



Year 10 Maths (Higher / Foundation)

The AQA GCSE Mathematics course continues to build upon concepts learned during KS3 and is part of a five year spiral curriculum. This is designed so that students re-visit topic areas on numerous occasions throughout their time at school. This allows students to develop fluency in the fundamentals of maths, to reason mathematically and to solve problems. We do this by taking the strands of 'Number', 'Algebra', 'Ratio, proportion and rates of change', 'Geometry and measures', 'Probability' and 'Statistics' splitting them up into smaller topic areas and interleaving these throughout the year (and subsequent years) so that students are able to connect different mathematical ideas. Students are exposed to a large amount of multi-step problem solving questions throughout their lessons and are expected to develop good reasoning skills alongside this. Prior attainment forms the basis as to whether students study higher or foundation; however there is some flexibility within this and the department meet regularly to ensure that all students are given the best chance of success.

Methods of deepening and securing knowledge:

Spaced practice	Topic areas are visited on multiple occasions throughout the five years of Maths provision. Our curriculum is designed to re-visit topic areas year on year to deepen understanding of mathematical concepts.
Retrieval practice	Most lessons have a task at the start or during the lesson that recalls learning from either a prior topic or the same topic from the previous year.
Interleaving	Our curriculum is designed so that the strands of 'Number', 'Algebra', 'Ratio, proportion and rates of change', 'Geometry and measures', 'Probability' and 'Statistics' are split up into individual topic areas and mixed so that, for instance, different number topics are taught at various points throughout the year.
Concrete examples	There are many abstract concepts taught throughout the Maths curriculum, the most obvious of which being algebra. In the teaching of these, concrete examples are used either to make these concepts more accessible.

	Autumn term 1	Autumn term 2	Spring term 1	Spring term 2	Summer term 1	Summer term 2
Topic(s) HIGHER	-Ratio -Fractions and Decimals -Data Collection -Brackets -Averages, Graphs and Charts	-Equations -Percentages -Substitution and Rearranging -Scatter Graphs and Cumulative Frequency	-Angles and Circle Theorems -Measures and Dimensions -Probability -Pythagoras and Trigonometry	-Straight Line Graphs -Transformations	-Estimation and Types of Number -Standard Form and Upper/Lower Bounds -Loci and Constructions -Area and Volume	-Sequences -Quadratics
FOUNDATION	-Fractions -Ratio -Expressions and Brackets	-Probability -Angles and Congruence -Data Collection -Decimals and Upper/Lower Bounds	-Area -Graphs and Charts -Percentages	-Number Skills -Equations	-Averages and Range -Units and Scale -Sequences	-Straight Line Graphs -Loci and Constructions -Factors, Powers and Roots

Assessment	Topic Reviews	Topic Reviews AH1	Topic Reviews PPE (AH2)	Topic Reviews	Topic Reviews	Topic Reviews AH3

Independent learning:

Students will receive Independent learning on a weekly basis. One platform for this Independent learning is the mathswatch website for which students have a unique password. It gives access to a large bank of questions and explanatory videos. The mathswatch website is also used as a revision tool for the larger Aiming High assessments.