

<h1>Year 11</h1> <p>Maths</p>			
1 Number, Ratio and Proportion	<ul style="list-style-type: none"> To calculate exactly with fractions To calculate and interpret standard form To compare lengths, areas and volumes using ratio notation To understand and use compound interest 	<ul style="list-style-type: none"> To change recurring decimals into their corresponding fractions To calculate with roots and integer indices To calculate with multiples of π To apply and interpret limits of accuracy 	<ul style="list-style-type: none"> To rationalise the denominator To work with the general iterative process To construct and interpret equations that describe direct and inverse proportion
2 Statistics	<ul style="list-style-type: none"> To interpret, analyse and compare averages and measures of spread To draw estimated lines of best fit To know and understand the terms; primary, secondary, discrete and continuous data 	<ul style="list-style-type: none"> To draw conclusions from graphical evidence To interpret, analyse and compare boxplots To interpret quartiles and the interquartile range 	<ul style="list-style-type: none"> To construct and interpret histograms To deduce an estimate for the median from a histogram To argue using data as evidence
3 Geometry and Measures	<ul style="list-style-type: none"> To use a ruler and compass to construct To know and use the formulae for Pythagoras' theorem To construct and interpret plans and elevations of 3D shapes To know and use the formulae for area and circumference of a circle 	<ul style="list-style-type: none"> To calculate arc lengths, angles and areas of sectors of circles To apply addition and subtraction of vectors, multiplication of vectors by a scalar and diagrammatic and column representations of vectors To apply the concepts of congruence and similarity including the relationships between lengths in similar figures To know and use the trigonometric ratios 	<ul style="list-style-type: none"> To describe the changes achieved by a combination of translation To apply and prove the standard circle theorems To apply the trigonometric ratios to find missing angles and lengths in 3D figures To use vectors to construct geometric arguments and proofs
4 Algebra	<ul style="list-style-type: none"> To understand and use standard mathematical formulae, rearrange formulae to change the subject To recognise, sketch and interpret graphs of linear, quadratic functions and $y=1/x$ To interpret simple expressions as inputs and outputs To be able to factorise quadratic expressions of the form x^2+bx+c 	<ul style="list-style-type: none"> To simplify and manipulate algebraic expressions involving surds To identify and interpret roots, intercepts, turning points of quadratic functions graphically To solve linear inequalities in one variable and represent the solution in a number line To recognise and use Fibonacci-type sequences, quadratic sequences and simple geometrical progressions (rn where n is an integer and a rational number) 	<ul style="list-style-type: none"> To simplify and manipulate algebraic fractions To deduce expressions to calculate the nth term of a quadratic sequence To sketch translations and reflections of a given function To recognise and use the equation of a circle with centre at the origin; find the equation of a tangent to a circle at a given point