Greystoke Primary School

Enabling our children to reach their full potential

2017/18 Mathematics Medium Term plans and textbook mapping.

Year 5

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	Week 13	Week 14	Week 15
Autumn	NUMBER:PLACE VALUE		NUMBER PROPERTIES	MENTAL CALCULATION	NUMBER: ADDITIONSUBTRACTION, MULTIPLICATION AND DIVISION.			GEOMETRY: SHAPE/ROMAN NUMERALS		FRACTIONS		DECIMALS/PERCENTAGES		MEASURES:	
Spring	STATISTICS		NUMBER:PLACE VALUE		MEASURES:		NUMBER: ADDITION, SUBTRACTION, MULTIPLICATION AND DIVISION.		FRACTIONS						
Summer	GEOMETRY: SHAPE/ROMAN NUMERALS		PLACE VALUE	NUMBER: ADDITION, SUBTRACTION, MULTIPLICATION AND DIVISION.			NUMBER: ADDITION, SUBTRACTION, MULTIPLICATION AND DIVISION.		FRACTIONS		GEOMETRY: SHAPE/ROMAN NUMERALS		STATISTICS		

Lesson Breakdown and Textbook Mapping

Year 5 Autumn Term

Topic	Week	National Curriculum Objective	Maths No Problem/Focus/NCETM mastery pages.
Place Value	1 & 2	• 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, including 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 • Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy	
Number properties	3	• Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers • Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers • Establish whether a number up to 100 is prime and recall prime numbers up to 19 • Recognise and use square numbers and cube numbers, and the notation for squared (^{2}) and cubed (^{3})	
Mental Calculations	4	• add and subtract numbers mentally with increasingly large numbers • solve problems involving multiplication and division where larger numbers are used by decomposing them into their factors • multiply and divide numbers mentally drawing upon known facts	
Number : all 4 operations	5, 6 and 7	• add and subtract whole numbers with more than 4 digits, including using efficient written methods (columnar addition and subtraction) • 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	

		• solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign	
Geometry	8	• Read Roman numerals to 1000 (M) and recognise years written in Roman numerals • Identify 3-D shapes, including cubes and other cuboids, from 2-D representations • Distinguish between regular and irregular polygons based on reasoning about equal sides and angles. • draw shapes using given dimensions and angles • state and use the properties of a rectangle (including squares) to deduce related facts	
Geometry	9	• Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres • Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm^2) and square metres (m^2) and estimate the area of irregular shapes • recognise and estimate volume (e.g. using 1 cm3 blocks to build cubes and cuboids) and capacity (e.g. using water)	
Fractions	10	• Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number • Compare and order fractions whose denominators are all multiples of the same number • Add and subtract fractions with the same denominator and denominators that are multiples of the same number	
Fractions	11	• Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams • solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates	
Decimals	12	• Read and write decimal numbers as fractions • To identify, name and write equivalent fractions of a given fraction 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.	
Percentages	13	• 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, 1/4, 1/5, 2/5, 4/5 and those with a denominator of a multiple of 10 or 25.	
Measures:	14 & 15	• convert between different units of measure (e.g. kilometre and metre; metre and centimetre; centimetre and millimetre; kilogram and gram; litre and millilitre) • Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints	