Year 5	Place value	Addition and subtraction	Multiplication and division	Fractions	Measurement
	COUNTING Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero. Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000. **COMPARING NUMBERS** Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit. **READING AND WRITING NUMBERS** Read Roman numerals to 1000 (M) and recognise years written in Roman numerals. **UNDERSTANDING PLACE VALUE** Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents **ROUNDING** Round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000. Round decimals with two decimal places to the nearest whole number and to one decimal place	**MENTAL CALCULATION** Add and subtract numbers mentally with increasingly large numbers. **WRITTEN METHODS** Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction). **INVERSE OPERATIONS, ESTIMATING AND CHECKING ANSWERS** Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy. **PROBLEM SOLVING** Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	**MULTIPLICATION & DIVISION FACTS** Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 **MENTAL CALCULATION** Multiply and divide numbers mentally drawing upon known facts. Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000. **WRITTEN CALCULATION** 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. 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. **MULTIPLES, FACTORS, PRIMES, SQUARE AND CUBE NUMBERS** 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.	**RECOGNISING FRACTIONS** Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents (appears also in Equivalence) **COMPARING FRACTIONS** Compare and order fractions whose denominators are all multiples of the same number. **COMPARING DECIMALS** Read, write, order and compare numbers with up to three decimal places. **ROUNDING INCLUDING DECIMALS** Round decimals with two decimal places to the nearest whole number and to one decimal place. **EQUIVALENCE** Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths. 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. Recognise the per cent symbol (%) and understand that per cent relates to "number of parts per hundred". Write percentages as a fraction with denominator 100 as a decimal fraction. **ADDITION AND SUBTRACTION** Add and subtract fractions with the same denominator and multiples of the same number. Recognise mixed numbers and improper fractions and convert from one form to the other. Write mathematical statements > 1 as a mixed number (e.g. 2/5 + 4/5 = 6/5 = 1 1/5)	**COMPARING AND ESTIMATING** Calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes (also included in measuring). Estimate volume (e.g. using 1 cm3 blocks to build cubes and cuboids) and capacity (e.g. using water). **MEASURING & CALCULATING** Use all four operations to solve problems involving measure (e.g. length, mass, volume, money) using decimal notation including scaling. Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres. Calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes. Recognise and use square numbers and cube numbers, and the notation for squared and cubed **TELLING THE TIME** Solve problems involving converting between units of time. **CONVERTING** Convert between different units of metric measure (e.g. kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre). Solve problems involving converting between units of

	PROBLEM SOLVING Solve number problems and practical problems that involve all the above.		**PROBLEM SOLVING** Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes. Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign. Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates	**MULTIPLICATION AND DIVISION OF FRACTIONS** Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams. **PROBLEM SOLVING** Solve problems involving numbers up to three decimal places. 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.	time. Understand and use equivalences between metric units and common imperial units such as inches, pounds and pints.

	Geometry	Statistics	Algebra
Year 5	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. Identify 3-D shapes, including cubes and other cuboids, from 2-D representations. 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. 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°	Complete, read and interpret information in tables, including timetables. Solve comparison, sum and difference problems using information presented in a line graph	Use the properties of rectangles to deduce related facts and find missing lengths and angles.