Year 5 Maths Curriculum Overview

Across Year 5, the curriculum objectives are initially covered in the half term stated below; in addition to this, activities which consolidate, extend and recap these explicit objectives will be planned throughout the year across the curriculum, where possible. The daily Maths lesson will cover new areas of learning for the children and opportunities to review prior learning will be thread throughout. Arithmetic skills are constantly developed through age-appropriate mental arithmetic reviews, undertaken weekly/fortnightly independently or as a whole class activity. For each of the Year 5 Maths curriculum objectives listed below, there will be planned opportunities for children of all abilities to: demonstrate their developing fluency; undertake reasoning activities; and solve problems of increasing complexity. Within each objective, there will also be increased opportunities for all pupils to work through the CPA (concrete-pictorial-abstract) approach to ensure adequate depth of mathematical understanding.

	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer term 2
Number – Place Value	Count forwards or backwards in steps of powers of 10 for any given number up to 1000000. Count forwards and backwards with positive and negative whole numbers, including through zero. Read, write, (order and compare) numbers to at least 1000000 and determine the value of each digit. Read Roman numerals to 1000 (M) and recognise years written in Roman numerals. (Read, write) order and compare numbers to at least 1000000 and determine the value of each digit. Interpret negative numbers in context. 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.					
Number – Addition & Subtraction	Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy. Add and subtract whole numbers with more than 4 digits, including using formal written methods. Add and subtract numbers mentally with increasingly large numbers. Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign.					
Number – Multiplication & Division		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 1000.	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. Recognise and use square numbers and cube numbers, and the notation for squared and cubed.			

	Col1	Col2	Col3	Col4	Col5	Col6
			Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes.	Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates. Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign.		
Number - Fractions			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. 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.	Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams. 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 and those fractions with a denominator of a multiple of 10 or 25.	Read and write decimal numbers as fractions. Read, write, order and compare numbers with up to three decimal places. Solve problems involving number up to three decimal places. Round decimals with two decimal places to the nearest whole number and to one decimal place.	
Measurement		Measure and calculate the perimeter of composite rectilinear shapes in cm and m. Calculate and compare the area of rectangles and including using standard units, square centimetres and square metres and estimate the area of irregular shapes.			Use all four operations to solve problems involving measure (for example, money).	Convert between different units of metric measure. Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints. Use all four operations to solve problems involving measure, using decimal notation, including scaling. Solve problems involving converting between units of time. Use, read, write and convert between standard units, converting measurements of time from a smaller unit of measure to a larger unit, and vice versa (Year 6). Estimate volume and capacity.
Geometry - Shape					Distinguish between regular and irregular polygons based on reasoning about equal sides and angles. Use the properties of rectangles to deduce related facts and find missing lengths and angles. Identify 3D shapes, including cubes and other cuboids, from 2D representations.	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; angles at a point on a straight line and half a turn; other multiples of 90 degrees.
Geometry – 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.
Statistics	Complete, read and interpret information in tables, including timetables.	Solve comparison, sum and difference problems using information presented in a line graph.				