

## KS4 – Year 10 – Mathematics Foundation

Term	Topic Titles	Brief Overview
<b>1</b>	F1 - Indices and standard form	Work with powers, roots and standard form.
	F1 - Angles	Use and interpret angle facts, geometry notation and apply these to problems.
	F2 - Basic Number and decimals	Understand, use and apply mental and written methods for calculations including decimals.
	F2 - Factors and multiples	Use the concepts and vocabulary of factors, multiples and primes.
	F2 - Basic Algebra	Use and interpret algebraic notation and manipulate algebra using mixed operations.
	F3 - Rounding	Understand, use and apply various methods for rounding.
	F3 - Perimeter and area	Calculate area and perimeter of 2D shapes. Calculate surface area of 3D shapes.
	F4 - Scale diagrams and bearings	Use angle facts, ratio and proportion to construct scale diagrams and calculate bearings.
	F4 - Basic fractions	Work with fractions in a variety of contexts.
	F4 - Circumference and area	Apply ideas of area and perimeter to circles.
<b>2</b>	F5 - Sequences	Recognise various sequences and represent these algebraically.
	F5 - Percentages	Work with percentages in a variety of contexts.
	F6 - Coordinates and linear graphs	Use coordinates and graphs to represent linear algebraic relationships.
	F6 - Real life graphs	Apply ideas of linear graphs to real-life contexts.
	F6 - Equations	Solve a variety of linear equations using algebraic methods, linking to graphs.

	F7 - Ratio and proportion	Understand and use ratio and proportion in a variety of contexts.
	F7 - Transformations	Understand and apply translations, reflections, rotations and enlargements to 2D shapes.
<b>3</b>	F8 - Congruence and similarity	Understand and apply similarity to 2D and 3D shapes and use the rules for congruence.
	F8 - Algebra: quadratics, formulae and identities	Manipulate quadratic expressions, rearrange formulae and understand basic algebraic identities.
	F9 - Statistical measures	Understand and use measures of central tendency and spread (mean, median, mode and range) in a variety of contexts.
	F9 - Collecting and representing data	Understand and use a range of statistical graphs and diagrams to represent and interpret data.
	F10 - Pythagoras' theorem	Understand, use and apply Pythagoras' theorem in right-angled triangles.
	F10 - Scatter graphs	Use and interpret scatter graphs for bivariate data.
	F11 - 2D representations of 3D shapes	Use nets, plans and elevations to represent 3D shapes.
	F11 - Volume	Calculate the volume of 3D shapes.