Y5

NUMBER – Number and place value

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	Read roman numerals to 1000 (m) and recognise years written in roman numerals.

NUMBER – Addition and subtraction

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

NUMBER – Multiplication and division

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

NUMBER – Multiplication and division

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 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

NUMBER – Fractions (including decimals and percentages)

Compare and order fractions whose denominators are all 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, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$]	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 [for example, $0.71 = \frac{71}{100}$]

NUMBER – Fractions (including decimals and percentages)

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	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 $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ and those fractions with a denominator of a multiple of 10 or 25

MEASUREMENT

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), and including using standard units, square centimetres (cm^2) and square metres (m^2) and estimate the area of irregular shapes	Estimate volume [for example, using 1 cm^3 blocks to build cuboids (including cubes)] and capacity [for example, using water]	Solve problems involving converting between units of time	Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.

GEOMETRY - Properties of shapes

			Identify		
Identify 3-D shapes, including cubes and other cuboids, from 2-D representations	Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles	Draw given angles, and measure them in degrees (º)	Angles at a point and one whole turn (total 360º)	Angles at a point on a straight line and $\frac{1}{2}$ a turn (total 180º	Other multiples of 90º

GEOMETRY - Properties of shapes | GEOMETRY – Position of shapes

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, 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

Solve comparison, sum and difference problems using information presented in a line graph	Complete, read and interpret information in tables, including timetables.