

National Curriculum Year 5	Ready to Progress	White Rose Workbook & Step	Curriculum Prioritisation	NCETM Spine
Number & Place Value				
Counting				
Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000		Autumn 1 Place value 2-9		
Represent				
Use Place Value & Compare				
Read Roman numerals to 1,000 (M) and recognise years written in Roman numerals.		Autumn 1 Place value 1 Roman numerals to 1,000		
Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit	5NPV-2 Recognise the place value of each digit in numbers with up to 2 decimal places and compose and decompose numbers with up to 2 decimal places using standard and nonstandard partitioning.	Autumn 1 Place value 2 Numbers to 10,000 3 Numbers to 100,000 4 Numbers to 1,000,000 5 Read and write numbers to 1,000,000 6 Powers of 10 7 10/100/1,000/10,000/100,000 more or less 8 Partition numbers to 1,000,000 10 Compare and order numbers to 100,000 11 Compare and order to 1,000,000	UNIT 1 Decimal Fractions	1.23 Composition and calculation: tenths 1.24 Composition and calculation: hundredths and thousandths
Problems & Rounding				
Round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000	5NPV-3 Reason about the location of any number with up to 2 decimal places in the linear number system, including identifying the previous and next multiple of 1 and 0.1 and rounding to the nearest of each.	Autumn 1 Place value 12 Round to the nearest 10, 100 or 1,000 13 Round within 100,000 14 Round within 1,000,000	UNIT 1 Decimal Fractions	
Solve number and practical problems that involve all of the above	5NPV-4 Divide 1 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in units of 1 with 2, 4, 5 and 10 equal parts.	Autumn 1 Place value 9 Number line to 1,000,000	UNIT 1 Decimal Fractions	
Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through 0		Summer 4 Negative numbers 1 Understand negative numbers 2 Count through zero in 1s 3 Count through zero in multiples 4 Compare and order negative numbers 5 Find the difference	UNIT 3 Negative numbers	1.27 Negative numbers
Addition and subtraction				
Recall, Represent, Use				
Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy		Autumn 2 Addition & subtraction 4 Round to check answers		
Calculations				
Add and subtract numbers mentally with increasingly large numbers		Autumn 2 Addition & subtraction 1 Mental strategies		
Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)		Autumn 2 Addition & subtraction 2 Add whole numbers with more than four digits 3 Subtract whole numbers with more than four digits 5 Inverse operations (addition and subtraction)		

Solve problems				
Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.		Autumn 2 Addition & subtraction 6 Multi-step addition and subtraction problems		
Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign		Autumn 2 Addition & subtraction 7 Compare calculations 8 Find missing numbers		
Multiply and divide				
Recall, Represent, Use				
Identify multiples and factors , including finding all factor pairs of a number, and common factors of two numbers.	5MD-2 Find factors and multiples of positive whole numbers, including common factors and common multiples, and express a given number as a product of 2 or 3 factors	Autumn 3 Multiplication & division A 1 Multiples 2 Common multiples 3 Factors 4 Common factors	UNIT 7 Factors, Prime & Multiples	2.20 Multiplication with three factors and volume 2.21 Factors, multiples, primes, square and composite 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		Autumn 3 Multiplication & division A 5 Prime numbers	UNIT 7 Factors, Prime & Multiples	
Recognise and use square numbers and cube numbers, and the notation for squared (²) and cubed (³)		Autumn 3 Multiplication & division A 6 Square numbers 7 Cube numbers	UNIT 7 Factors, Prime & Multiples	
Calculations				
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	5MD-3 Multiply any whole number with up to 4 digits by any one-digit number using a formal written method	Spring 1 Multiplication & division B 1 Multiply up to a 4-digit number by a 1-digit number 2 Multiply a 2-digit number by a 2-digit number (area model) 3 Multiply a 2-digit number by a 2-digit number 4 Multiply a 3-digit number by a 2-digit number 5 Multiply a 4-digit number by a 2-digit number		2.14 Multiplication: partitioning leading to short multiplication
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	5MD-4 Divide a number with up to 4 digits by a one-digit number using a formal written method, and interpret remainders appropriately for the context	Spring 1 Multiplication & division B 7 Short division 8 Divide a 4-digit number by a 1-digit number	UNIT 4 Short division and multiplication	2.15 Division: partitioning leading to short division
Multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000	5MD-1 Multiply and divide numbers by 10 and 100; understand this as equivalent to making a number 10 or 100 times the size, or 1 tenth or 1 hundredth times the size	Autumn 3 Multiplication & division A 8 Multiply by 10, 100 and 1,000 9 Divide by 10, 100 and 1,000 10 Multiples of 10, 100 and 1,000 Summer 3 Decimals 10-12	UNIT 6 Calculating with decimal fractions	
Multiply and divide numbers mentally drawing upon known facts				
Solve problems				
Solve problems involving multiplication and division, including using their knowledge of factors and multiples, squares and cubes		Spring 1 Multiplication & division B 6 Solve problems with multiplication	UNIT 4 Short division and multiplication	
Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.			UNIT 4 Short division and multiplication	

Combined Operations				
Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign				
Fractions Decimals Percentages				
Recognising and Write				
Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths	5F–2 Find equivalent fractions and understand that they have the same value and the same position in the linear number system.	Autumn 4 Fractions A 1 Find fractions equivalent to a unit fraction 2 Find fractions equivalent to a non-unit fraction 3 Recognise equivalent fractions	UNIT 8 Fractions	3.7 Finding equivalent fractions and simplifying fractions
Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number		Autumn 4 Fractions A 4 Convert improper fractions to mixed numbers 5 Convert mixed numbers to improper fractions	UNIT 8 Fractions	
Comparing fractions				
Compare and order fractions whose denominators are all multiples of the same number		Autumn 4 Fractions A 6 Compare fractions < 1 7 Order fractions < 1 8 Compare and order fractions > 1	UNIT 8 Fractions	
Fractions: calculations				
Add and subtract fractions with the same denominator and denominators that are multiples of the same number		Autumn 4 Fractions A 9 Add and subtract fractions with the same denominator 10 Add fractions within 1 11 Add fractions with total greater than 1 12 Add to a mixed number 13 Add two mixed numbers 14 Subtract fractions 15 Subtract from a mixed number 16 Subtract from a mixed number – breaking the whole 17 Subtract two mixed numbers	UNIT 8 Fractions	
Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	5F–1 Find non-unit fractions of quantities.	Spring 2 Fractions B 1 Multiply a unit fraction by an integer 2 Multiply a non-unit fraction by an integer 3 Multiply a mixed number by an integer 4 Calculate a fraction of a quantity 5 Fraction of an amount 6 Find the whole 7 Use fractions as operators	UNIT 8 Fractions	3.6 Multiplying whole numbers and fractions
Fractions: Solve Problems				
Decimals: Recognise and Write				
Read and write decimal numbers as fractions	5NPV-1 Know that 10 tenths are equivalent to 1 one, and that 1 is 10 times the size of 0.1. Know that 100 hundredths are equivalent to 1 one, and that 1 is 100 times the size of 0.01. Know that 10 hundredths are equivalent to 1 tenth, and that 0.1 is 10 times the size of 0.01.	Spring 3 Decimals & percentages 1 Decimals up to 2 decimal places 2 Equivalent fractions and decimals (tenths) 3 Equivalent fractions and decimals (hundredths) 4 Equivalent fractions and decimals	UNIT 1 Decimals	
Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents		Spring 3 Decimals & percentages 5 Thousandths as fractions 6 Thousandths as decimals	UNIT 1 Decimals	1.23 Composition and calculation: tenths

		7 Thousandths on a place value chart 10 Round to the nearest whole number 11 Round to 1 decimal place		1.24 Composition and calculation: hundredths and thousandths
Decimals: Comparing & rounding				
Round decimals with 2 decimal places to the nearest whole number and to 1 decimal place		Spring 3 Decimals & percentages 10 Round to the nearest whole number 11 Round to 1 decimal place	UNIT 1 Decimals	
Read, write, order and compare numbers with up to 3 decimal places			UNIT 1 Decimals	
Decimals: Calculations & Problems				
Solve problems involving number up to 3 decimal places		Summer 3 Decimals 1 Use known facts to add and subtract decimals within 1 2 Complements to 1 3 Add and subtract decimals across 1 4 Add decimals with the same number of decimal places 5 Subtract decimals with the same number of decimal places 6 Add decimals with different numbers of decimal places 7 Subtract decimals with different numbers of decimal places 8 Efficient strategies for adding and subtracting decimals 9 Decimal sequences	UNIT 6 Calculating with decimal fractions	2.19 Calculation: \times/\div decimal fractions by whole numbers 2.29 Decimal place-value knowledge, multiplication and division
	5MD–1 Multiply and divide numbers by 10 and 100; understand this as equivalent to making a number 10 or 100 times the size, or 1 tenth or 1 hundredth times the size	10 Multiply by 10, 100 and 1,000 11 Divide by 10, 100 and 1,000 12 Multiply and divide decimals – missing values		
Fractions Decimals & Percentages				
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 1/2, 1/4, 1/5, 2/5, 4/5 and fractions with a denominator of a multiple of 10 or 25.	5F-3 Recall decimal fraction equivalents for 1/2, 1/4, 1/5 and 1/10, and for multiples of these proper fractions.	Spring 3 Decimals & percentages 12 Understand percentages 13 Percentages as fractions 14 Percentages as decimals	UNIT 8 Fractions	3.10 Linking fractions, decimals and percentages
		Spring 3 Decimals & percentages 15 Equivalent fractions, decimals and percentages		
Measurement				
Using Measures				
Convert between different units of metric measure	5NPV-5 Convert between units of measure, including using common decimals and fractions	Summer 5 Converting units 1 Kilograms and kilometres 2 Millimetres and millilitres 3 Convert units of length	UNIT 9 Converting units	
Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints		Summer 5 Converting units 4 Convert between metric and imperial units	UNIT 9 Converting units	

Use all four operations to solve problems involving measure e.g. length, mass, volume, money using decimal notation including scaling.		Summer 5 Converting units	UNIT 9 Converting units	
Money				
Use all four operations to solve problems involving measure e.g. money .			UNIT 2 Money	1.25 Addition and subtraction: money
Time				
Solve problems involving converting between units of time		Summer 5 Converting units 5 Convert units of time 6 Calculate with timetables	UNIT 9 Converting units	
Perimeter, Area & Volume				
Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres		Spring 4 Perimeter & area 1 Perimeter of rectangles 2 Perimeter of rectilinear shapes 3 Perimeter of polygons		
Calculate and compare the area of rectangles (including squares) including using standard units, square centimetres (cm ²) and square metres (m ²) and estimate the area of irregular shapes	5G-2 Compare areas and calculate the area of rectangles (including squares) using standard	Spring 4 Perimeter & area 4 Area of rectangles 5 Area of compound shapes 6 Estimate area	UNIT 5 Area and scaling	2.16 Multiplicative contexts: area and perimeter 1 2.17 Structures: using measures and comparison to understand scaling
Estimate volume e.g. using 1cm ³ blocks to build cuboids, and capacity e.g. using water		Summer 6 Volume 1 Cubic centimetres 2 Compare volume 3 Estimate volume 4 Estimate capacity		2.20 Multiplication with three factors & volume
Geometry				
2-D Shapes				
Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.		Summer 1 Shape 9 Regular and irregular polygons		
3-D Shapes				
Identify 3-D shapes , including cubes and other cuboids, from 2-D representations		Summer 1 Shape 10 3-D shapes		
Angles & Lines				
Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles	5G-1 Compare angles, estimate and measure angles in degrees (°) and ...	Summer 1 Shape 1 Understand and use degrees 2 Classify angles	UNIT 10 Angles and transformations	
Draw given angles , and measure them in degrees (°)	5G-1 ... and draw angles of a given size	Summer 1 Shape 3 Estimate angles 4 Measure angles up to 180° 5 Draw lines and angles accurately		
Identify: <ul style="list-style-type: none"> angles at a point and 1 whole turn (total 360°) angles at a point on a straight line and half a turn (total 180°) other multiples of 90° 		Summer 1 Shape 5 Draw lines and angles accurately 6 Calculate angles around a point 7 Calculate angles on a straight line		
Use the properties of rectangles to deduce related facts and find missing lengths and angles		Summer 1 Shape 8 Lengths and angles in shapes		

Position & 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.		Summer 2 Position & direction 1 Read and plot coordinates 2 Problem solving with coordinates 3 Translation 4 Translation with coordinates 5 Lines of symmetry 6 Reflection in horizontal and vertical lines		
Statistics				
Present and Interpret				
Complete, read and interpret information in tables, including timetables .		Spring 5 Statistics 4 Two-way tables 5 Read and interpret timetables		
Solve Problems				
Solve comparison, sum and difference problems using information presented in a line graph		Spring 5 Statistics 1 Draw line graphs 2 Read and interpret line graphs 3 Read and interpret tables		