

Mathematics Year Eleven	Curriculum Intent: The Year 11 curriculum will consolidate and extend the differing areas of mathematics covered during Year 10. Students will continue to study Number, Algebra, Geometry and Data Handling as they prepare for the GCSE Mathematics examinations at the end of the year. Opportunities to revisit key concepts through retrieval practice will be frequent parts of the curriculum. Key knowledge and skills will be developed with the use of problem solving activities and the frequent use of 'problem solving' style GCSE questions. Students will be required to identify which part of their knowledge and skills will be best suited to the question.					
	Term One		Term Two		Term Three	
Knowledge (Red indicates 'Higher tier only' topic areas)	Geometry - Pythagoras - Right-angled trigonometry Further trigonometry Algebra - Plotting straight line graphs - Plotting quadratic graphs $y = mx + c$ - Gradient Equation of a line – gradient and a point) Equation of line – 2 coordinates Parallel and perpendicular lines - Other graphs - Real life graphs Data - Revision of Data Handling work covered in Term Six of Year Nine		Geometry - Nets - Properties of 2D shapes - Properties of 3D shapes - Plans and elevations - Surface area and volume of prisms - Surface area and volume of non-prisms (pyramid, cone, sphere) - Compound measures Data - Revision of Data Handling work covered in Term Six of Year Nine - Averages and Range - Collecting Data - Bar charts, pictograms, line graphs - Pie Charts - Scatter graphs Cumulative Frequency diagrams Box and Whisker Diagrams Histograms		Algebra - Solving linear simultaneous equations Solving non-linear simultaneous equations - Linear inequalities Graphical and quadratic inequalities Data - Probability of a single event - Relative frequency - Expectation - Systematic listing strategies - Probability of combined events (mutually exclusive and independent) - Probability with Venn diagrams - Frequency trees - Tree Diagrams	
					Geometry - Symmetry - All transformations - Translation and basic vectors - Reflection - Rotation - Enlargement - Similarity and congruence Algebra Equation of a circle Graphs of trigonometric functions Functions Transformation of functions Iteration Estimating area under a curve Estimating gradient of curves Algebraic proof Consolidation and preparation for GCSE examinations.	
Skills	Use and apply standard technique	Reason, interpret and communicate mathematically	Solve problems within mathematics and in other contexts	Use and apply standard technique	Reason, interpret and communicate mathematically	Solve problems within mathematics and in other contexts
Interleaving	Regular consolidation of all prior teaching Reviewing skills for future learning Use of Mathsbox 10 and 20 question starters Use of Dr Frost for exam question tasks			Regular consolidation of all prior teaching Reviewing skills for future learning Use of Mathsbox 10 and 20 question starters Use of Dr Frost for exam question tasks Completion of Weekly Past Papers		
Assessment	Regular 'low stakes' testing in class Formal assessment in November			Regular 'low stakes' testing in class PPE Exams at start of Term 3 GCSE exams during Terms Five and Six		