



Curriculum Summary Document

Year 10 Mathematics

Module/Unit of Learning	Term Taught	What will students learn?	What does this prepare students for?	Links to other subjects
To understand the properties of polygons	Autumn	Interior and exterior angles of polygons	Calculating the area of regular polygons using trigonometry	
To understand the concept of algebra and a equations	Autumn	Expanding, simplifying and factorising; Algebraic fractions	Quadratics.	
To understand how to operator with numbers expressed as indices or in standard form	Autumn	Convert between standard form and ordinary numbers	Determining the roots of big and small numbers	Science: Mass of planets
To calculate using surds	Autumn	Simplify surds; Calculate with surds	Exact trigonometric values, links to Pythagoras	
To use advanced methods to solve probability problems	Autumn	Probability tree diagrams	Conditional probability	
To understand the use of measures	Autumn	Metric units; compound measures; bounds	Error intervals for compound measures	Geography
To understand and use quadratics	Spring	Quadratic formula; completing the square	Link quadratics to problems involving area and probability.	
Calculating and solving problems with percentages	Spring	Percentage change; compound interest; reverse percentages.	Applications in finance, including mortgages.	
To rearranging formulae, identities and use function notation	Spring	Change the subject of the formula including problems that require factorizing.	Inverse functions.	Science
To apply Pythagoras Theorem and trigonometry to solve problems	Spring	Basic trigonometry; area rule for any triangle; Sine and Cosine Rules.	Area of regular polygons; Trigonometric graphs.	
To use constructions and loci to solve problems	Summer	Angle bisectors; line bisectors; using a compass.	Real life applications in navigation	Geography. Graphics.
Advanced sequences	Summer	Nth term rules for geometric and quadratic sequences.	Find more complex rules; link to series.	
To solve problems involving the volume	Summer	Volume of cones, pyramids, prisms and spheres.	Volume of frustrums; volume of revolution of a graph.	Science.
To construct and gain insight from scatter graphs	Summer	Correlation; lines of best fit; reliable estimates.		Science