

Year 11 Mathematics

In Years 10 and 11, students will further develop their problem solving and deeper reasoning skills in order to build confidence in exam and revision techniques following the two-year GCSE scheme of learning. Teachers will use AFL thoroughly with students in order to foster confident individual learners and to target bespoke support. Students will complete 32 sequenced learning blocks which are thoughtfully sequenced to ensure the students can build upon prior knowledge and link concepts. Year 11 completes the remaining Blocks 22 -32 of the GCSE content. Retrieval practice is embedded into lessons. This is usually seen in Brain in Gears at the start of all lessons and may include recall questions from previous lessons or a recap of prior learning. Retrieval practice includes interleaved questions from previous topics, making connections between topics where possible.

Year 11 Curriculum	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
Topic(s)	<p>Block 22: Proportion</p> <ul style="list-style-type: none"> - Simple direct and inverse proportion worded problems - Algebraic direct and inverse proportion - Constant of proportionality <p>Block 23: Formulae</p> <ul style="list-style-type: none"> - Rearranging simple formulae - Use the kinematics formulae - Compound Units - Density - Changing the subject of a formula where subject appears twice 	<p>Block 27: Trigonometry</p> <ul style="list-style-type: none"> - Know and apply the trigonometric ratios - Know the exact values - Apply 2D trigonometry to 3D problems - Sketch the trigonometric graphs of sine, cosine and tangent - Sine and cosine rule <p>Block 28: Simultaneous Equations</p> <ul style="list-style-type: none"> - Setup and/or solve linear simultaneous equations 	<p>Block 31: Loci, Mapping and Drawings</p> <ul style="list-style-type: none"> - Plans and elevations - Scale drawings/maps - Isometric drawings - Constructions with compasses <p>Block 32: Statistics</p> <ul style="list-style-type: none"> - Averages from lists - Misleading data - Scatter diagrams and correlation - Line of best fit - Outliers - Averages from grouped data - Box plots 	<p>Revision and Examination Preparation</p>	<p>Revision and Examination Preparation</p>	

	<p>Block 24: Probability 2</p> <ul style="list-style-type: none"> - Venn diagrams - Set notation - Mutually exclusive events - Listing strategies - Tree diagrams - Conditional probability - Product rule for counting <p>Block 25: Real-Life Graphs</p> <ul style="list-style-type: none"> - Construct and interpret real-life graphs - Distance-time graphs - Velocity-time graphs - Instantaneous rate of change - Areas under graphs <p>Block 26: Functions</p> <ul style="list-style-type: none"> - Function machines - Function notation - Find inverse and composite functions - Identify and sketch translations and reflections of a function. 	<ul style="list-style-type: none"> - Use graphs to approximate solutions - Solve one linear and one quadratic equation simultaneously - Points of intersection <p>Block 29: Shape and Proportion</p> <ul style="list-style-type: none"> - Similar triangles - Scale factors - Recognising congruency - Proving congruency - Length, area, volume scale factors <p>Block 30: Vectors</p> <ul style="list-style-type: none"> - Addition, subtraction and scalar multiplication of vectors - Draw a column vector on a grid - Vectors in geometrical proofs 				
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Assessment	No key assessment	Internal Year 11 November Examination	Internal Year 11 February Examination		GCSE Examination Period	GCSE Examination Period
		<p>These internal examinations take place in the Main Hall. There will be three papers: Paper 1 - Non-Calculator Paper 2 - Calculator Paper 3 - Calculator</p> <p>Students sit either the Foundation or Higher Tier paper.</p> <p>Students are expected to revise for these examinations to showcase their abilities such that intervention or challenge work can take place afterwards.</p>	<p>These internal examinations take place in the Main Hall. There will be three papers: Paper 1 - Non-Calculator Paper 2 - Calculator Paper 3 - Calculator</p> <p>Students sit either the Foundation or Higher Tier paper.</p> <p>Students are expected to revise for these examinations to showcase their abilities such that intervention or challenge work can take place afterwards.</p>			

Independent Work

At the end of each block of work, students will receive an “Independent Block Review Sheet” which must be completed fully and handed in to the teacher. The sheet contains key questions and work from key concepts from the block of learning they have just completed. Each question has attached a Hegarty Maths video clip to support full completion of the sheet. These sheets make excellent starting points for revision when an assessment is approaching. These can be found in students’ books to aid sequential learning. Students are also encouraged to complete the HegartyMaths quizzes. Additionally, students should be spending two hours a week minimum practicing questions, completing past papers, making revision notes/cards and reviewing their notes.