

Year 8

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

1 Working with numbers	To carry out multiplications and divisions involving negative numbers
	To know and use highest common factors (HCF)
	To know and use lowest common multiples (LCM)
	To know and use powers and roots
	To be able to identify the prime factors of any integer
	To be able to use and apply number skills in a real-life situation
2 Geometry	To calculate angles in parallel lines
	To know the geometric properties of quadrilaterals
	To be able to translate a shape
	To enlarge a 2D shape by a scale factor
	To construct the mid-point and perpendicular bisector of a line
	To construct a perpendicular to a line from or at a given point
	To complete more complex constructions and produce a set of instructions
3 Probability	To recognise mutually exclusive outcomes and exhaustive outcomes
	To represent a chance on a probability scale
	To use a sample space to calculate probabilities
	To use relative frequency to estimate probabilities
	To apply probability to a real-life situation
4 Percentages	To write one quantity as a percentage of another
	To use a multiplier to calculate a percentage change
	To work out a change in value as a percentage increase or decrease
	To apply percentages when analysing a real-life situation
5 Congruent Shapes	To recognise congruent shapes
	To know the conditions for recognising congruent triangles
	To solve geometric problems using the rules of congruency
	Applying scale factors in real-life situations.
6 Surface area and volume of prisms	To convert between metric units for area and for volume
	To calculate the surface area of a prism
	To calculate the volume of a prism
	To apply knowledge of area and work systematically to solve a problem
7 Graphs	To develop graphical fluency with a range of linear representations
	To know the gradient of a line from its linear equation
	To establish the equation of a line in the form $y = mx + c$ from its graph
	To recognise and draw the graph from a quadratic equation
	To solve a quadratic equation from a graph
	To draw graphs from real-life situations to show the relationship between two variables
	To solve problems involving more than one variable in a real-life context
8 Number	To multiply and divide by negative powers of 10
	To round to a specific number of significant figures
	To write a large number in standard form
	To multiply with numbers in standard form
	To apply standard form to solve a problem in a real-life context
9 Interpreting data	To interpret different charts seen in the media
	To draw pie charts relative to data size
	To read scatter graphs
	To interpret correlation
	To construct scatter graphs and use a line of best fit to describe data trends
	To use and apply data handling skills in a real-life context
10 Algebra	To simplify algebraic expressions involving the four operations of arithmetic
	To simplify expressions by collecting up like terms
	To multiply out brackets in an expression
	To identify and manipulate algebraic expressions
	To write algebraic expressions involving powers
	To use and apply algebraic manipulation skills in a range of contexts