



The Priory Witham Academy : Curriculum Overview

Believe together, achieve together

SUBJECT	Maths	CURRICULUM LEADER	Mr Webster	YEAR	KS5 – Core Maths
ORGANISATION OF THE SUBJECT	Core Maths is the new Level 3 qualification for students who achieved a Grade 4 (formerly a Grade C) or above at GCSE Mathematics and wish to develop their practical skills so they may apply these in work, study or everyday life. Core Maths is studied in 2 hours per week.				
Key Concepts (The big ideas underpinning this subject)			Key Skills in this subject		
<p>Core Maths is about students doing meaningful mathematical problems to increase their confidence in using mathematics to be better equipped for the mathematical demands of other courses, higher education and employment.</p> <p>Designed to maintain and develop real-life mathematics skills, this Level 3 Mathematical Studies (Core Maths) course will be able to be adapted to what students study and can be applied on a day-to-day basis whether in further study or employment. This course also includes a financial mathematics element and can support with students' other A level subjects, including science, geography, business studies, economics and psychology.</p> <p>Core Maths is a brand new course for those who want to keep up their valuable maths skills but are not planning to take AS or A-Level Mathematics. At the end of the two-year course, they will achieve a level 3 qualification – similar to AS.</p>			<p>Key skills taught in the compulsory element are:</p> <p>3.1 Analysis of data 3.2 Maths for personal finance 3.3 Estimation 3.4 Critical analysis of given data and models (including spreadsheets and tabular)</p> <p>Optional content, depending on which option is taken:</p> <p>Students will be expected to develop and demonstrate confidence and competence in the understanding and application of mathematical modelling in the solution of problems related to the use of statistical techniques.</p> <p>OR</p> <p>Students will be expected to develop and demonstrate confidence and competence in the understanding and application of mathematical modelling in the solution of problems related to decision making and the planning of projects.</p> <p>OR</p> <p>Students will be expected to develop and demonstrate confidence and competence in the understanding and application of mathematical modelling in the solution of problems related to simple polynomial and exponential functions.</p>		

What will be learnt in this subject?	How will learning take place in this subject?
<p>Subject content</p> <p>Compulsory content</p> <p>3.1 analysis of data 3.2 Maths for personal finance 3.3 Estimation 3.4 Critical analysis of given data and models (including spreadsheets and tabular data)</p> <p>Optional content</p> <p>3/5 The normal distribution 3.6 Probabilities and estimation 3.6 Correlation and regression 3.8 Critical path analysis 3.9 Expectation</p>	<p>Work within Core Mathematics with vary depending on the subject matter being taught. The core principals of the course is to link the study of mathematics to real world contexts that students would expect to encounter in life after education.</p> <p>In lessons students will be expected to take their own individual notes when appropriate and store them in the folder provided to them upon the start of their course.</p> <p>The majority of lessons will be taught in a discussion and reasoning context with students mainly working in pairs and small groups to discuss solutions to different mathematical problems, although the teaching is not limited to this approach. Students will also encounter:</p> <ul style="list-style-type: none"> ▪ Problem solving tasks – these are more open ended tasks giving students the opportunity to explore real world mathematical concepts in more depth to create links between those concepts and to gain a greater understanding of them. ▪ Research/report tasks – students will be asked to research a variety of different subject matters to bring to discussion within lessons and will be expected to submit written reports of their findings. ▪ Experiments and investigations – This will require students to design/participate in/analyse different experiments both within and outside the classroom to solve different real life problems ▪ Questions from a worksheet– These tasks help to improve the student’s mathematical fluency which is essential if a concept is to be fully understood, initial ideas are developed by working methodically through questions that may change in style or difficulty in order to embed a specific concept. ▪ Testing – Inevitably KS5 there will be different levels of testing. Although any final exams are limited until the end of the second year of the course. These will range from end of unit tests that the teachers will use to inform

	<p>future planning to full Mock examinations which your child will sit at the end of Module 2 and 4 before their final examinations in May/June</p> <p>In all of these tasks students are encouraged to challenge themselves and their limits, but most importantly to communicate their understanding both verbally with each other and in written form. The work will be designed to ensure each and every student is stretched in order to achieve their potential.</p>
<p>What methods of assessment will be used?</p>	<p>How can you support learning and progress in this subject?</p>
<p>Two, 90 minute examinations with preliminary material for each paper.</p> <ul style="list-style-type: none"> • Paper 1 (compulsory content) (60 marks) <ul style="list-style-type: none"> • analysis of data • maths for personal finance • estimation. <p>Paper 2 (optional content – students take one paper only) (60 marks)</p> <ul style="list-style-type: none"> • Option 2A <ul style="list-style-type: none"> • critical analysis of given data and models including spreadsheets and tabular data • Statistical techniques. • Option 2B <ul style="list-style-type: none"> • Critical analysis of given data and models including spreadsheets and tabular data • Critical path and risk analysis. • Option 2C <ul style="list-style-type: none"> • critical analysis of given data and models including spreadsheets and tabular data • Graphical techniques. 	<ul style="list-style-type: none"> • Support students at home, encouraging them to complete homework and discussing mock examination grades and progress. • Ensure you are aware of the different online and offline resources your child can access when they are not in school. • Support your child with effective time management, in particular when completing extended report writing and problem solving tasks. • Communicate with school, your child will certainly benefit from positive dialogue between yourself and your child’s teacher. • Support the Academy by allowing your child to attend extra-curricular clubs and intervention sessions. • Ensure you know how to access and use Show My Homework to support your child with their homework.
<p>Equipment needed for this subject.</p>	<p>Learning outside the classroom: enrichment opportunities in this subject.</p>
<ul style="list-style-type: none"> • Black pen • Pencil • 30cm ruler • Protractor • Pair of compasses 	<p>There are many online resources available to support learning including</p> <ul style="list-style-type: none"> • Teaching CORE MATHS (AQA Level 3 Mathematical Studies) YouTube playlist. – This includes a topic by topic breakdown of all the key concepts

- Scientific/graphical calculator (We recommend the Casio FX-85GTPLUS which can be bought in most stationary shops).

that students need to understand in preparation for their examinations. We recommend this to be used for revision purposes.

- Nuffield foundation – This includes complex and detailed problem solving activities that students could undertake. They include support sheets and mark schemes to provide the opportunity for work to be self-assessed.
- AQA Level 3 Mathematical Studies Student Book – This is available to purchase online and will allow students to independently study topics in greater detail and also provides them with additional consolidation exercises to aid with their understanding. However, the lessons do not follow a particular textbook and should only be used to supplement your child's learning, not directly lead it.