Year 5 Maths

Term	Topic	Objectives
Autumn 1	Place Value (4 weeks)	- 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 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) recognise years written in Roman numerals
Autumn 1	Addition and Subtraction (3 weeks)	- Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) - 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 - Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
Autumn 1	Statistics (1 week)	- Solve comparison, sum and difference problems using information presented in a line graph - Complete, read and interpret information in tables, including timetables
Autumn 2	Shape and angles (2 weeks)	- Identify 3-D shapes, including cube and other cuboids, from 2-D representations - Know and use the vocabulary of angles - Know angles are measured in degrees; estimate and compare acute, obtuse and reflex angles - Draw given angles, and measure them in degrees - Use the properties of rectangles to deduce related facts and find missing lengths and angles - Distinguish between regular and irregular polygons based on reasoning about equal sides and angles 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°
Autumn 2	Multiplication and division (3 weeks)	- Identify multiples and factors, including finding all factor pairs of a number, and common factors of two 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
Autumn 2	Position and direction (2 weeks)	- 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 - Lines of symmetry - Reflection of horizontal and vertical lines
Spring 1	Decimals (2 weeks)	- Decimals up to 2 places - Equivalent fractions and decimals – tenths and hundredths, equivalent fractions and decimals - Thousandths as fractions and decimals, and on a place value chart - Order and compare up to 3 decimal places
Spring 1	Fractions (2 weeks)	- 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 (e.g. 2/5 + 4/5 = 6/5 = 11/6) - Add and subtract fractions with the same denominator and denominators that are multiples of the same number - Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams - Read and write decimal numbers as fractions (e.g. 0.71 = 71/100) - Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents
Spring 1	Multiplication and division (2 weeks)	- Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 - Recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3) - Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equal's sign - Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates
Spring 2	Fractions and decimals (2 weeks)	- 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 - 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 with a
Summer 1	Measurement (4 weeks)	- Convert between different units of metric measure (e.g. km, m, cm and mm; g and kg; l and ml) - 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 cms and m - Calculate and compare the area of rectangles (including squares) and including using standard units, square centimetres (cm²) and square metres (m²) and estimate the area of irregular shapes - Estimate volume (e.g. using 1cm³ blocks to build cuboids (including cubes)) and capacity (e.g. using water)
Summer 1	Negative numbers (2 weeks)	- Understand negative numbers - Count through zero in 1s and in multiples - Compare and order negative numbers - Find the difference
Summer 2	Percentages (1 week)	- Percentages as fractions, decimals - Equivalent fractions and decimals and percentages
Summer 2	Converting units (2 weeks and consolidation and objectives recovering)	- Kg and km - Mm and km - Convert between metric and imperials - Convert units of time, units of length - Calculate with timetables - Solve problems involving converting between units of time - Use all four operations to solve problems involving measure (e.g. length, mass, volume, money) using decimals notation including scaling