



## KS4 Curriculum Plan 2024-25

		LP1	LP2	LP3	LP4	LP5
TOPIC		<i>Multiplicative Reasoning and Geometry</i>	<i>Developing Algebra</i>	<i>Proportional Change and Probability</i>	<i>Further Geometry and Numerical Reasoning</i>	<i>Algebraic Reasoning and Data Handling</i>
Year 10	<b>Knowledge</b>	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.	Proportional Change - compound measures, ratio, proportion, ratio and algebra Probability - experimental probability, Venn diagrams, tree diagrams	Geometry - angles, bearings, scale, transformations, vectors Numerical reasoning - rounding, error intervals, indices and standard form	Algebra - brackets, factorising, quadratics Data – collecting, representing and interpreting data, sampling, scatter graphs
	<b>Skills</b>	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.				
	<b>Key Vocab</b>	Multiplier, depreciation, volume, surface area, Pythagoras, trigonometry, hypotenuse, adjacent.	Equations, inequality, representation, factorisation, simultaneous, quadratic, linear, gradient, intercept.	Proportional, speed, density, pressure, probability, experimental, dependent, conditional.	Angles, bearing, enlargement, similar, congruent, error, index notation, standard form.	Factorise, stratified, polygon, compare, distribution, arithmetic, quadratic, Fibonacci.

		LP1	LP2	LP3	LP4	LP5
TOPIC		<i>Graphs and Probability</i>	<i>Number and Shape</i>	<i>Shape and Algebra</i>	<i>Problem Solving</i>	
Year 11 (Higher)	<b>Knowledge</b>	Indices and Standard form Graphs and Equations - linear equations, straight line, quadratic, cubic and reciprocal graphs, algebraic fractions.	Number and Shape – Properties of number, percentages, Pythagoras and trigonometry, vectors	Shape and algebra – Circle Theorems, proof and functions	Problem solving – Bringing together all knowledge from the KS4 course to solve problems linking topics together.	
	<b>Skills</b>	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.				
	<b>Key Vocab</b>	Quadratic, parallel, perpendicular, simultaneous, index, standard form, equations, inequality, reciprocal, exponential.	Surds, rationalise, denominator, Pythagoras, Trigonometry, vectors, geometrical.	Circle, tangent, equation, theorem, sector, quadratic, function, algebraic, composite, inverse.	Calculation, manipulation, simplification, interpret, representations.	

		LP1	LP2	LP3	LP4	LP5
TOPIC		<i>Graphs</i>	<i>Number and Algebra</i>	<i>Number and Shape</i>	<i>Problem Solving</i>	
Year 11 (Foundation)	<b>Knowledge</b>	Graphs - Straight line, quadratic, cubic and reciprocal graphs and transformation of shapes about axes.	Number and Algebra – Standard form, solving equations, substituting into formula, inequalities, factorisation.	Number and Shape – Properties of number, percentages, Pythagoras and trigonometry, area and volume, vectors.	Problem solving – Bringing together all knowledge from the KS4 course to solve problems linking topics together.	
	<b>Skills</b>	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.				
	<b>Key Vocab</b>	Straight, quadratic, equation, cubic, reciprocal, translate, enlargement, reflection, rotation.	Standard form, estimate, expand, simplify, factorise, equation, expression.	Percentage, Pythagoras, trigonometry, surface area, volume, cuboid, prism, cylinder, vector.	Calculation, manipulation, simplification, interpret, representations.	