Mathematics Curriculum Map

Year 7	Year 8
Sequences Algebraic expressions Applications of number Analysing data sets Fractions, decimals and percentages Developing geometric reasoning Area and perimeter Solving simple equations Using simple ratio	Proportional Reasoning Graphical representations Representing data Brackets, Equation & Inequalities Sequences & Indices Standard Form Fractions and percentages Geometry in polygons The data handling cycle

Year 9	Year 10	Year 11
Graphs and equations Construction in 2 and 3 dimensions Reasoning with number Financial maths Rotation and translation Pythagoras' Theorem Enlargement and Similarity Rates and proportion Probability	Congruence Trigonometry Equations and Inequalities Simultaneous Equations Angles and Bearings Arcs and Sectors Vectors Proportional change Analysing and representing data Using number Algebraic expressions	Non-linear graphs Algebraic factorisation Functions Algebraic and geometric reasoning Transformations and construction

Year 12	Year 13
Problem solving Surds and indices Coordinate geometry Quadratic functions Equations and inequalities Polynomials Trigonometry Binomial expansion Graphs and transformations Differentiation Integration Exponentials and logarithms Data collection Data processing and interpretation Probability Vectors Binomial distribution Statistical hypothesis testing Forces and Newton's law of motion Variable acceleration Sequences and series Functions Proof	Differentiation Algebra Trigonometric functions Further differentiation Integration Parametric equations Differential equations Vectors Numerical methods Kinematics Force and motion Moments Projectiles Friction Probability and distributions Hypothesis testing

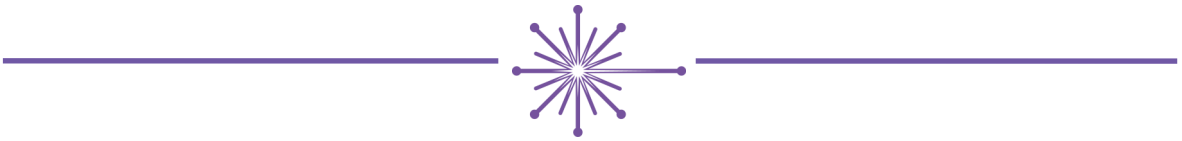
Further Mathematics Curriculum Map

Year 12	Year 13
Matrices and transformations Complex numbers Matrices and their inverses Complex numbers and geometry Roots of polynomials Sequences and series Vectors and 3D space Kinematics Forces and motion Statistical problem solving Discrete random variables Discrete probability distributions Friction Moments of forces Work energy and power Impulse and momentum Bivariate data Centre of mass Dimensional analysis Bivariate data Chi-squared tests Revision in preparation for AS examinations	Vectors Matrices Series and induction Further calculus Polar coordinates Maclaurin series Hyperbolic functions Applications of integration Approximation The solution of equations Numerical integration First order differential equations Complex numbers Approximating functions Numerical differentiation Rates of convergence Vectors Second order differential equations Review mock examinations Revision on preparation or final examinations

Core Mathematics Curriculum Map

Year 12

Analysis of data
Maths for personal finance
The normal distribution
Estimation
Critical analysis of given data and models
Probabilities and estimation
Correlation and regression
Examination



Mathematics Assessment Guidance

Formative Assessment

Assessment takes place in every maths lesson. Starter activities are used to assess previous learning or to identify misconceptions and teacher observation and questioning are used to assess current learning. This assessment can then Inform future teaching of the class, giving students feedback, allowing time for further reflections, identifying gaps in knowledge and adjusting the pace of the lesson where required. In KS3 Flashback 4 starter activities are used to consolidate prior learning and identify specific weaknesses. At the end of each unit of work we also use unit tests, which allow us to strengthen weak areas and extend areas of good practice. At KS4 Corbett maths 5 a day is used to start many lessons to help students get used to exam terminology and question styles. In Year 11, practice examination papers are used to identify areas of weakness, and personalised PinPoint Learning booklets are then used to target and overcome these weaknesses.

Summative Assessment

All Year 7 students complete a numeracy assessment at the beginning of the year, which is used to provide immediate intervention to those who require support with basic numeracy strategies. Summative assessments are given to Year 7 –10 twice per year to assess current knowledge and gaps in prior learning. In Year 11, students will have two mock examinations, one in November and one in March, to determine the correct tier of entry for each student. In Sixth form, topic assessments are used at the end of each topic in order to assess learning, and mock examinations covering all material learned to date take place in both Year 12 and Year 13.