

Curriculum Map	Subject	Maths	Year	11
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Unit	Summary	Skills	Assessment	British Values and SMSC	Career links	Cross-curricular links
Graphs	<p>Gradients and lines</p> <p>This is an introduction to key mechanics skills for A-Level math.</p> <p>This is linked to resolving forces, used in a variety of settings.</p>	<p>Plotting and interpreting linear graphs.</p> <p>Parallel and perpendicular lines</p>	<p>Mocks to assess all GCSE skills.</p> <p>Reviews done in lessons at end of each block</p>	<p>Lessons include verbal and written reasoning, promoting debate around methodology.</p>	<p>Representing data is useful for many jobs including any data analysis roles.</p> <p>Quadratic graphs are used in equations of motion and other physics based maths. This is used in programming, for example.</p>	<p>Science: Teach graphs, including tangents and area under curves.</p> <p>Geography – representing data</p>
	<p>Gradients Non-linear graphs</p> <p>Using graphs to model real world situations.</p>	<p>Plotting quadratic, cubic, reciprocal, exponential graphs. Equation of a circle</p>		<p>Applying mathematical modelling to real world applications such as projectile motions helps pupils understand the world around them.</p>		
	<p>Using graphs</p> <p>Using graphs to model real world situations.</p>	<p>Distance time, speed time graphs. Direct and inverse proportion graphs.</p> <p>Estimating the area under a curve</p>				

Unit	Summary	Skills	Assessment	British Values and SMSC	Career links	Cross-curricular links
Algebraic manipulation	Expanding and factorising	Expanding and simplifying single and double brackets. Solving quadratic equations by factorizing and by the quadratic formula. Completing the square.	Mocks to assess all GCSE skills. Reviews done in lessons at end of each block	Giving pupils a choice in how to solve a quadratic equation promotes their independence and forces them to justify their choices. This helps to promote a democratic culture in mathematics as pupils can choose the right approach for them.	Programming Engineering STEM Mechanics Many aspects of modern life use algebra whether it is obvious or in the background	Rearranging formulae in Science Coding in Computer Science
	Changing the subject	Solving equations and inequalities.				
	Functions	Function notation, composite and inverse functions.				
Reasoning	Multiplicative reasoning	Pressure, density, direct and inverse proportion. Graphs and equations of proportion.	Mocks to assess all GCSE skills. Reviews done in lessons at end of each block	Here we develop their reasoning skills by learning formal proof. Pupils are required to communicate arguments both verbally and written in this block. This promotes individual liberty, whilst still respecting numerical and algebraic laws.	Problem solving. Resilience, perseverance skills are developed from the soft skills being used in mathematics	Links to physics – pressure and density are in the KS4 curriculum for both
	Geometric reasoning	Angle facts, interior and exterior angles of polygons. Further circle theorems				
Topics beyond this will be adaptive based on the needs of each class. This will be based on QLA data from mocks.						