Curriculum Overview

SUBJECT:	MATHS	YEAR:	11
INTENT:	To build on the skills learnt in KS3 and begin to equip students with the numeracy and problem-solving skills they will need to succeed in KS4, build on in KS5 and take beyond school.		

UNITS OF WORK

Gradients & Lines	Non-Linear Graphs	Using Graphs	Expanding and Factorising
Changing the Subject	Functions	Multiplicative Reasoning	Geometric Reasoning
Algebraic Reasoning	Transforming & Constructing	Listing and describing	Show That..

Main Fluency Development	Main Application Development	Assessment
• Understand plot and define linear and non-linear graphs. • Solve problems using real life and more abstract graphs. • Manipulate algebra using a range of skills including expanding, factorising, simplifying, substituting and solving. • Apply transposition of formula where the desired subject appears once or more than once in the equation. • Use reasoning in a variety of contexts including arithmetic, geometric and algebraic to solve problems and present mathematical arguments. • Transform shapes in two dimensions. • Understand and interpret transformations of graphs including trigonometric graphs. • Solve probability problems involving more than one event including independent and dependent events. • Use formal proof in a variety of mathematical contexts.	• Make links between equations and the appearance of linear graphs. • Make links between the shape of a non-linear graph and its corresponding equation. • Apply algebra to abstract problem solving. • Use transposition of formula to solve multi-step problems • Substitute into and rearrange formulae, expand and factorise double brackets. • Use, describe and identify different types of transformation. • Compare theoretical and experimental probabilities, • Understand and use function notation. • Calculate experimental probabilities and solve problems using knowledge of probability by selecting appropriate methods. • Understand and communicate formal proof including geometric and algebraic proof	• PPE in November • PPE in February
SMSC/British Values/Careers	**Literacy/Numeracy**	**Curriculum Enrichment**
• Understand data in the news, finance, shopping, basics needed for many careers and functioning outside the school setting. • Know that maths was discovered and codified by peoples of all genders and ethnicities.	• Contextual problem solving.	Real life applications addressed through problem solving, use of ICT where relevant, variety of activities to enforce and embed concepts and retrieval activities used for ongoing revision. Use of metacognition to encourage students to thinks about their learning and improve their progress.