Year 12: Subject: Maths A Level

	Content	Book Chapters	Knowledge	Subject Skills	Assessments	Employability Skills / Careers
HT1	**Pure:** Coordinate Geometry Surds and Indices Functions **Mechanics:** Vectors Kinematics	Ch 6.1-6.3 Ch 2 Ch 3 Ch 5.3 Ch 15 Ch 16	• Use laws of indices • Work with surds • Work with straight line graphs • Understand the main features of graphs of quadratics • Solve quadratic equations, including disguised quadratics, through a variety of methods • Graph Transformations • Vector manipulation • Travel Graphs and SUVAT problems	• Extend your range of mathematical skills and techniques • Draw diagrams and sketch graphs • Interpret solutions and communicate this effectively in the context of the problem • Generalise mathematically • Take increasing responsibility for your own learning and mathematical development	Peer Assessment 1 In-class Exam Questions	**(E)Problem Solving**: Being resilient in tackling increasingly complex problems on new areas of mathematics **(E)Teamwork**: Work in small groups to successfully complete exercises. **(E)Independence**: Get into good habits with Independent Study **(E)Communication**: Communicating written mathematical solutions with correct notation **(E)Technological Skills:** Use the graphical calculator and its functionality including solving equations, drawing graphs, statistical functions **(E)Literacy**: Understand subject specific terminology and use it effectively in work **(E)Numeracy**: Every lesson! ☺ **(C)**: Enrichment tasks in homework with podcast link to maths related jobs
HT2	**Pure:** Functions Circles Sequences and Series Trigonometry **Mechanics:** Forces **Statistics:** Probability Stats Distributions (Binomial)	Ch 4 Ch 9 Ch 10 Ch 18 Ch 21	• Work with polynomials including applying the Factor Theorem • Apply the Binomial Expansion • Solve problems involving circles and their properties • Extend knowledge of GCSE trigonometry to include solutions of equations using trig identities • Understand and apply Newton's laws to solve problems involving forces and gravity • Use the Binomial Distribution and probability laws to solve problems	• Use mathematical skills and techniques to solve challenging problems which require you to decide on the solution strategy (FA 1) • Interpret and communicate solutions in the context of the original problem • Interpret the outputs of a mathematical model in the context of the original situation • Take responsibility for your own learning and mathematical development	**Formal Assessment 1** Peer Assessment 2 In-class Exam Questions	

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