

Curriculum Map – GCSE Foundation Mathematics

Learning Phase 2 – Year 11		
Knowledge	Skills	Rationale
ALL students cover:	Through the mathematics content, pupils are taught to:	The order in which topics are taught are as recommended by the Route Map provided by AQA, the exam board which we use. However, faculty time and INSET time were used to check/amend hours needed for each unit of work eg Unit 36 Algebra and graphs was reduced from 10 hours to 4 hours.
Unit Topic	Develop fluency	Differentiated schemes of work were then written – one for the higher groups sitting the Foundation GCSE tier and one for the lower groups sitting the Foundation GCSE tier.
29 Probability	consolidate their numerical and mathematical capability from key stage 3 and extend their understanding of the number system	
30 Volume	select and use appropriate calculation strategies to solve increasingly complex problems	
31 Algebra: quadratics, rearranging formulae and identities	consolidate their algebraic capability from key stage 3 and extend their understanding of algebraic simplification and manipulation to include quadratic expressions	
32 Scatter graphs	extend fluency with expressions and equations from key stage 3, to include quadratic equations, simultaneous equations and inequalities	
33 Inequalities	move freely between different numerical, algebraic, graphical and diagrammatic representations, including of linear, quadratic and reciprocal functions	
34 Pythagoras’ theorem	use mathematical language and properties precisely	
35 Simultaneous equations		
36 Algebra and graphs		
37 Sketching graphs		
38 Direct and inverse proportion		
39 Trigonometry		
40 Solving quadratic equations		
41 Quadratic graphs		
42 Growth and decay		
43 Vectors		
	Reason mathematically	
	extend their ability to identify variables and express relations between variables algebraically and graphically	
	make and test conjectures about the generalisations that underlie patterns and relationships	
	reason deductively in geometry, number and algebra	
	interpret when the structure of a numerical problem requires additive, multiplicative or proportional reasoning	
	assess the validity of an argument and the accuracy of a given way of presenting information	
		The order of topics are determined generally by the knowledge and skills which are pre-requisites for future topics.
		The subject content matches that set out in the Department for Education’s Mathematics GCSE subject content and assessment objectives document, and is common to all exam boards.

	Solve problems • develop their mathematical knowledge, in part through solving problems and evaluating the outcomes, including multi-step problems • develop their use of formal mathematical knowledge to interpret and solve problems, including in financial contexts • make and use connections between different parts of mathematics to solve problems • model situations mathematically and express the results using a range of formal mathematical representations, reflecting on how their solutions may have been affected by any modelling assumptions • select appropriate concepts, methods and techniques to apply to unfamiliar and non-routine problems; interpret their solution in the context of the given problem	
Assessment 1 (NOV): First full GCSE Mock exam: Three 90 minute papers (Paper 1: Non-calculator, Paper 2: Calculator, Paper 3: Calculator). Assessment 2 (MAR): Final full GCSE Mock exam: Three 90 minute papers (Paper 1: Non-calculator, Paper 2: Calculator, Paper 3: Calculator). Assessment 3 (MAY/JUNE): GCSE Exam (external).		