



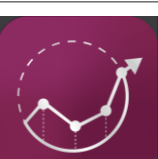



What I will know and understand by the end of Year 10.

	Themes	This year in Mathematics we will be learning:	This links to:	Key Vocabulary & Notation		
1		The Construction of the World <ul style="list-style-type: none"> Block 1 – Congruence, similarity & enlargement Block 2 – Trigonometry 	<ul style="list-style-type: none"> Revisits angle rules. Revisits equations, especially variants of $ax = b$ Revisits Pythagoras' theorem. 	<ul style="list-style-type: none"> Position Term Linear Non-Linear Graphical 	<ul style="list-style-type: none"> Function Input Output Inverse Expression 	<ul style="list-style-type: none"> Equal = Equivalent \equiv Like Terms Form Solve
2		The Language of the Universe <ul style="list-style-type: none"> Block 3 – Representing solutions of equations & inequalities Block 4 – Simultaneous equations 	<ul style="list-style-type: none"> Links by the context for equations to include probability, area, angles, ratio problems etc. 	<ul style="list-style-type: none"> Variable Expression Inverse Inequality Set notation 	<ul style="list-style-type: none"> Infinite Intersect Eliminate Substitute Coefficient 	
3		The Construction of the World <ul style="list-style-type: none"> Block 5 – Angles & bearings Block 6 – Working with circles Block 7 – Vectors 	<ul style="list-style-type: none"> Visit trigonometry. Revisits area and volumes of other shapes, and compound shapes. Links to estimation, rounding and significant figures. 	<ul style="list-style-type: none"> Bearing Included angle Ratio Similar 	<ul style="list-style-type: none"> Sector Segment Tangent Chord Subtend 	<ul style="list-style-type: none"> Vector Magnitude Scalar Direction Parallel
4		A Numerate Citizen <ul style="list-style-type: none"> Block 8 – Ratios & fractions Block 9 – Percentages & interest Block 10 – Probability 	<ul style="list-style-type: none"> Revisits formal methods of calculation. Revisits fraction arithmetic. 	<ul style="list-style-type: none"> Ratio Equivalent Proportion Convert Similar 	<ul style="list-style-type: none"> Compound Simple Interest Depreciate Iterate 	<ul style="list-style-type: none"> Exact Value Complement Intersect Union Given that
5		An Informed Citizen <ul style="list-style-type: none"> Block 11 – Collecting representing & interpreting data Block 12 – Non calculator methods 	<ul style="list-style-type: none"> Links with using equations e.g. solving problems about the mean. Revisits using non-calculator methods when appropriate. 	<ul style="list-style-type: none"> Population Stratified Cumulative Frequency Density Extrapolation 	<ul style="list-style-type: none"> Balance Credit/Debit Reciprocal Recurring Terminating 	
6		The Language of the Universe <ul style="list-style-type: none"> Block 13 – Types of number and sequences Block 14 – Indices & roots Block 15 – Manipulating expressions 	<ul style="list-style-type: none"> Revisits exact trigonometrical values. Revisits area and volume formulae. Links to convert FDP, exact answers in terms of π. Links to financial mathematics. 	<ul style="list-style-type: none"> Arithmetic Geometric Triangular Fibonacci Oscillate 	<ul style="list-style-type: none"> Exponent Root Base Index/Indices Simplify 	<ul style="list-style-type: none"> Expression Term Coefficient Variable Reciprocal

Target Grade:




AP1:

AP2:

AP3:



What I will know and understand by the end of Year 11 (Foundation).




	Themes	This year in Mathematics we will be learning:	This links to:	Key Vocabulary & Notation	
1		An Informed Citizen <ul style="list-style-type: none"> Probability – relative frequency, expectation, listing outcomes, Venn diagrams, and or rules and conditional probability Scales, bounds, SDT, area, circle arcs and sectors 	<ul style="list-style-type: none"> Revisits probability which has been studied since Year 7 Revisits substitution 	<ul style="list-style-type: none"> Expectation Relative frequency Conditional Outcomes 	<ul style="list-style-type: none"> Compound measures Arc Sector Upper and lower bounds
2		The Construction of the World <ul style="list-style-type: none"> Prisms, spheres, pyramids, cones, volume, similar shapes, density Averages, range, data representations 	<ul style="list-style-type: none"> Builds on work with more simple shapes and their formulae Builds on work with other compound measures Revisits existing knowledge of averages 	<ul style="list-style-type: none"> Prism Sphere Cone Density 	<ul style="list-style-type: none"> Mean Mode Median Range
3		The Construction of the World <ul style="list-style-type: none"> Comparing sets of data, sampling Angles, constructions, bearings, Pythagoras' Theorem, trigonometry 	<ul style="list-style-type: none"> Builds on existing knowledge of comparing averages Use of protractors and rulers. Scale drawing uses knowledge of ratio and proportion 	<ul style="list-style-type: none"> Mean Mode Median Range Stratified sample 	<ul style="list-style-type: none"> Trigonometry Pythagoras' theorem Scale drawing Construction
4	Once the course content has been covered, the remainder of the year will be spent revisiting the most challenging topics, consolidating knowledge and practicing exam technique.				

Target Grade:

AP1:

AP2:

AP3:

	Themes	This year in Mathematics we will be learning:	This links to:	Key Vocabulary & Notation
1		<p>The Language of the Universe</p> <ul style="list-style-type: none"> Completing the square, quadratic formula, quadratic simultaneous equations, equation of a circle, tangent to a circle, exponentials, Arc length and area of a sector, volume of a prism, sphere and other 3D shapes. 	<ul style="list-style-type: none"> Builds on circle theorems from Year 10 Much of the rest of the content is new, but requires algebra skills which have been developed since Year 7 	<ul style="list-style-type: none"> Quadratic equation Circle vocabulary Exponentials Prism Cylinder Sphere
2		<p>Informed Citizen</p> <ul style="list-style-type: none"> 2D and 3D similar shapes Averages and range, tabulated data, cumulative frequency, boxplots, histograms, comparing data 	<ul style="list-style-type: none"> Proportion and ratio are required to understand scale factors Comparing data has been studied since Year 7 but we are now using new representations to show these comparisons 	<ul style="list-style-type: none"> Mean, median, mode and range Cumulative frequency Histogram boxplot
3		<p>The Construction of the World</p> <ul style="list-style-type: none"> Solving inequalities, graphical inequalities, algebraic fractions Map scales, constructions, loci, trigonometric equations, transformations of functions 	<ul style="list-style-type: none"> Build on algebraic skills Proportion and ratio are needed to understand map scales. 	<ul style="list-style-type: none"> Inequality Algebraic fractions Loci Trigonometry Functions
4	Once the course content has been covered, the remainder of the year will be spent revisiting the most challenging topics, consolidating knowledge and practicing exam technique.			

Target Grade:

AP1:

AP2:

AP3: