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Year Group	Learning Cycle 1 – Autumn Term	Learning Cycle 2 – Spring Term	Learning Cycle 3 – Summer Term
Year 7 **The year begins with a formal introduction to algebra and is designed to aid their fluency with the notation. The remainder of the year has a heavy number focus, ensuring our students have those key skills in place.**	Sequences Use Algebraic Notation Equality & Equivalence Place Value, Integers & Decimals Fractions, Decimals & Percentages	Addition & Subtraction Multiplication & Division Fractions/Percentages of Amounts Directed Number Addition/Subtraction of Fractions	Constructing & Measuring Develop Geometric Reasoning Developing Number Sense Sets & Probability Prime Numbers & Proof
Year 8 **This year builds upon these key skills and gives the students a real blend of the six content areas that populate the KS3/KS4 National Curriculum.**	Ratio & Scale Multiplicative Change Multiplying & Dividing Fractions Cartesian Plane Representing Data	Tables & Probability Brackets, Equations & Inequalities Sequences Indices Fractions & Percentages Standard Index Form	Number Sense Angles in Parallel Lines & Polygons Area of Trapezia & Circles Line Symmetry & Reflection The Data Handling Cycle Measures of Location
Year 9 **The year begins with a strong algebra focus, revisiting key notation and building on this by applying the skills in a variety of contexts. Although a variety of the six content areas are visited, much of the year has a strong focus on geometry and measures.**	Straight Line Graphs Forming & Solving Equations Testing Conjectures Three-dimensional Shapes Constructions & Congruency	Numbers Using Percentages Maths & Money Deduction Rotation & Translation	Pythagoras' Theorem Enlargement & Similarity Solving Ratio & Proportion Problems Rates Probability Algebraic Representation
Year 10 **Students of both tiers study the same broad topics but the specific skills within them differ e.g. 'Trigonometry' will be restricted to right-angled trigonometry for foundation students. All six content areas are visited.**	Congruence, Similarity & Enlargement Trigonometry Representing Solutions Simultaneous Equations	Angles & Bearings Working with Circles Vectors Ratios & Fractions Percentages & Interest Probability	Collecting, Representing & Interpreting Data Non-calculator Methods Types of Number & Sequences Indices & Roots Manipulating Expressions
Year 11	Gradients & Lines Non-linear graphs Using Graphs	Multiplicative Reasoning Geometric Reasoning Algebraic Reasoning	Revision

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This year is predominantly algebra and includes many of the most challenging and interesting topics. Teaching is designed to be completed by Easter to allow time to revise.	Expanding & Factorising Changing the Subject Functions	Transforming & Constructing Listing & Describing Show That…	
Year 12 Maths A-Level (Teacher A, Teacher B) This year develops and extends GCSE work in algebra and trigonometry while introducing new topics in calculus, exponentials, mechanics and statistics.	Algebra & Functions Coordinate Geometry Proof Sequences & Series Differentiation Large Data Set (IST) Integration Exponentials & Logarithms 1	Trigonometry Vectors Units Exponentials & Logarithms 2 Sampling Data, Present & Interpret Probability	Kinematics Forces & Newton's Laws Distributions Hypothesis Testing
Year 12 Further Maths A-Level (Teacher A, Teacher B) This year expands on and deepens understanding of Maths topics of algebra, calculus, mechanics and statistics as well as introducing new areas such as matrices and complex numbers	Further Algebra & Functions 1 & 2 Polar Coordinates Further Calculus Proof Complex Numbers Matrices	Further Vectors Dimensional Analysis Momentum & Collisions 1 & 2 Work, Energy & Power 1 Hyperbolic Functions Discrete Random Variables & Expectations Poisson Distribution Continuous Random Variables	Work, Energy & Power 2 Circular Motion Chi-Squared Tests for Association Confidence Intervals Type I and II Errors
Year 13 Maths A-Level (Teacher A, Teacher B) This year builds on the work covered in year 12, extending knowledge and skills and increasing complexity. Teaching is designed to be completed by Easter to allow time to revise.	Trigonometry Proof Algebra and Functions Sequences and Series Coordinate Geometry Differentiation Integration Exponentials and Logarithms	Sequences and Series Vectors & Units Kinematics Forces and Newton's Laws Moments Numerical Methods Probability & Distributions Hypothesis Testing Large Data Set	
Year 13 Further Maths A-Level (Teacher A, Teacher B) This year further develops and extends concepts and techniques met in year 12 Maths and Further	Further Algebra and Functions Polar Coordinates Further Calculus 1 & 2 Further Vectors Momentum and Collisions Complex Numbers	Work, Energy and Power Circular Motion Centres of Mass and Moments Differential Equations Applications Differential Equations 2	

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Maths and introduces new topics of differential equations and numerical methods. Teaching is designed to be completed by Easter to allow time to revise.	Matrices Hyperbolic Functions Numerical Methods Differential Equations 1	Discrete Random Variables and Expectation Exponential Distribution Inference Confidence Intervals	