



SUBJECT: MATHS

Key Stage 5 Curriculum Content

	<u>Year 12</u>	<u>Year 13</u>	<u>Year 12 Further Maths</u>
<u>HT1</u>	<ul style="list-style-type: none"> • A/A* Revision & Pre-requisite test • Surds & Indices • Logs & Exponentials • Arithmetic & Geometric sequences • Venn Diagrams • Probability & Tree Diagrams 	<ul style="list-style-type: none"> • Partial Fractions • Polynomials • Binomial expansion • Functions • Numerical solutions • Natural Logs & Exponential • Matchings • Algorithms 	<ul style="list-style-type: none"> • Matrix Algebra • Series • Mathematical Induction • Kinematics
<u>HT2</u>	<ul style="list-style-type: none"> • Inequalities • Quadratics & Discriminant • Quadratics & Simultaneous Equations • Histograms • Measures of Location • Measures of Dispersion 	<ul style="list-style-type: none"> • Trigonometry • Differentiation 1 • Graphs & Network • Route Inspection 	<ul style="list-style-type: none"> • Numerical Solutions • Complex Number • Co-ordinate Systems • Moments • Conservation of Momentum
<u>HT3</u>	<ul style="list-style-type: none"> • Polynomials • Factor Theorem • Binomial Expansion • Box plots & Skewness • Discrete random variables 	<ul style="list-style-type: none"> • Differentiation 2 • Integration 1 	<ul style="list-style-type: none"> • Dynamics • Algorithms • Graphs & Networks
<u>HT4</u>	<ul style="list-style-type: none"> • Functions & Co-ordinate Geometry • Circle co-ordinate geometry • Correlation & Regression 	<ul style="list-style-type: none"> • Integration 2 • Differential Equations • Critical Path Analysis 	<ul style="list-style-type: none"> • Statics • Vectors • Route Inspection
<u>HT5</u>	<ul style="list-style-type: none"> • Differentiation • Integration • Normal Distribution 	<ul style="list-style-type: none"> • Vectors • Linear Programming 	<ul style="list-style-type: none"> • Critical Path Analysis • Linear Programming
<u>HT6</u>	<ul style="list-style-type: none"> • Trigonometry • Exams 	<ul style="list-style-type: none"> • <i>Exams</i> 	<ul style="list-style-type: none"> • <i>Exams</i>

	<u>Year 12 GCSE Resit</u>	<u>Maths in Context (2-year course)</u>	<u>Year 13 Further Maths</u>
<u>HT1</u>	<ul style="list-style-type: none"> Number Revision (Grade D/C/B) – percentages, decimals, fractions 4-ops, written multiplication & division, estimation & rounding 	<ul style="list-style-type: none"> Personal Economics – payday loans, imports/exports Personal Finance – income tax, life insurance, car/student loans, mortgages 	<ul style="list-style-type: none"> Inequalities Series Further Co-ordinates Systems Transportation Problems Allocation Problems
<u>HT2</u>	<ul style="list-style-type: none"> Algebra Revision (Grade D/C/B) – simplify/factorise/expand expressions, solve equations, draw straight line and quadratic graphs, sequences, solve quadratics 	<ul style="list-style-type: none"> Society – wealth & life expectancy, risk, marriages, population growth & social housing 	<ul style="list-style-type: none"> MaClaurin & Taylor Series Expansion Hyperbolic Functions Further Matrix Algebra Travelling Salesman Flows in Networks Allocation Problems
<u>HT3</u>	<ul style="list-style-type: none"> Data Revision (Grade D/C/B) – questionnaires, averages, frequency tables, cumulative frequency, boxplots, sampling, scatter graphs, probability, probability trees 	<ul style="list-style-type: none"> Social Networking – social network usage, big data, six degrees of separation 	<ul style="list-style-type: none"> Polar Co-ordinates Further Complex Numbers Game Theory Flows in Network Dynamic Programming
<u>HT4</u>	<ul style="list-style-type: none"> Shape Revision (Grade D/C/B) – angles, polygons, area, volume & surface area of prisms, circles, pythagora's theorem, trig 	<ul style="list-style-type: none"> Sport Disasters 	<ul style="list-style-type: none"> Differentiation Differential Equations Vectors Integration
<u>HT5</u>	<ul style="list-style-type: none"> Past paper practice 	<ul style="list-style-type: none"> Engineering – project management Environment – cost of going green, deforestation, climate & weather 	<ul style="list-style-type: none">
<u>HT6</u>	<ul style="list-style-type: none"> Past paper practice 	<ul style="list-style-type: none"> Travel Health Creative arts 	<ul style="list-style-type: none">