

Curriculum Map – Year 7 Mathematics

Learning Phase 3 – Summer Term		
Knowledge	Skills	Rationale
ALL students cover: NUMBER - Calculations SHAPE - Transformations and Symmetry DATA - Surveys and Data FUNCTIONAL SKILLS - Changing Rooms/Smarties Project Excellence only: ALGEBRA - Equations and Formulae - Factorising Quadratics Excellence and Extending only: NUMBER - Percentages, Ratio and Proportion ALGEBRA - Expanding Double Brackets SHAPE - Area and Circumference of a Circle - Pythagoras' Theorem Excellence/Extending and Secure only: SHAPE	Through the mathematics content, pupils are taught to: Develop fluency: - select and use appropriate calculation strategies to solve increasingly complex problems - use algebra to generalise the structure of arithmetic, including to formulate mathematical relationships - substitute values in expressions, rearrange and simplify expressions, and solve equations - develop algebraic and graphical fluency - use language and properties precisely to analyse algebraic expressions, 2D and 3D shapes and statistics Reason mathematically: - make connections between number relationships, and their algebraic and graphical representations - extend and formalise their knowledge of ratio and proportion - identify variables and express relations between variables algebraically and graphically - use geometrical constructions - explore what can and cannot be inferred in statistical settings, and begin to express their arguments formally 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 - begin to model situations mathematically	The order in which topics are taught are influenced by the textbooks used (Oxford Maths Link 7A, 7B, 7C) although schemes have been written and adapted by experienced teaching staff to ensure challenge is provided across the attainment bands and to ensure students are prepared for on-going assessments. The order of topics are determined generally by the knowledge and skills which are pre-requisites for future topics. The content taught is determined by the National Curriculum.

• 2D Representation of 3D Shapes • Constructions Secure only: ALGEBRA • Equations, sequences and graphs	• select appropriate concepts, methods and techniques to apply to unfamiliar and non-routine problems	
Developing only: NUMBER • Time ALGEBRA • Symbols and Expressions SHAPE • Area of Compound Shapes		
Assessment 3 (MAY) Two written 45 minute papers (Paper 1: Non-calculator; Paper 2: Calculator). EXC/EXT/SEC - same paper; DEV - different paper.		