Unit	Summary	Skills	Assessment	British Values and SMSC	Career links	Cross-curricular links
Reasoning with algebra	Straight line graphs Forming and solving equations Testing conjectures	Interpret straight line graphs and compare to linear sequences to find the rule. Solve equations and inequalities with unknown on both sides in different contexts. Change the subject of a formula. Test conjectures in a wide range of contexts.	Reviews at the end of each block. Term 1 – Numeracy assessment. Term 3 – Assessment on the Autumn term content. Term 5 – Assessment on the Spring term content. Term 6 – Numeracy assessment.	The development of critical thinking skills by testing conjectures using mathematics will help develop student resilience. Through various forms of mathematical issues, freedom of speech is discussed. Students are reminded of an expectation of respect for all others.	Finance. Stock broker. Industry. Financial sector.	Science – graphs and geography. Science – rearranging formulae Science – practicality. Food technology – design and evaluation. All subjects regarding evaluation and justification.
Constructing in 2 and 3 dimensions	Three-dimensional shapes Constructions and congruency	Understand the language of faces, edges and vertices and names of (non-)prisms. Work out the volume and surface areas of 2D shapes. Construct nets and use scale drawings. Explore congruency via construction.		Understanding of the universe, the world around us, cultures and history of human kind and sociology. Challenging the unknown – how were the pyramids built? Valuing the opinion of others.	Landscaping. Engineering. Architecture. Food technology. Artist. Jewellery maker.	Technology. Art. PE

Unit	Summary	Skills	Assessment	British Values and SMSC	Career links	Cross-curricular links
Reasoning with number	Numbers Using percentages Mathematics and money	Extend to rational and real numbers. Revisit fraction arithmetic, HCF and LCM and standard form. Find percentage changes. Solve reverse percentage problems. Explore financial mathematics.		Valuing the opinion of others. Reasoning and justifying understanding of concepts and giving evidence to support. Law and legal concepts with reasoning.	Retail. Banking and finance.	PSHCE RE – discussion of difficult topics. how to reason. Use of money – cashless in school and society.
Reasoning with geometry	Deduction Rotation and translation Pythagoras' Theorem	Angle rules including within special quadrilaterals. Find angles using algebraic methods. Identify the order of symmetry and find the result of rotating shapes and translations. Calculate missing sides in a right-angled triangle.		Historical life and the history of mathematics.	Landscaping and gardening.	Design technology. PE – dance and drama.
Reasoning with proportion	Enlargement and similarity Solving ratio and proportion problems Rates	Enlarge shapes by a positive scale factor, including by a given point. Direct proportion problems and graphs. Work with speed, distance, time and density.		Shapes in real world and in nature. Walk in the countryside – wellbeing.	Hairdressers. Engineering. Designers. Games designer. Roller coaster designer.	Science – drawing and interpreting speed, distance time graphs. Calculate density.
Representations and revision	Probability Algebraic representation Revision	Relative frequency. Drawing and reading quadratic and other graphs and representing inequalities. Teacher choice of topics based on assessment throughout key stage 3.		Theory versus reality.	Cryptanalyst. Stocks and shares. Stock broker. Jet fighter pilot. Forensic scientist. Actuary.	Science. Geography.