Year 7

In addition to the list of topics below you will also need to apply your numeracy skills and problem solving techniques.

1 Using numbers	To carry out calculations from information given in charts and tables
	To know and use financial vocabulary
	To order positive and negative numbers using a number line
	To use and apply comparison symbols such as > (greater than) and < (less than)
	To calculate addition, subtraction and multiplication problems involving directed numbers
	To use and apply directed number calculations in a real-life situation
2 Sequences	To use function machines to generate inputs and outputs
	To use given inputs and outputs to work out a function
	To recognise, describe and generate linear sequences
	To identify missing terms in a sequence
	To identify the nth term of a linear sequence
	To use the nth term to work out any term in a sequence
	To explore square and triangular numbers as sequences
	To know and generate the Fibonacci sequence and Pascal's triangle
	To apply knowledge of sequences in a context
3 Perimeter, area and volume	To use a simple formula to work out the perimeter of a rectangle
	To use a simple formula to work out the area of a rectangle
	To work out the perimeter and area of compound rectilinear shapes by using simple formulae
	To calculate the area of a triangle
	To calculate the area of a parallelogram
	To calculate the area of a trapezium
	To calculate the surface area of cubes and cuboids
	To calculate the volume of cubes and cuboids
	To calculate perimeters and areas in a real-life context
4 Decimal numbers	To multiply and divide decimal numbers by powers of 10
	To use rounding to estimate answers to calculations, to spot possible errors
	To order decimals, including numbers with different decimal places

	To add and subtract decimal numbers
	To multiply and divide decimal numbers
	To solve multi-step problems involving decimals in a familiar context
5 Working with numbers	To recognise and use square numbers up to 225 (15^2) and corresponding square roots
	To round numbers to more than one decimal place
	To round numbers to one or two significant figures
	To use the conventions of BIDMAS to carry out calculations
	To use an efficient written method of multiplication without a calculator
	To use an efficient written method of division without a calculator
	To convert between common metric units
	To use measurements in calculations
	To recognise and use appropriate metric units
	To apply number skills in real life contexts
6 Statistics	To calculate and use the mode, median and range of a set of data
	To calculate and use the mean average of a set of data
	To be able to read and interpret different statistical diagrams
	To create and use a tally chart
	To understand continuous data and use grouped frequency
	To develop a greater understanding of data collection
	To apply data handling skills to a real-life situation
7 Using algebra	To use algebra to write simple expressions and recognise equivalent expressions
	To substitute numbers into expressions to work out their value
	To apply arithmetic rules to algebraic expressions
	To use substitution in the context of formulae
	To construct formulae from contextual situations
	To use a formula to calculate costs
8 Fractions	To find common equivalent fractions
	To write fractions in their simplest form
	To compare and order two fractions
	To add and subtract fractions with different denominators
	To convert between mixed numbers and improper fractions
	To add and subtract simple mixed numbers with different denominators

	To explore fractions in the context of the part-whole relationship
9 Angles	To use a protractor to measure an angle
	To use a protractor to draw an angle
	To know the properties of parallel and perpendicular lines
	To calculate angles on a line
	To calculate angles at a point
	To identify opposite equal angles
	To calculate angles in parallel lines
	To know that the angle sum in a triangle is 180°
	To know that the angle sum in a quadrilateral is 360°
	To know and use the properties of triangles
	To know and use the properties of quadrilaterals
	To use angles construction and measuring skills with confidence, fluency and accuracy
10 Co-ordinates and graphs	To use coordinates to identify and locate position points in all four quadrants
	To draw a graph using a simple linear rule
	To know the connection between pairs of coordinates and the relationship shown in an equation and a graph
	To recognise and draw linear graphs with values of x and y
	To recognise and draw the graphs of y = x and y = −x
	To recognise and draw graphs of the form $x + y = a$
	To draw and use real-life graphs
	To know how graphs can be used in real-life situations
	To apply graphing skills in a real-life situation