Year 11 (Foundation)
In our students' final year of study, we begin by drawing on all of the knowledge and skills they have developed over their 4 years with us to introduce some the most challenging GCSE content, including vectors, construction and loci, and geometric reasoning at foundation tier. Students are now refining and fully developing their **problem-solving** and **mathematical reasoning** skills in preparation for their exam. In the periods of revision that are scheduled, teachers identify gaps in knowledge and underdeveloped skills in their students, and revisit elements of the KS4 curriculum accordingly. Often, these areas of weakness will not be in **fluency**, but in students' ability to **reason mathematically** with the knowledge they have, or **problem-solve** in unseen situations. They will use this time to hone these core concepts fully.

	Learning Period 1: Autumn	Learning Period 2: Autumn	Learning Period 3: Spring	Learning Period 4: Spring	Learning Period 5: Summer	Learning Period 6: Summer
Topic title	Geometric reasoning and proof	Inequalities and graphs	Data		Mock preparation
Key questions	What is a column vector? What is bearing and how can I use parallel line angle facts to find them? What is congruency and how can I use it to prove two shapes are congruent? How can I use a compass to construct loci?	How can I use my understanding of balancing to solve an inequality? How can I represent an inequality graphically? What is the relationship between the equation of a line and a parallel line? What are the different types of graphs I can generate? How can I apply my understanding of graphs to D-T and V-T graphs? What do trigonometric graphs look like and how can I use them to fid multiple solutions? What is a Venn diagram and how can I use it to organise data?	How can I achieve a fair sample from a population?		What do the exam papers look like and how can I apply my knowledge to answering exam style questions?
Key knowledge/concepts and skills	**Unit 23 - Vectors** Use column vector notation and be able to add/subtract vectors **Unit 24 - Geometric reasoning** Be able to calculate interior and exterior angles of polygons **Unit 25 - Bearings** Understand the conventions involved in bearings Use parallel line angle facts to reason with bearings **Unit 26 - Congruence** Identify congruency using the SAS, ASA, SSS and RHS rules **Construction and loci** Construct angle bisectors and perpendicular bisectors using a compass Construct loci to solve problems	**Unit 27- Linear inequalities** Solve linear inequalities Identify regions indicated by one or more inequality **Unit 28 - Linear graphs** Understand the relationship between an equation of a line and the gradient and intercept of that line Be able to find the equation of a line between two given points **Unit 29 - Non-linear graphs** Recognise quadratic, cubic and reciprocal graphs Plot and interpret distance-time and velocity-time graphs Conversion graphs	**Data collection and Sampling** Tabulate and classify data Identify different types of sampling Calculate group sizes for stratified sampling		Revision and Exam booklet
Assessment & Educational Visit Opportunities		Y11 mocks		Y11 assessment	Y11 Assessments	Y11 Assessments