



love the journey

Curriculum Implementation 2023-24

Secondary

LCA Strand	Maths
Subject	Maths
Key Stage	Key Stage 5 (Chapter 12-13)

What are the key concepts taught?	<ul style="list-style-type: none"> Overarching Themes: <ul style="list-style-type: none"> Mathematical Argument, language, and proof Mathematical problem solving Mathematical modelling This is taught via the three main topic areas: <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Pure Maths</th> <th>Statistics</th> <th>Mechanics</th> </tr> </thead> <tbody> <tr> <td>Algebra</td> <td>Data collection</td> <td>Kinematics</td> </tr> <tr> <td>Trigonometry</td> <td>Data analysis</td> <td>Dynamics</td> </tr> <tr> <td>Calculus</td> <td>Probability & distributions</td> <td>Statics</td> </tr> <tr> <td>Coordinate geometry</td> <td>Hypothesis testing</td> <td>Vectors</td> </tr> <tr> <td>Numerical methods</td> <td></td> <td></td> </tr> </tbody> </table> 	Pure Maths	Statistics	Mechanics	Algebra	Data collection	Kinematics	Trigonometry	Data analysis	Dynamics	Calculus	Probability & distributions	Statics	Coordinate geometry	Hypothesis testing	Vectors	Numerical methods		
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Numerical methods																			

What is the sequencing of units?	<ul style="list-style-type: none"> Pure Maths, Statistics, and Mechanics interleaved throughout the scheme of work but with early emphasis on pure to embed essential skills. GCSE algebraic methods recapped thoroughly at the start of the course since this is threaded through all aspects of the course. Topics covered sequentially so pre-requisites covered prior to next unit. Two/three teachers allows fluidity of sequencing if required. Each sequence of lessons will re-visit the overarching themes.
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How do we encourage pupils to see the links between different units and concepts?	<ul style="list-style-type: none"> Teachers know the scheme of work and emphasise links between topics covered Key skills are woven throughout the curriculum so that key concepts are revisited. Questioning and retrieval starters are used to link back to, and gauge students' understanding of prior learning.
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	<ul style="list-style-type: none"> • Each unit includes modelling questions, problem solving, and proof questions, used both in class and for independent study. • Future applications of current topics mentioned in class.
<p>What are the planned opportunities for adaptive teaching, including for SEND, the more and able and disadvantaged pupils?</p>	<ul style="list-style-type: none"> • Teachers highlight where to look for further reinforcement & support • Extension/challenge questions included in resource booklets • Support out of lessons given by any maths staff not just the class teacher • Targeted intervention and revision lessons • Academic Support Plans put in place when needed • STEP and MAT sessions for those who need them either in school or through Advanced Maths Support Programme. • Individual and team maths challenges e.g. UKMT • Awareness by staff of pupil profiles and/or EHCP, so as to plan appropriately • Whole school principles of adaptive teaching are followed
<p>What are the planned opportunities for retrieval and reflection by pupils?</p>	<ul style="list-style-type: none"> • Retrieval starters in every lesson • Regular assessments covering multiple topic areas • Follow up tasks to develop in any weaker areas identified in assessments and/or homework
<p>What are the opportunities for feed forward by the teacher post assessment outcomes?</p>	<ul style="list-style-type: none"> • All assessment answers are modelled by teachers post assessment • Pupils make a note of the main topic areas for review and use resources provided to do this for homework • Similar questions are presented to students to see if they have improved, often as part of the retrieval starters
<p>What are the planned opportunities for developing Reading?</p>	<ul style="list-style-type: none"> • Literacy: Recognising, understanding and interpreting mathematical words and command words e.g. series, hence, evaluate. Students to develop sixth form glossary of mathematical symbols & words
<p>What are the planned opportunities for developing literacy, numeracy, oracy and SMSC?</p>	<ul style="list-style-type: none"> • The overarching theme of modelling lends itself to literacy, oracy and SMSC applications. • e.g.in mechanics, discussion about suitability of modelling assumptions • e.g.in statistics data chosen from relevant modern world real life situations, large data set. • Students encouraged to make links with other curriculum areas.