type: none"> Multiply numbers up to four digits by a 1- or 2-digit number using a formal written method, including long multiplication for 2-digit numbers
Step 2: Multiply a 2-digit number by a 2-digit number (area model)	Can you multiply a 2-digit number by a 2-digit number using the area model?	
Step 3: Multiply a 2-digit number by a 2-digit number	Can you multiply a 2-digit number by a 2-digit number?	
Step 4: Multiply a 3-digit number by a 1-digit number	Can you multiply a 3-digit number by a 1-digit number?	
Step 5: Multiply a 4-digit number by a 2-digit number	Can you multiply a 4-digit number by a 2-digit number?	
Step 6: Solve problems with multiplication	Can you solve problems involving multiplication?	
Step 7: Short division	Can you use short division to divide numbers?	<ul style="list-style-type: none"> Divide up to four digits by a 1-digit number using the formal written method of short division and interpret remainders appropriately for the context
Step 8: Divides a 4-digit number by a 1-digit number	Can you divide a 4-digit number by a 1-digit number?	
Step 9: Divide with remainders	Can you use short division to divide numbers with remainders?	
Step 10: Efficient division	Can you solve division problems by choosing the most efficient method?	
Step 11: solve problems with multiplication and division	Can you solve problems involving multiplication and division?	<ul style="list-style-type: none"> Divide up to four digits by a 1-digit number using the formal written method of short division and interpret remainders appropriately for the context

		<ul style="list-style-type: none"> Solve problems involving multiplication and division, including using their knowledge of factors and multiples, squares and cubes
Number: Fractions B		
Step 1: Multiply a unit fraction by an integer	Can you multiply a unit fraction by an integer?	<ul style="list-style-type: none"> Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams
Step 2: Multiply a non-unit fraction by an integer	Can you multiply a non-unit fraction by an integer?	
Step 3: Multiply a mixed number by an integer	Can you multiply a mixed number by an integer?	
Step 4: Calculate a fraction of a quantity	Can you calculate a fraction of a quantity?	
Step 5: Fraction of an amount	Can you find the fraction of an amount?	
Step 6: Find the whole	Can you find the whole?	
Step 7: Use fractions as operators	Can you use fractions as operators?	<ul style="list-style-type: none"> Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number (Y4)
Number: Decimals and Percentages		
Step 1: Decimals up to 2 decimal places	Can you read decimals up to 2 decimal places?	<ul style="list-style-type: none"> Read, write, order and compare numbers with up to 3 decimal places
Step 2: Equivalent fractions and decimals (tenths)	Can you read and write decimal numbers as fractions in the tenths Colum?	<ul style="list-style-type: none"> Read and write decimal numbers as fractions
Step 3: Equivalent fractions and decimals (hundredths)	Can you read and write decimal numbers as fractions in the hundredths Colum?	<ul style="list-style-type: none"> Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths Read and write decimal numbers as fractions
Step 4: Equivalent fractions and decimals	Can you find equivalent fractions and decimals?	<ul style="list-style-type: none"> Read and write decimal numbers as fractions Solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ and those fractions with a denominator of a multiple of 10 or 25
Step 5: Thousandths as fractions	Can you identify thousandths as fractions?	<ul style="list-style-type: none"> Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents
Step 6: Thousandths as decimals	Can you identify thousandths as decimals?	<ul style="list-style-type: none"> Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents Read, write, order and compare numbers with up to 3 decimal places

Step 7: Thousandths on a place value chart	Can you identify thousandths on a place value chart?	<ul style="list-style-type: none"> Read, write, order and compare numbers with up to 3 decimal places Solve problems involving numbers up to 3 decimal places
Step 8: Order and compare decimals (same number of decimal places)	Can you order and compare decimals?	
Step 9: Order and compare any decimals with up to 3 decimal places	Can you order and compare decimals up to 3 decimal places?	
Step 10: Round to the nearest whole number	Can you round decimals to the nearest whole number?	<ul style="list-style-type: none"> Round decimals with 2 decimal places to the nearest whole number and to 1 decimal place
Step 11: Round to 1 decimal place	Can you round decimals to 1 decimal place?	
Step 12: Understand percentages	Can you understand and identify percentages?	<ul style="list-style-type: none"> Recognise the per cent symbol (%) and understand that per cent relates to "number of parts per 100", and write percentages as a fraction with denominator 100, and as a decimal fraction Recognise the per cent symbol (%) and understand that per cent relates to "number of parts per 100", and write percentages as a fraction with denominator 100, and as a decimal fraction Solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ and those fractions with a denominator of a multiple of 10 or 25
Step 13: Percentages as fractions	Can you write a percentage as a fraction?	
Step 14: Percentages as decimals	Can you write a percentage as a decimal?	
Step 15: Equivalent fractions, decimals and percentages	Can you find equivalent fractions, decimals and percentages?	
Measurement: Perimeter and Area		
Step 1: Perimeter of rectangles	Can you find the perimeter of rectangles?	<ul style="list-style-type: none"> Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres
Step 2: Perimeter of rectilinear shapes	Can you find the perimeter of rectilinear shapes?	
Step 3: Perimeter of polygons	Can you find the perimeter of polygons?	
Step 4: Area of rectangles	Can you find the area of rectangles?	<ul style="list-style-type: none"> Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres Calculate and compare the area of rectangles (including squares), including using standard units, square centimetres (cm²) and square metres (m²), and estimate the area of irregular shapes
Step 5: Area of compound shapes	Can you find the area of compound shapes?	
Step 6: Estimate area	Can you estimate the area of irregular shapes?	<ul style="list-style-type: none"> Calculate and compare the area of rectangles (including squares), including using standard units, square centimetres (cm²) and square metres (m²), and estimate the area of irregular shapes
Statistics		
Step 1: Draw line graphs	Can you draw line graphs to display data?	

Step 2: Read and interpret line graphs	Can you read and interpret line graphs?	<ul style="list-style-type: none"> Solve comparison, sum and difference problems using information presented in a line graph Complete, read and interpret information in tables, including timetables
Step 3: Read and interpret tables	Can you read and interpret tables?	
Step 4: Two-way tables	Can you complete, read and interpret two-way tables?	
Step 5: Read and interpret timetables	Can you complete, read and interpret timetables?	

Geometry: Shape

Step 1: Understand and use degrees	Can you understand and use degrees?	<ul style="list-style-type: none"> Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles
Step 2: Classify angles	Can you classify a range of angles?	
Step 3: Estimate angles	Can you estimate the degrees in a range of angles?	
Step 4: Measure angles up to 180	Can you measure angles up to 180 degrees?	<ul style="list-style-type: none"> Draw given angles, and measure them in degrees ($^{\circ}$)
Step 5: Draw lines and angles accurately	Can you draw lines and angles accurately?	
Step 6: Calculate angles around a point	Can you calculate angles around a point?	<ul style="list-style-type: none"> Identify angles at a point and 1 whole turn (total 360°)
Step 7: Calculate angles on a straight line	Can you calculate angles on a straight line?	
Step 8: Lengths and angles in shapes	Can you identify lengths and angles in shapes?	<ul style="list-style-type: none"> Identify: angles at a point and 1 whole turn (total 360°); angles at a point on a straight line and half a turn (total 180°) Use the properties of rectangles to deduce related facts and find missing lengths and angles
Step 9: Regular and irregular polygons	Can you distinguish between regular and irregular polygons based on reasoning about equal sides and angles?	
Step 10: 3-D shapes	Can you identify various 3-D shapes?	<ul style="list-style-type: none"> Identify 3-D shapes, including cubes and other cuboids, from 2-D representations

Geometry: Position and Direction

Step 1: Read and plot coordinates	Can you read and plot coordinates?	<ul style="list-style-type: none"> 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
Step 2: Problem solving with coordinates	Can you solve problems involving coordinates?	
Step 3: Translation	Can you identify, describe and represent the position of a shape following translation?	
Step 4: Translation with coordinates	Can you translate shapes using coordinates?	
Step 5: Lines of symmetry	Can you identify lines of symmetry?	

Step 6: Reflection in horizontal and vertical lines	Can you reflect shapes in horizontal and vertical lines?	
Number: Decimals		
Step 1: Use known facts to add and subtract decimals within 1	Can you use known facts to add and subtract decimals within 1?	<ul style="list-style-type: none"> Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents Solve problems involving number up to 3 decimal places
Step 2: Complements to 1	Can you find complements to 1 for numbers with up to 3 decimal places?	
Step 3: Add and subtract decimals across 1	Can you add and subtract decimals across 1?	
Step 4: Add decimals with the same number of decimal places	Can you add decimals with the same number of decimal places?	
Step 5: Subtract decimals with the same number of decimal numbers	Can you subtract decimals with the same number of decimal numbers?	
Step 6: Add decimals with different numbers of decimal places	Can you add decimals with different numbers of decimal places?	
Step 7: Subtract decimals with different numbers of decimal places	Can you subtract decimals with different numbers of decimal places?	
Step 8: Efficient strategies for adding and subtracting decimals	Can you explore a range of calculation strategies to solve problems involving numbers up to 3 decimal places?	<ul style="list-style-type: none"> Solve problems involving number up to 3 decimal places
Step 9: Decimal sequences	Can you combine your knowledge of number sequences and decimals to explore decimal sequences?	<ul style="list-style-type: none"> Read, write, order and compare numbers with up to 3 decimal places Solve problems involving number up to 3 decimal places
Step 10: Multiply by 10, 100 and 1,000	Can you multiply whole numbers including those involving decimals by 10, 100 and 1,000?	<ul style="list-style-type: none"> Multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000
Step 11: Divide by 10, 100 and 1,000	Can you divide whole numbers including those involving decimals by 10, 100 and 1,000?	
Step 12: Multiply and divide decimals - missing values	Can you multiply and divide decimals with missing values?	
Number: Negative Numbers		
Step 1: Understand negative numbers	Can you understand and interpret negative numbers in context?	<ul style="list-style-type: none"> Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero.
Step 2: Count through zero in 1s	Can you count backwards through zero in 1s?	

Step 3: Count through zero in multiples	Can you count backwards through zero in multiples?	
Step 4: Compare and order negative numbers	Can you compare and order negative numbers?	
Step 5: Find the difference	Can you find the different between negative numbers?	

Measurement: Converting Units

Step 1: Kilograms and kilometres	Can you convert between kilograms and kilometres?	<ul style="list-style-type: none"> Convert between different units of metric measure [for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre]
Step 2: Millimetres and millilitres	Can you convert between millimetres and millilitres?	
Step 3: Convert units of length	Can you convert different units of length?	
Step 4: Convert between metric and imperial units	Can you convert between metric and imperial units?	<ul style="list-style-type: none"> Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints
Step 5: Convert units of time	Can you convert different units of time?	<ul style="list-style-type: none"> Solve problems involving converting between units of time
Step 6: Calculate with timetables	Can you solve calculation problems with timetables?	

Measurement: Volume

Step 1: Cubic centimetres	Can you calculate the volume using cubic centimetres?	<ul style="list-style-type: none"> Estimate volume [for example, using 1 cm³ blocks to build cuboids (including cubes)] and capacity
Step 2: Compare volume	Can you find the volume of different shapes by counting cubes, then decide which shape has the greater volume?	
Step 3: Estimate volume	Can you estimate the volume of different objects?	
Step 4: Estimate capacity	Can you estimate the capacity of different objects?	<ul style="list-style-type: none"> Estimate volume and capacity [for example, using water]