Curriculum Overview - *Maths*

	Autumn Term – Terms 1 and 2	Spring Term – Terms 3 and 4	Summer Term – Terms 5 and 6
Year 7	• Place value • Written methods for Addition, subtraction, multiplication and division • Negative numbers • Factors, multiples, primes • Prime factors, HCF and LCM • Time • BIDMAS • Fractions • Percentages	• Algebraic notation • Simplify expressions and expand brackets • Solve equations and rearrange equations • Sequences and nth term • Ratio & proportion • Perimeter & Area • Naming angles, drawing and measuring angles and finding angles in polygons	• Collect and organise data • Construct & Interpret a range of tables and graphs • Calculating averages • Properties of 2D and 3D shapes • Volume of prisms
Year 8	• BIDMAS • Rounding & Estimating • Negative numbers • Powers and roots • Prime factors, HCF and LCM • Fractions • Perimeter & Area • Area and circumference of circles • Compound measures • Plot linear & Quadratic graphs	• Plot linear & Quadratic graphs • Simplify expressions, expand and factorise. • Solve linear equations • Change the subject of a formula • Understand & solve linear inequalities • Find and use the nth term • Angles in parallel lines • Interior and exterior angles in polygons • Percentages	• Ratio • Direct and inverse proportion • Constructions • Congruent and similar shapes • Nets, Volume & surface area of prisms • Averages • Using scatter graphs to represent data • Averages from stem & leaf • Describe chance/outcomes from the language of probability

Year 9 Foundation	• Rounding & Estimation • Prime factors, LCM and HCF • Index laws • Fractions • FDP • Percentages • Ratio and proportion • Representing data (charts, graphs and tables) • Probability	• Algebraic Notation & Manipulation • Solve multi-step algebraic equations • Solve inequalities • Substitution • Simple simultaneous equations • Rearrange formula • nth term of a sequence • Perimeter & Area • Surface Area & Volume	• Surface Area & Volume • Angles in polygons and parallel lines • Pythagoras theorem • Linear graphs • Real life graphs • Transformations
Year 9 Higher	• Rounding & Estimation • Prime factors, LCM and HCF • Index laws • Standard form • Fractions • FDP • Percentages • Ratio and proportion • Representing data (charts, graphs and tables) • Probability • Algebraic manipulation	• Algebraic manipulation (cont.) • Solve multi-step algebraic equations • Solve inequalities • Substitution • Simultaneous equations • Rearrange formula • nth term of a sequence • Perimeter & Area • Surface Area & Volume	• Surface Area & Volume (cont.) • Angles in polygons and parallel lines • Pythagoras theorem and trigonometry ratios • Linear graphs • Real life graphs • Non-linear graphs • Transformations

Year 10 Foundation	● Integers and place value ● Decimals ● Indices, powers and roots ● Manipulate and simplify expressions ● Substitute into formulae ● Fractions, decimals and percentages ● Tables, charts and graphs	● Equations and inequalities ● Sequences ● Properties of shapes and angle facts ● Perimeter, area and volume ● Linear graphs ● Real-life graphs	● Statistics, sampling and averages ● Simplify and share into a ratio ● Direct proportion tables and recipes ● Convert between currencies ● Pythagoras ● Trigonometry ● Probability ● Constructions, loci and bearings
Year 10 Higher	● Calculating, checking and rounding. ● Indices, roots, and reciprocals ● Factors, multiples, standard form and surds ● Simplifying and factorising expressions, setting up and solving equations ● Sequences ● Fractions and percentages ● Simplify and share into a ratio ● Direct proportion tables and recipes ● Convert between currencies ● Polygons, angles and parallel lines ● Pythagoras and trigonometry	● Averages and range ● Representing and interpreting data ● Linear graphs and coordinate geometry ● Quadratic, cubic and other graphs ● Real-life graphs ● Perimeter, area and circles ● 3D shapes, volume and surface area ● Accuracy and bounds ● Quadratic equations ● Simultaneous equations ● Inequalities ● Probability	● Compound measures ● Transformations ● Constructions ● Similarity and congruence ● Graphs of trigonometric functions ● Further trigonometry ● Equations and graphs

Year 11 Foundation	- Primes, factors, multiples, powers and roots - Fractions - Percentages - Rounding - Algebraic manipulation - Solving equations - Sequences - Area and perimeter - Circles - Volume and surface area	- Volume and surface area - Pythagoras - Angles - Probability - Graphs - Averages - Pie charts - Inequalities	- Transformations - Revision following a precision plan tailored to each class
Year 11 Set 2	- HCF and LCM - Surds - Recurring decimals - Bounds - Algebraic manipulation - Ratio, proportion and rates of change - Graphs - Congruence - Similar shapes - Volume and surface area Transformations	- Arc length and sector area - Trigonometry - Vectors - Probability - Statistical graphs	Revision following a precision plan tailored to each class

Year 11 Set 1	- Collecting data - Cumulative frequency, box plots and histograms - Circle theorems - Circle geometry - Changing the subject of complex formulae - Solving equations from algebraic fractions - Rationalising surds - Algebraic proof - Vectors and Geometric proof - Reciprocal and exponential graphs - Area under graphs - Direct and inverse proportion	Revision following a precision plan tailored to each class	Revision following a precision plan tailored to each class
GCSE resits	- Revision following a precision plan based on advanced information until November exams After November exams: - Primes, factors, multiples, powers and roots - Fractions - Percentages - Rounding - Algebraic manipulation - Solving equations	- Sequences - Area and perimeter - Circles - Volume and surface area - Pythagoras - Angles - Probability - Graphs - Averages	- Pie charts - Inequalities - Transformations - Revision following a precision plan tailored to class from mock QLAs

Year 12 Maths	- Quadratics - Equations and inequalities - Graphs and transformations - Straight line graphs - Circle geometry - Algebraic methods - The Binomial expansion - Trigonometric ratios - Trigonometric identities - Vectors - Exponentials and logarithms	- Data collection - Measures of location and spread - Differentiation - Integration - Representations of data - Correlation - Radians - Trigonometric functions - Probability	- Statistical distributions - Hypothesis testing - Partial fractions - Functions and graphs - Trigonometry and modelling - Parametric equations
Year 12 Further Maths	- Complex numbers - Argand diagrams - Series - Roots of polynomials - Volumes of revolution - Matrices - Proof by induction - Linear transformations	- Vectors - Impulse and momentum - Work, energy and power - Elastic collisions in 1D - Algorithms - Graphs and networks - Algorithms on graphs - Route inspection - Linear programming	- Elastic strings and springs - Differentiation - Integration - The travelling salesman problem - The simplex algorithm - The planarity algorithm - Floyd's algorithm - Resource histograms and scheduling diagrams

Year 12 Core Maths	- Tax and National insurance - Percentages, Interest rates and AER - Student loans and APR - Currency rates and budgeting - Critical Path Analysis - Expectation - Cost Benefit Analysis	- Data types - Collecting and sampling data - Representing data numerically - Representing data diagrammatically - Cost Benefit Analysis - Critical Analysis - The modelling cycle - Fermi estimation	Revision for exams following a precision plan
Year 13 Maths	- The Binomial expansion - Sequences and series - Differentiation - Integration - Modelling in mechanics - Constant acceleration - Forces and motion - Variable acceleration - Vectors	- Regression, correlation and hypothesis testing - Conditional probability - The normal distribution - Moments - Forces and friction - Projectiles - Applications of forces - Further kinematics	Revision for exams following a precision plan
Year 13 Further Maths	- Series - Hyperbolic functions - Methods in differential equations - Complex numbers - Methods in calculus - Volumes of revolution	- Modelling with differential equations - Elastic collisions in 2D - Polar coordinates	Revision for exams following a precision plan