Maths Curriculum – Year 5

Term	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
NC Topics/units Covered	**Number – place value** **Number – addition and subtraction**	**Statistics** **Number – multiplication and division** **Measurement – perimeter and area**	**Number – multiplication and division** **Number – fractions**	**Number – fractions** **Number – decimals and percentages**	**Number – decimals**	**Geometry – properties of shape** **Geometry – position and direction** **Measurement – converting units** **Measurement - volume**
Ongoing	Add/subtract 10,000 and 100,000 to a number (up to 999,999) Add/subtract multiples of 10, 100, 1,000, 10,000 and 100,000 to a number (up to 999,999) Add/subtract numbers with more than 4 digits using formal method of column addition Add/subtract with decimals (up to thousandths) Add decimals (where two numbers have a different number of decimal places e.g. 14.7 + 8.65) Multiply a 3-digit number by a 2-digit number using formal method of long multiplication Multiply whole numbers by 10, 100 and 1,000 (where the answer is no greater than 999,999) Multiply decimal numbers by 10, 100 and 1,000 where the quotient may be a decimal Recognise and use square and cube numbers Multiply multiples of 10 by 10, 100 or 1,000 (e.g. 30 x 400) Divide numbers up to 4 digits by a 1-digit number using the formal written method of long division (recording with a remainder where required) Divide whole numbers by 10, 100 and 1,000 (where the quotient contains a decimal and the dividend may contain a decimal) Add fractions with the same denominators and convert the answer from improper fractions to mixed numbers Add and subtract a mixed number to a fraction where there are different denominators *(same as Y6)* Multiply proper fractions and mixed numbers by whole numbers Find fractions of quantities using formal calculation strategies Find 10% of a number Find a multiple of 10% of a number Find 5% of a number					
NC	**Number – place value** Read, write, order and compare numbers to at least 1000000 and determine the value of each digit. Count forwards or backwards in steps of powers of 10 for any	**Statistics** Solve comparison, sum and difference problems using information presented in a line graph. Complete, read and interpret information in tables including timetables.	**Number – multiplication and division** Multiply and divide numbers mentally drawing upon known facts. Multiply numbers up to 4 digits by a one or two digit number using a formal written	**Number – fractions** *As for previous half term.* **Number – decimals and percentages** Read, write, order and compare numbers with up to three decimal places.	**Number – decimals** Solve problems involving number up to three decimal places. Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000. Use all four operations to solve problems	**Geometry – properties of shape** Identify 3D shapes, including cubes and other cuboids, from 2D representations. Use the properties of rectangles to deduce related facts and find missing lengths and angles.

given number up to 1000000.
Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers including through zero.
Round any number up to 1000000 to the nearest 10, 100, 1000, 10000 and 100000
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.

Number – addition and subtraction
Add and subtract numbers mentally with increasingly large numbers.
Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) 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

Number – multiplication and division
Identify multiples and factors, including finding all factor pairs of a number, and common factors of 2 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 1,000
Recognise and use square numbers and cube numbers, and the

method, including long multiplication for 2 digit numbers.
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.
Solve problems involving addition and subtraction, multiplication and division and a combination of these, including understanding the use of the equals sign.

Number – fractions
Compare and order fractions whose denominators are 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 = 1 1/5]
Add and subtract fractions with the

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.
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 ½, ¼, 1/5 2/5, 4/5] and those fractions with a denominator of a multiple of 10 or 25.

involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.

Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.
Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles.
Draw given angles, and measure them in degrees.
Identify: angles at a point and one whole turn (total 360°), angles at a point on a straight line and ½ a turn (total 180°) other multiples of 90°

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.

Measurement – converting units
Convert between different units of metric measure [for example, km and m; cm and m; cm and mm; g and kg; l and ml]
Understand and use approximate

	methods to use and why.	notation for squared (²) and cubed (³) Solve problems involving multiplication and division, including using their knowledge of factors and multiples, squares and cubes	same denominator and denominators that are multiples of the same number.			equivalences between metric units and common imperial units such as inches, pounds and pints. Solve problems involving converting between units of time.
		Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign				**Measurement – volume** Estimate volume [for example using 1cm³ blocks to build cuboids (including cubes)] and capacity [for example, using water] Use all four operations to solve problems involving measure.
		Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates				
		Measurement – perimeter and area 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 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					
White Rose Units	Autumn Blocks 1 and 2	Autumn Blocks 2, 3 and 4	Spring Blocks 1 and 2	Spring Blocks 2 and 3	Summer Block 1	Summer Blocks 2, 3, 4 and 5
Resources/ equipment	100 squares, dienes, place value grids	Objects for grouping, ruler	Fraction walls	Fraction walls	Fraction walls	Shapes, angle measurers, jugs, containers
General resources	Number squares, dienes apparatus, number lines, number fans, bead strings, counters, dice (large and small),					