

## What are the aims and intentions of this curriculum?

Students are taught how to work with numbers, algebra, ratio, proportions and rates of change, geometry and measures, probabilities and statistics. The skills attained in KS2 are consolidated mainly through visual arithmetic and concrete applications. At the end of each topic, a closing-the-gap-questionnaire in the form of a review sheet is required to be completed by the students. Homework is given on a weekly basis and is expected to be completed online. To provide students with a holistic experience, prepare them for future success, help them aspire and value mathematics, **Personal Social Health and Economic (PSHE)** education and **Careers Education (CE)** are incorporated into the curriculum.

Term	Topics	Knowledge and key terms	Skills developed	Assessment
Autumn 1	<i>Analysing and displaying data</i>	<b>Data, Frequency, axis, Vertical, hypothesis, sample, survey</b>	Interpret and construct tables, charts and diagrams, including frequency tables, bar charts, pie charts and pictograms for categorical data, vertical line charts for ungrouped discrete numerical data, tables and line graphs for time series data and know their appropriate use.  <b>CE: Research, business or annuities or market data analyst, data engineer, data quality analyst, statistician, fraud countering, insurance</b>	End of topic review Homework Bookmarking Classroom feedback Half-term formal assessment
	<i>Number skills</i>	<b>integer, factor, factorisation, divisor, simplify, cancelation, inverse, notation</b>	Order positive and negative integers, decimals and fractions; apply the four operations, use the concepts and vocabulary of prime numbers, factors (divisors, multiples, common factors, common multiples, highest common factor, lowest common multiple, prime factorisation, use positive integer powers and associated real roots.  <b>CE: Auditor, data scientist, data analyst, economist, financial planner, accountant, market researcher, mathematician</b>  <b>PSHE: Analysing physical health and fitness data to promote regular exercise.</b>	
Autumn 2	<i>Expressions, functions and formulae.</i>	<b>Term, variable, coefficient, like term, expression, formulae, equation, function inequality, significant, interval, factor, expand scale</b>	Use and interpret algebraic manipulation, substitute numerical values into formulae and expressions, understand and use the concepts and vocabulary of expressions, equations, formulae, terms and factors, simplify, collect like term and expanding products of two or more binomials  <b>CE: Jeweler, air traffic controller, dietitian, teacher, nutritionist, broadcast technician, carpenter</b>	End of topic review Homework Bookmarking Classroom feedback Half-term formal assessment



Summer 1	Sequences and graphs	Term, sequence, arithmetic, geometric, quadrant	<p>Work with coordinates in all four quadrants; plot graphs of equations that correspond to straight-line graphs in the coordinate plane; generate terms of a sequence from either a term-to-term or a position-to-term rule; recognise and use sequences of triangular, square and cube numbers, simple arithmetic progressions.</p> <p>CE: Food services, barista, housekeeper, utilities worker, librarian, assembly, cook, machine operator</p>	<p>End of topic review Homework Bookmarking Classroom feedback End of year formal assessment</p>
	Transformations	Congruence, scale factor, center of rotation and enlargement, image, object; clock and anti-clock wise, mirror line	<p>Use the basic congruence criteria for triangles (SSS, SAS, ASA, RHS) and construct them; rotation, reflection, translation and enlargement of shapes.</p> <p>CE: Construction worker, teacher, interior designer, CAD engineer, plumber, animator</p> <p>PSHE: During end of year examination preparation, maintaining good health by getting enough sleep is promoted to improve concentration and overall wellbeing during times of intense examinations.</p>	