Year 4 Maths Long Term Map

Autumn	Number **Place value**	Number **Addition and subtraction**	Measurement **Area**	Number **Multiplication and division A**	Consolidation		
Spring	Number **Multiplication and division B**	Measurement **Length and perimeter**	Number **Fractions**	Number **Decimals A**			
Summer	Number **Decimals B**	Measurement **Money**	Measurement **Time**	Consolidation	Geometry **Shape**	Statistics	Geometry **Position and direction**

White Rose Steps		
Number: Place Value	**Can you…**	**National Curriculum Objectives**
Step 1: Represent numbers to 1,000	Can you represent numbers to 1000?	• Read and write numbers up to 1,000 in numerals and words (Y3) • Identify, represent and estimate numbers using different representations
Step 2: Partition numbers to 1,000	Can you partition numbers up to 1000?	• Identify, represent and estimate numbers using different representations • Recognise the place value of each digit in a 3-digit number (hundreds, tens, ones) (Y3)
Step 3: Number line to 1,000	Can you label, identify and find missing values on number lines to 1000?	• Identify, represent and estimate numbers using different representations
Step 4: Thousands	Can you count in thousands and explore multiples of a thousand?	• Count in multiples of 6, 7, 9, 25 and 1,000
Step 5: Represent numbers to 10,000	Can you represent numbers to 10,000?	• Recognise the place value of each digit in a 4-digit number (thousands, hundreds, tens and ones) • Identify, represent and estimate numbers using different representations
Step 6: Partition numbers to 10,000	Can you partition numbers to 10,000 into thousands, hundreds, tens and ones?	
Step 7: Flexible partitioning of numbers to 10,000	Can you partition numbers up to 10,000 in different ways?	
Step 8: Find 1, 10, 100, 1,000 more or less	Can you find 1, 10, 100, 1,000 more or less than a number up to 10,000?	• Find 1,000 more or less than a given number
Step 9: Number line to 10,000	Can you explore number lines to 10,000?	• Identify, represent and estimate numbers using different representations • Order and compare numbers beyond 1,000
Step 10: Estimate on a number line to 10,000	Can you estimate on a number line to 10,000?	
Step 11: Compare numbers to 10,000	Can you compare numbers to 10,000?	• Order and compare numbers beyond 1,000
Step 12: Order numbers to 10,000	Can you order numbers to 10,000?	
Step 13: Roman Numerals	Can you read and write Roman numerals to 100?	• Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value
Step 14: Round to the nearest 10	Can you round to the nearest 10?	• Round any number to the nearest 10, 100 or 1,000
Step 15: Round to the nearest 100	Can you round to the nearest 100?	
Step 16: Round to the nearest 1,000	Can you round to the nearest 1000?	

Step 17: Round to the nearest 10, 100 or 1,000	Can you round to the nearest 10, 100 or 1000?	
Number: Addition and Subtraction		
Step 1: Add and subtract 1s, 10s, 100s and 1000s	Can you add and subtract 1s, 10s, 100s and 1000s?	• Add and subtract numbers with up to four digits using the formal written methods of columnar addition and subtraction where appropriate • Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why
Step 2: Add up to two 4-dgiit numbers – no exchange	Can you add up to two 4-digit numbers with no exchanges?	
Step 3: Add two 4-digit numbers – one exchange	Can you add two 4-digit numbers with one exchange?	
Step 4: Add two 4-digit numbers – more than one exchange	Can you add two 4-digit numbers with more than one exchange?	
Step 5: Subtract two 4-dgiit numbers – no exchange	Can you subtract two 4-digit numbers with no exchanges?	
Step 6: Subtract two 4-digit numbers – one exchange	Can you subtract two 4-digit numbers with one exchange?	
Step 7: subtract two 4-digit numbers – more than one exchange	Can you subtract two 4-digit numbers with more than one exchange?	
Step 8: Efficient subtraction	Can you subtract using an efficient method?	• Add and subtract numbers with up to four digits using the formal written methods of columnar addition and subtraction where appropriate
Step 9: Estimate answers	Can you estimate answers to addition and subtraction calculations using number lines and rounding?	• Estimate and use inverse operations to check answers to a calculation
Step 10: Checking strategies	Can you use the inverse to check your calculations?	
Measurement: Area		
Step 1: What is area?	Can you explore different ways of working out area of a shape?	• Find the area of rectilinear shapes by counting squares
Step 2: Count squares	Can you count squares inside a shape to calculate area?	
Step 3: Make Shapes	Can you calculate area and draw rectilinear shapes with a specific area?	
Step 4: Compare areas	Can you compare the areas of rectilinear shapes?	
Number: Multiplication and Division A		
Step 1: Multiples of 3	Can you count in and identify multiples of 3?	• Recall multiplication and division facts for multiplication tables up to 12 × 12 • Recognise and use factor pairs and commutativity in mental calculations
Step 2: Multiply and divide by 6	Can you multiply and divide by 6?	
Step 3: 6 times-table and division facts	Can you recall the 6 times table and related division facts?	
Step 4: Multiply and divide by 9	Can you multiply and divide by 9?	

Step 5: 9 times-table and division facts	Can you recall the 9 times table and related division facts?	
Step 6: The 3, 6 and 9 times-tables	Can you make links between the 3, 6 and 9 times-tables?	
Step 7: Multiply and divide by 7	Can you multiply and divide by 7?	• Count in multiples of 6, 7, 9, 25 and 1,000 • Recall multiplication and division facts for multiplication tables up to 12 × 12
Step 8: 7 times-table and division facts	Can you recall the 7 times table and related division facts?	
Step 9: 11 times-table and division facts	Can you recall the 11 times table and related division facts?	• Recall multiplication and division facts for multiplication tables up to 12 × 12 • Recognise and use factor pairs and commutativity in mental calculations
Step 10: 12 times-table and division facts	Can you recall the 12 times table and related division facts?	
Step 11: Multiply by 1 and 0	Can you multiply by 1 and 0?	• Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers
Step 12: Divide a number by 1 and itself	Can you divide a number by 1 and itself?	
Step 13: Multiply three numbers	Can you multiply 3 numbers together?	
Consolidation		
Number: Multiplication and Division B		
Step 1: Factor pairs	Can you find all of the factor pairs of a given number?	• Recognise and use factor pairs and commutativity in mental calculations
Step 2: Use factor pairs	Can you use factor pairs to complete equivalent calculations?	
Step 3: Multiply by 10	Can you multiply whole numbers by 10?	• Recall multiplication and division facts for multiplication tables up to 12 × 12 • Multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000 (Y5)
Step 4: Multiply by 100	Can you multiply whole numbers by 100?	
Step 5: Divide by 10	Can you divide whole numbers by 10?	
Step 6: Divide by 100	Can you divide whole numbers by 100?	
Step 7: Related facts – multiplication and division	Can you use known multiplication and division facts to help calculated related facts?	• Solve problems involving multiplying and adding, including using the distributive law to multiply 2-digit numbers by 1 digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects
Step 8: Informal written methods for multiplication	Can you multiply using an informal method?	• Solve problems involving multiplying and adding, including using the distributive law to multiply 2-digit numbers by 1 digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects • Recognise and use factor pairs and commutativity in mental calculations
Step 9: Multiply a 2-digit number by a 1-digit number	Can you multiply a 2-digit number by a 1-digit number?	• Multiply 2-digit and 3-digit numbers by a 1-digit number using formal written layout

Step 10: Multiply a 3-digit number by a 1-digit number	Can you multiply a 3-digit number by a 1-digit number?	
Step 11: Divide a 2-digit number by a 1-digit number (1)	Can you divide a 2-digit number by a 1-digit number?	• Recall multiplication and division facts for multiplication tables up to 12 × 12 • Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together 3 numbers
Step 12: Divide a 2-digit number by a 1-digit number (2)	Can you divide a 2-digit number by a 1-digit number?	
Step 13: Divide a 3-digit number by a 1-digit number	Can you divide a 3-digit number by a 1-digit number?	
Step 14: Correspondence problems	Can you use multiplication to work out the number of possible combinations?	• Solve problems involving multiplying and adding, including using the distributive law to multiply 2-digit numbers by 1 digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects
Step 15: Efficient multiplication	Can you use the most efficient multiplication method to solve a problem?	
Measurement: Length and Perimeter		
Step 1: Measure in kilometres and metres	Can you measure in kilometres and metres?	• Convert between different units of measure [for example, kilometre to metre; hour to minute]
Step 2: Equivalent lengths (kilometres and metres)	Can you calculate equivalent lengths (km and m)?	
Step 3: Perimeter on a grid	Can you calculate perimeter on a grid?	• Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres
Step 4: Perimeter of a rectangle	Can you calculate the perimeter of rectangles?	
Step 5: Perimeter of rectilinear shapes	Can you measure and calculate the perimeter of rectilinear shapes?	
Step 6: Find missing lengths in rectilinear shapes	Can you find missing lengths in rectilinear shapes?	
Step 7: Calculate the perimeter of rectilinear shapes	Can you calculate the perimeter of rectilinear shapes where there is missing information?	
Step 8: Perimeter of regular polygons	Can you calculate the perimeter of regular polygons?	
Step 9: Perimeter of polygons	Can you calculate the perimeter of irregular polygons?	
Number: Fractions		
Step 1: Understand the whole	Can you investigate the whole and its equal parts?	• Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators (Y3)
Step 2: Count beyond 1	Can you count in fractions beyond 1?	This small step is not taken from the Year 4 National Curriculum. It is included to take into account the non-statutory DfE Ready to Progress guidance.
Step 3: Partition a mixed number	Can you partition a mixed number?	
Step 4: Number lines with mixed numbers	Can you represent mixed numbers on a number line?	

Step 5: Compare and order mixed numbers	Can you compare and order mixed numbers?	
Step 6: Understand improper fractions	Can you use diagrams and number lines to describe improper fractions?	
Step 7: Convert mixed numbers to improper fractions	Can you convert mixed numbers to improper fractions?	
Step 8: Convert improper fractions to mixed numbers	Can you convert improper fractions to mixed numbers?	
Step 9: Equivalent fractions on a number line	Can you represent equivalent fractions on a number line?	• Recognise and show, using diagrams, families of common equivalent fractions
Step 10: Equivalent fraction families	Can you use bar models and fraction walls to find equivalent fact families?	
Step 11: Add two or more fractions	Can you add two or more fractions?	• Add and subtract fractions with the same denominator
Step 12: Add fractions and mixed numbers	Can you add fractions and mixed numbers?	
Step 13: Subtract two fractions	Can you subtract two fractions?	
Step 14: Subtract from whole amounts	Can you subtract fractions from whole amounts?	
Step 15: Subtract from mixed numbers	Can you subtract fractions from mixed numbers?	
Number: Decimals A		
Step 1: Tenths as a fraction	Can you recognise tenths as a fraction?	• Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing 1-digit numbers or quantities by 10 (Y3)
Step 2: Tenths as decimals	Can you recognise tenths as decimals?	• Recognise and write decimal equivalents of any number of tenths or hundredths
Step 3: Tenths on a place value chart	Can you recognise tenths on a place value chart?	
Step 4: Tenths on a number line	Can you recognise tenths on a number line?	• Recognise and write decimal equivalents of any number of tenths or hundredths • Compare numbers with the same number of decimal places up to 2 decimal places
Step 5: Divide a 1-digit number by 10	Can you divide a 1-digit number by 10?	• Find the effect of dividing a 1- or 2-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths

Step 6: Divide a 2-digit number by 10	Can you divide a 2-digit number by 10?	• Recognise and write decimal equivalents of any number of tenths or hundredths • Find the effect of dividing a 1- or 2-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths
Step 7: Hundredths as fractions	Can you recognise hundredths as fractions?	• Count up and down in hundredths; recognise that hundredths arise when dividing an object by 100 and dividing tenths by 10 • Recognise and show, using diagrams, families of common equivalent fractions
Step 8: Hundredths as decimals	Can you recognise hundredths as decimals?	• Recognise and write decimal equivalents of any number of tenths or hundredths • Compare numbers with the same number of decimal places up to 2 decimal places
Step 9: Hundredths on a place value chart	Can you recognise hundredths on a place value chart?	
Step 10: Divide a 1- or 2-digit number by 100	Can you divide a 1- or 2-digit number by 100?	• Recognise and write decimal equivalents of any number of tenths or hundredths • Find the effect of dividing a 1- or 2-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths
Number: Decimals B		
Step 1: Make a whole with tenths	Can you make a whole with tenths?	• Recognise and write decimal equivalents of any number of tenths or hundredths • Solve simple measure and money problems involving fractions and decimals to 2 decimal places
Step 2: Make a whole with hundredths	Can you make a whole with hundredths?	
Step 3: Partition decimals	Can you partition decimals?	
Step 4: Flexibly partition decimals	Can you flexibly partition decimals?	
Step 5: Compare decimals	Can you compare decimals?	• Recognise and write decimal equivalents of any number of tenths or hundredths • Compare numbers with the same number of decimal places up to 2 decimal places
Step 6: Order decimals	Can you order decimals?	
Step 7: Round to the nearest whole number	Can you round to the nearest whole number?	• Recognise and write decimal equivalents of any number of tenths or hundredths • Round decimals with 1 decimal place to the nearest whole number
Step 8: Halves and quarters as decimals	Can you recognise halves and quarters as decimals?	• Recognise and write decimal equivalents of any number of tenths or hundredths • Recognise and write decimal equivalents to 1 4, 1 2 and 3 4
Measurement: Money		

Step 1: Write money using decimals	Can you write money using decimals?	• Estimate, compare and calculate different measures, including money in pounds and pence
Step 2: Convert between pounds and pence	Can you convert between pounds and pence?	
Step 3: Compare amounts of money	Can you compare amounts of money?	
Step 4: Estimate with money	Can you estimate with money?	
Step 5: Calculate with money	Can you calculate with money?	
Step 6: Solve problems with money	Can you solve problems with money?	
Measurement: Time		
Step 1: Years, months, weeks and days	Can you solve problems involving years, months, weeks and days?	• Solve problems involving converting from hours to minutes, minutes to seconds, years to months, weeks to days
Step 2: Hours, minutes and seconds	Can you solve problems involving hours, minutes and seconds?	
Step 3: Convert between analogue and digital times	Can you convert between analogue and digital times?	• Read, write and convert time between analogue and digital 12- and 24-hour clocks
Step 4: Convert to the 24-hour clock	Can you convert to the 24-hour clock?	
Step 5: Convert from the 24-hour clock	Can you convert from the 24-hour clock?	
Consolidation		
Geometry: Shape		
Step 1: Understand angles as turns	Can you understand angles as turns?	• Recognise angles as a property of shape or a description of a turn (Y3)
Step 2: Identify angles	Can you identify various angles?	• Identify acute and obtuse angles and compare and order angles up to two right angles by size
Step 3: Compare and order angles	Can you compare and order angles?	
Step 4: Triangles	Can you compare and classify triangles?	• Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes
Step 5: Quadrilaterals	Can you compare and classify quadrilaterals?	
Step 6: Polygons	Can you compare and classify polygons?	
Step 7: Lines of symmetry	Can you identify lines of symmetry?	• Identify lines of symmetry in 2-D shapes presented in different orientations
Step 8: Complete a symmetric figure	Can you complete symmetric figures?	• Complete a simple symmetric figure with respect to a specific line of symmetry
Statistics		

Step 1: Interpret charts	Can you interpret charts?	• Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs
Step 2: Comparison, sum and difference	Can you solve comparison, sum and difference problems using information presented in charts, tables of graphs?	• Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and line graphs • Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs
Step 3: Interpret line graphs	Can you interpret line graphs?	
Step 4: Draw line graphs	Can you draw line graphs?	
Geometry: Position and Direction		
Step 1: Describe position using coordinates	Can you describe position using coordinates?	• Describe positions on a 2-D grid as coordinates in the first quadrant
Step 2: Plot coordinates	Can you plot coordinates?	• Describe positions on a 2-D grid as coordinates in the first quadrant • Plot specified points and draw sides to complete a given polygon
Step 3: Draw 2-D shapes on a grid	Can you draw 2-D shapes on a grid?	• Plot specified points and draw sides to complete a given polygon
Step 4: Translate on a grid	Can you translate on a grid?	• Describe movements between positions as translations of a given unit to the left/right and up/down
Step 5: Describe translation on a grid	Can you describe translations on a grid?	