Mathematics

KS4 Curriculum Overview

Year 10

During Year 10 students will be completing the curriculum for the AQA GCSE Mathematics course which is completed over 2 years. The ability to solve problems is at the very heart of maths, and is why employers value the subject so highly. Maths teaches you how to draw together different techniques to enable more complex problems to be solved. It nurtures resilience and builds perseverance. It teaches you to work efficiently and accurately, but also allows you to think creatively; there are often many ways of solving any particular problem.

Assessment in AQA GCSE Mathematics
Maths has two tiers of entry: higher and foundation.
• Higher tier awards grades from 4 to 9.
• Foundation tier awards grades from 1 to 5.
For both tiers there are 3 exams at the end of Year 11.
Each exam is 1hr 30 minutes long. Paper 1 is non-calculator, in papers 2 and 3 calculators are allowed.

Autumn Term
Foundation
The curriculum this term will cover the following topics in the statistics part of the GCSE: tables, charts, sampling, averages and graphs. The end of term focusses on parallel lines, angle facts and properties of shapes.
Higher
The curriculum this term will extend prior learning on indices & roots, fractions and algebra. We then move onto further understanding of linear graphs & coordinate geometry, surds and solving quadratics.

Spring Term
Foundation
The Spring term then continues with shape including all polygons, Pythagoras theorem, perimeter & area and 3D forms & volume. They will also deepen their understanding of quadratic equations building on their learning from the end of year 9.
Higher
The Spring term for the Higher curriculum starts with the new topic of simultaneous equations, then develops further understanding of data and averages including representing & interpreting data. This term ends with a unit focussing on shape including Pythagoras and trigonometry in right angled triangles.

Summer Term
Foundation
The Summer term begins with further development in their understanding of probability, then moves onto compound measures and constructions, loci & bearings. The term finishes with units on area & perimeter (building on the compound measures) and similarity and congruence in 2D shapes.
Higher
The Summer term continues with a focus on shape including perimeter & area, circles, then moves to constructions, loci & bearings. We then consolidate and strengthen understanding of probability and end the term with further work on trigonometry in non-right angled triangles.

Mathematics

KS4 Curriculum Overview

Foundation

Higher

Year 11

During Year 11 students will finish the topics in the AQA Mathematics curriculum and then focus on developing their problem solving skills and complete exam techniques practise to ensure success in the GCSE exams at the end of the year. Time has been built into the curriculum to gap-fill and revisit topics from previous years that students may need to repeat to ensure secure understanding.

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Autumn Term
Foundation
This term begins with a revisit of Pythagoras theorem and moves into trigonometry in right-angled triangles, we then look at vectors and graphs. The term ends with the last few topics in the foundation curriculum on simultaneous equations, proofs and accuracy & bounds.
Higher
This term begins with vectors & proofs, quadratic sequences and inequalities and will introduce circle theorems. We then look at revisiting graphs & coordinate geometry and algebraic fractions, finally moving onto changing the subject of an equation and proofs.

Mathematics

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Spring Term
Foundation
The Spring term is a focus on problem solving and wordy questions, this term will include a lot of exam practise and apply techniques learnt in year 10 to exam style, wordy questions. Gaps in understanding will be identified via PPE exams and the gaps identified will be filled during lessons.

Higher
For higher students the Spring term covers the final units in the curriculum: functions, iteration, gradient & area under a curve and growth & decay. There is also time for a catch-up on problem solving and gap filling any topics students are unsure about.

Summer Term
Foundation & Higher
For both foundation & higher the Summer term will focus on examination preparation and reviewing any topics students are concerned about. After each exam we will complete an analysis of the topics covered and ensure revision for the future exams targets the topics that are outstanding. We will use recognised diagnostic tools and exam papers to try and maximise outcomes for all students.

Foundation

Year 11

Sep 6	Sep 13	Sep 20	Sep 27	Oct 4	Oct 11	Oct 18	Oct 25	Nov 1	Nov 8	Nov 15	Nov 22	Nov 29	Dec 6	Dec 13	Dec 20	Dec 27
Trigonometry	Vectors	Graphs			Health check 1	Catch up	Half term	Simultaneous equations		Proof	Accuracy and bounds	Catch up		Health check 2	Xmas holiday	

Jan 3	Jan 10	Jan 17	Jan 24	Jan 31	Feb 7	Feb 14	Feb 21	Feb 28	Mar 7	Mar 14	Mar 21	Mar 28	Apr 4	Apr 11
						Half term							Easter holiday	

Apr 18	Apr 25	May 2	May 9	May 16	May 23	May 30	Jun 6	Jun 13	Jun 20	Jun 27	Jul 4	Jul 11	Jul 18
						Half term							

Higher

Year 11

Sep 6	Sep 13	Sep 20	Sep 27	Oct 4	Oct 11	Oct 18	Oct 25	Nov 1	Nov 8	Nov 15	Nov 22	Nov 29	Dec 6	Dec 13	Dec 20	Dec
Vectors and geometric proof	Quadratic inequalities	Simultaneous/ Quadratic	Circle theorems	Health check 1	Catch up	Half term	Circle geometry	Transformations of graphs	Inequalities/ Graphing	Algebraic fractions	Changing the subject	Proof	Health check 2	Xmas holiday		

Jan 3	Jan 10	Jan 17	Jan 24	Jan 31	Feb 7	Feb 14	Feb 21	Feb 28	Mar 7	Mar 14	Mar 21	Mar 28	Apr 4	Apr 11
	Functions	Iteration	Gradient and area under curve	Growth and decay	Catch up	Half term	Catch up / revision						Easter holiday	

Apr 18	Apr 25	May 2	May 9	May 16	May 23	May 30	Jun 6	Jun 13	Jun 20	Jun 27	Jul 4	Jul 11	Jul 18
						Half term							