KS4 – Year 10 – Mathematics Higher		
Term	**Topic Titles**	**Brief Overview**
1	H1 - Indices and standard form	Work with powers, roots and standard form.
	H1 - Scale diagrams and bearings	Use angle facts, ratio and proportion to construct scale diagrams and calculate bearings.
	H2 - Basic Number, factors and multiples	Understand, use and apply mental and written methods for calculations and use the concepts and vocabulary of factors, multiples and primes.
	H2 - Basic Algebra	Use and interpret algebraic notation and manipulate algebra using mixed operations.
	H2 - Equations and formulae	Solve a variety of linear equations using algebraic methods, linking to graphs.
	H3 - Rounding	Understand, use and apply various methods for rounding and error intervals.
	H3 - Perimeter and area	Calculate area and perimeter of 2D shapes. Calculate surface area of 3D shapes.
	H3 - Circumference and area	Apply ideas of area and perimeter to circles, arcs and sectors.
	H4 - Fractions and decimals	Work with fractions and decimals in a variety of contexts.
	H4 - Sequences	Recognise various sequences and represent these algebraically.
	H4 - Surds	Calculate and solve problems involving surds.
2	H5 - Percentages	Work with percentages in a variety of contexts.
	H5 - Linear graphs	Use coordinates, equations and graphs to represent linear algebraic relationships.
	H6 - Real life graphs	Apply ideas of linear graphs to real-life contexts.
	H6 - Ratio and proportion	Understand and use ratio and proportion in a variety of contexts.

	H6 - Direct and inverse proportion	Use algebraic methods to solve direct and inverse proportion problems.
	H7 - Transformations	Understand and apply translations, reflections, rotations and enlargements to 2D shapes.
	H7 - Algebra: quadratics, functions and identities	Manipulate quadratic expressions, rearrange formulae and work with functions using function notation.
3	H8 - Pythagoras and basic trigonometry	Understand, use and apply Pythagoras' theorem and trigonometry in right-angled triangles, including exact values.
	H8 - Congruence and similarity	Understand and apply similarity to 2D and 3D shapes and use the rules for congruence.
	H9 - Statistical measures	Understand and use measures of central tendency and spread (mean, median, mode and range) in a variety of contexts.
	H9 - Collecting and representing data	Understand and use a range of statistical graphs and diagrams to represent and interpret data.
	H10 - Algebraic fractions	Apply algebraic methods to manipulation of algebraic fractions.
	H10 - Scatter graphs	Use and interpret scatter graphs for bivariate data.
	H11 - Circle theorems	Understand, use and apply circle theorems.
	H11 - 2D representations of 3D shapes	Use nets, plans and elevations to represent 3D shapes.
	H11 - Volume	Calculate the volume of 3D shapes.
	H8 - Pythagoras and basic trigonometry	Understand, use and apply Pythagoras' theorem and trigonometry in right-angled triangles, including exact values.