



KS3 Maths

I N D E P E N D E N C E	KNOWLEDGE / LITERACY / NUMERACY / ORACY / AGENCY	CONTENT / TOPICS / CONCEPTS	Year 7 Place value; Properties of numbers; Arithmetic; Expressions and equations; Coordinates; Perimeter and area; Fractions; Ratio and proportion; Transformations	Year 8 Estimating and rounding; Solving linear equations; Sequences; Linear graphs; Percentages and proportionality; Statistics; Perimeter, area and volume; Polygons and angles; Constructions	Year 9: Support/Core/Higher Support: Integers and place value; Decimals; Indices, powers and roots; Factors, multiples and primes; Fractions; Percentages; Fractions, decimals, and percentages; Drawing and interpreting tables and charts; Mensuration and Properties of 2D shapes; Perimeter and area, simple angle facts, and 3D forms; Algebra: the basics; Expressions and substitution into formula; Probability scale; Theoretical probability (then up to and including <i>Use of a calculator of Core</i>) Core: Two-way Tables; Frequency Trees, Venn diagrams; Product of prime factors/HCF/LCM; Multiples in context; Best value; Exchange rates; Rounding & error intervals; Estimation; Percentage of an amount; Interest, growth and decay; Use of a calculator; Reverse percentages; Fractions; Ratio; Standard form; Index Laws, Expand and simplify; Factorising; Solving equations; Subject of; Averages; Averages from a table; Inequalities; Frequency diagrams; Scatter graphs; Linear graphs, Quadratic & cubic graphs Higher (all of Core and then): Coordinate geometry; Speed, distance, time & compound measures; Real-life graphs; Pythagoras & trigonometry; Bearings; Alternate & corresponding angles; Interior and exterior angles; Sampling; Pie charts; Probability; Probability trees; Plans and elevations; Constructions						
		VOCABULARY	integer, factor, multiple, square number, power, product, absolute value, commutative, associative, distributive, expression, equation, inequality, expand, coordinate, angle, parallel, polygon, quadrilateral, construct, perimeter, area, recurring decimal, equivalent, multiplier, exchange rate, translation, rotation, reflection, enlargement	rounding, estimation, significant figure, linear, identity, inverse, isolate, sequence, scale, rate, constant of proportionality, direct, inverse, ratio, mean, median, mode, range, outlier, circumference, diameter, radius, composite, cross-section, volume, surface area, transversal, interior, exterior, locus	simplify factorise frequency probability discrete continuous union intersection currency conversion	multiplier VAT interest depreciation annum power index mixed number improper (fraction) formula	substitution rearrange solve unitary compound coefficient truncation interval gradient reciprocal				
		SKILLS	Deep Understanding: students are encouraged to develop a deep understanding of the concepts they meet rather than learn from rules. Mathematical Thinking: it is essential for students to develop mathematical thinking in and out of the classroom, to fully master mathematical concepts. Mathematical Language: pupils are encouraged to use mathematical language throughout their maths learning to deepen their understanding of concepts.		The skills for Y9 are the acquisition of mathematical knowledge in order to apply this understanding to the topics covered in Y9. For the Support stream, key topics will be covered in order for pupils to be have the necessary prerequisite knowledge to access the GCSE curriculum. In Term 4, pupils following this steam will move on to the <i>Crossover</i> topics; these are skills that need to be acquired in order to be successful in both the <i>Foundation</i> and the <i>Higher</i> tier at GCSE. For the Core and Higher streams, students will focus on the <i>Crossover</i> topics. The Core stream will focus on these skills for 2 years, whereas the Higher stream will acquire this knowledge in just over a year.						
		ASSESSMENT	Regular I ACT quizzes followed by feedback. Summative assessments in Terms 3 and 6 will test on <i>all</i> knowledge acquired up to that point. Assessments in Year 8 will include topics taught in Year 7.		Regular I ACT quizzes followed by feedback. Summative assessments in Terms 3 and 6 will test <i>all</i> knowledge acquired up to that point; therefore, there will be three different assessments for each assessment point to reflect the three streams in Year 9. Each assessment will have a calculator and a non-calculator element.						
A T T I T U D E			In KS3, mathematical language is a focus and paired and group work is regularly used to develop pupils' social skills; teaching them to listen, share and develop ideas in conjunction with others.			R E S I L I E N C E			In KS3, building resilience in the face of challenging problems is developed, which continues into KS4. Students develop a growth mindset through the use of differentiated activities which support and challenge accordingly allowing pupils to have a sense of achievement in every lesson regardless of their prior achievement. Students have opportunities in KS3 such as Axiom Maths Club and UKMT Maths Challenge.		
Understanding others, behaviour and attitudes, SMSC, PHSE						Character, personal Development, wellbeing and CIAG					