

KS4 Curriculum Plan 2025-26

TOPIC	LP1	LP2	LP3	LP4	LP5
	<i>Multiplicative Reasoning and Geometry</i>	<i>Developing Algebra</i>	<i>Graphs, Proportional Change and Probability</i>	<i>Data Handling and Reasoning with Number and Geometry</i>	<i>Algebraic Reasoning and Number</i>
Knowledge	Multiplicative Reasoning - percentage, repeated percentage change Geometry - volume, surface area, trigonometry, constructions and loci	Developing Algebra – solving quadratic equations, drawing and interpreting graphs, representing solutions of equations and inequalities, solving simultaneous equations including with quadratics.	Graphs - non-linear and real life Proportional Change - compound measures, ratio, proportion, ratio and algebra Probability - experimental probability, Venn diagrams, tree diagrams	Data Handling - averages, statistical diagrams and sampling Numerical reasoning - powers, roots, indices and standard form, sequences Geometrical Reasoning - transformations	Algebra - brackets, factorising, quadratics Number - rounding, proportion, decimals
Skills	Use the equation of the line formula to solve problems. Solve simultaneous linear and quadratic equations both algebraically and graphically. Represent linear and quadratic inequalities visually and solve them. Sketch graphs of non-linear functions. Find estimates for gradients and areas under graphs. Calculate the probability of independent and dependent combined events. Calculate and interpret conditional probabilities through representation. Calculate with roots, indices and recurring decimals. Solve problems involving Pythagoras and Trigonometry in 2D and 3D shapes. Use vectors to construct arguments and proofs. Use and prove standard circle theorems. Simplify and manipulate algebraic fractions. Interpret and use function notation to solve problems.				
Key Vocab	Denominator, interest, volume, surface area, hypotenuse, adjacent, loci.	Variable, simultaneous, rearrange, gradient, parallel, quadratic, reciprocal	Cubic, gradient, acceleration, density, ratio, direct proportion, intersection	Average, stratified sampling, index, standard form, geometric, scale factor, similar	Factorise, stratified, polygon, compare, distribution, arithmetic, quadratic, Fibonacci.

TOPIC	LP1	LP2	LP3	LP4	LP5
	<i>Graphs and Probability</i>	<i>Number and Shape</i>	<i>Shape and Algebra</i>	<i>Problem Solving</i>	
Knowledge	Indices and Standard form Graphs and Equations - linear equations, straight line, quadratic, cubic and reciprocal graphs	Algebra and Shape – Algebraic fractions, Pythagoras and trigonometry, angles, circles.	Shape and algebra – Surds, Circle Theorems, functions, quadratic equations, simultaneous equations, perpendicular lines.	Problem solving – Bringing together all knowledge from the KS4 course to solve problems linking topics together.	
Skills	Find the gradient and y-intercept of a linear graph and interpret non-linear graphs. Plot quadratic, cubic and reciprocal graphs and estimate solutions from these. Use construction methods to accurately draw the locus of points. Transform shapes by reflecting, rotating, translating and enlarging them following a given instruction. Solve problems involving angles and circles. Interpret transformations of functions. Solve problems with numbers written in standard form. Solve linear equations, including ones with brackets and with unknowns on both sides of the equals sign. Solve quadratic equations using a variety of methods. Solve compound measure problems by selecting and using the correct formula. Solve prime number percentage problems. Use Pythagoras and trigonometry to find missing values. Solve area and volume problems.				
Key Vocab	Index, linear, quadratic, perpendicular, reciprocal, gradient, algebraic	Denominator, adjacent, tangent, sine, cosine	Frequency density, surd, tangent, function, common ratio, variable, gradient.	Calculation, manipulation, simplification, interpret, representations.	

TOPIC	LP1	LP2	LP3	LP4	LP5
	<i>Number and Shape</i>	<i>Algebra</i>	<i>Geometry & Graphs</i>	<i>Problem Solving</i>	

Year 11 (Foundation)

Knowledge	Number and applications to shape - Indices, standard form, graphs, constructions and loci, transformations, vectors.	Algebra – solving equations, inequalities, simultaneous equations.	Graphs - real life graphs Geometry & measures - angles, bearings, surface area, volume, vectors	Problem solving – Bringing together all knowledge from the KS4 course to solve problems linking topics together.	
Skills	<p>Find the gradient and y-intercept of a linear graph. Plot quadratic, cubic and reciprocal graphs and estimate solutions from these. Use construction methods to accurately draw the locus of points. Transform shapes by reflecting, rotating, translating and enlarging them following a given instruction. Solve problems with numbers written in standard form. Solve linear equations, including ones with brackets and with unknowns on both sides of the equals sign. Solve compound measure problems by selecting and using the correct formula. Solve prime number percentage problems. Use Pythagoras and trigonometry to find missing values. Solve area and volume problems.</p>				
Key Vocab	Index, linear, quadratic, bisect, construct, rotate, vector	Scale factor, factorise, variable, inequality, simultaneous	Gradient, density, polygon, bearings, prism, volume, vector	Bound, hypotenuse, proof, quadratic, conditional, vector	