

YEAR 12 CURRICULUM INFORMATION - Mathematics

	Summer 1	Summer 2
What will students be learning?	Pure unit 8 Exponentials and logarithms Mechanics Unit 8 Forces and Motion Mechanics Unit 9 Variable Acceleration	Pure 2 unit 1 Algebraic methods Pure 2 unit 3 Sequences and series
How will students be assessed?	Mock examinations	2 pure checkpoint assessments
Literacy – What keywords will be taught?	Calculus, differentiate, integrate, reverse, indefinite, definite, constant, evaluate, intersection, Exponential, exponent, power, logarithm, base, initial, rate of change, compound interest, Force, newtons, mass, weight, gravity, tension, thrust, compression, air resistance, reaction, driving force, braking force, resultant, force diagram, equilibrium, inextensible, light, negligible, particle, smooth, uniform, pulley, string, retardation, free particle.	Proof, verify, deduction, contradict, rational, irrational, square, root, prime, infinity, square number, quadratic, expansion, trigonometry, Pythagoras, Polynomial, numerator, denominator, factor, difference of two squares, quadratic, power, index, coefficient, degree, squared, coefficients, improper, identity, algebraic fraction, partial fraction, rational, Sequence, series, finite, infinite, summation notation, $\sum$ (sigma), periodicity, convergent, divergent, natural numbers, arithmetic series, arithmetic progression (AP), common difference, geometric series, geometric progression (GP), common ratio, n th term, sum to n terms, sum to infinity (S_{∞})(∞), limit.
What employability skills are being developed?	The specific value of maths as a required or preferred subject for particular careers e.g. - Engineers and engineering technicians - Surveyors and surveying technicians - Systems analysts - Actuaries - Accountants - Operational researchers - Chemists - Software engineers - Statisticians	The specific value of maths as a required or preferred subject for particular careers e.g. - Engineers and engineering technicians - Surveyors and surveying technicians - Systems analysts - Actuaries - Accountants - Operational researchers - Chemists - Software engineers - Statisticians

Wider Curriculum Links?	Physics Trigonometry (sine waves) SUVAT Logarithms Exponentials Simultaneous equations Chemistry Graphs Quadratics Logarithms Rearranging formulae Biology Graphs Surface area and volume Logarithms Business Percentages Graphs Psychology Scatter graphs Venn diagrams Box plots	Physics Trigonometry (sine waves) SUVAT Logarithms Exponentials Simultaneous equations Chemistry Graphs Quadratics Logarithms Rearranging formulae Biology Graphs Surface area and volume Logarithms Business Percentages Graphs Psychology Scatter graphs Venn diagrams Box plots
What useful websites are there for this topic?	www.mathsgenie.co.uk www.drfrust.co.uk www.resourceaholic.co.uk www.crashmaths.co.uk www.physicsandmathstutor.co.uk	www.mathsgenie.co.uk www.drfrust.co.uk www.resourceaholic.co.uk www.crashmaths.co.uk www.physicsandmathstutor.co.uk

What wider reading could be done for this topic?	Bridging GCSE & A Level Maths by Mark Rowland Published by Collins ISBN: 978 0 00741 023 1 AS-Level Maths Head Start Published by CGP Workbooks ISBN: 978 1 84146	Bridging GCSE & A Level Maths by Mark Rowland Published by Collins ISBN: 978 0 00741 023 1 AS-Level Maths Head Start Published by CGP Workbooks ISBN: 978 1 84146
What else can students be doing independently to develop their understanding of this topic?	Complete topic booklets from physicsandmathstutor.co.uk Complete exam packs to develop examination skills. Complete old specification past papers for extra practise.	Complete topic booklets from physicsandmathstutor.co.uk Complete exam packs to develop examination skills. Complete old specification past papers for extra practise.