Maths A Level | Key Stage 5 Curriculum Plan | Year 12

Exam Board:	*Edexcel*
Qualification:	*8/9MAO*
Assessment Information:	*3 exams, each 120 minutes*
Link to official specification	

Department Information:
AS and A-Level Mathematics are extremely popular with students. Currently there are four Maths groups in year 12. Students have nine lessons per fortnight which are taught by two subject specialists. We are very proud that many of our students continue studying maths related courses at university.

ACHIEVE in the curriculum:
*Students are encouraged to work **collaboratively** on problems, to show **ambition** through the resources they opt to work on, to show **endurance** to master concepts and to demonstrate **integrity** in their personalised home learning. We strive for students to share in our love of maths and ultimately be **happy** in their lessons.*

Curriculum Aims & Intent:
Our curriculum is designed to extend students' mathematical knowledge and skills so they can make logical and reasoned decisions when solving problems in a variety of contexts. Students will be able to make connections between different aspects of maths and their application in other subjects and the real world. We aim to foster enjoyment and provide a strong foundation for progress to further study

Resources:
https://www.pearsonactivelearn.com/app/home - online textbooks (login as a student with school email and password: FurzePlatt1).
https://integralmaths.org/ - username and password 178AL-firstinitalsurname
https://login.mymaths.co.uk/login (School username: furze password: reflect. Students are given their own portal login details in September)
https://ukmt.org.uk/senior-challenges/senior-mathematical-challenge-UKMT past papers.
https://www.mathsgenie.co.uk/newalevel.html - Revision resources and past papers
https://www.physicsandmathstutor.com/maths-revision/
https://www.revisely.com/alevel/maths/edexcel
https://www.savemyexams.com/a-level/maths/edexcel/

Students should bring to all Maths lessons: Scientific Calculator (we recommend the Casio fx-CG50) and laptops.

How we keep parents informed:
Progress reports are published 4 times per year, in October, January, March and July, with a face-to-face parents' evening in November.

How parents can help their child:
Please check that students are completing home learning which is set every lesson on ClassCharts. Encourage students to seek help when needed and attend Maths workshop every Tuesday in M7/8.

What we study and when:					
Term	**Unit, Topic Or Summary Of Work Covered**	**Knowledge, Understanding & Skills Developed**	**ACHIEVE / Personal Development Focus**	**How The Work Is Assessed**	**Careers Links**
1	Pure Maths	*Algebraic expressions - Quadratics -Equations and Inequalities -Graphs and Transformations - Straight line graphs -Circles -Algebraic methods - Binomial Expansion*	All lessons offer opportunities for students to demonstrate our ACHIEVE values	Baseline assessment at the start of the course. Written assessments throughout the year. Full AS PPE in June.	Engineering – Statistician – Data Analyst – Actuary – Air traffic controller- Architect - Forecaster
2	Pure Maths	*Algebraic methods - Binomial Expansion*			
	Statistics	*Data Collection - Measures of location and spread*			
	Mechanics	*Modelling in Mechanics - Constant acceleration*			
	Pure Maths	*Trigonometric ratios -Trigonometric identities and equations*			
3	Pure Maths	*Vectors*			
	Statistics	*Representation of data*			
	Pure Maths	*Differentiation*			
4	Pure Maths	*Integration - Exponentials and logarithms*			
	Statistics	*Correlation - Probability - Statistical distributions*			
	Mechanics	*Forces and Motion*			
5	Statistics	*Hypothesis Testing*			
	Mechanics	*Variable acceleration*			
6	Pure Maths (A level)	*Algebraic methods* - Functions & graphs - *Sequences and series*			