

Module/Unit of Learning	Taught During	What will students learn?	How are students challenged to become experts?	Links to other Subjects
Pythagoras (All Groups)	Autumn Term 1	Students will be recap and revisiting number properties to apply them to Pythagoras problems.	Students will have an opportunity to discover the history of Pythagoras as well as opportunities to create Pythagorean trees and Spirals and exploring the world of fractals.	Art
Trigonometry (MIXE Groups)	Autumn Term 1	Students will link their Pythagoras skills to discover Trigonometry in the 2D plane, seeing how it is to the ratio of angles and sides of right-angled triangles.	Students will discuss the real-world application of these skills, the careers they are used in and their impact in everyday life.	Engineering
Angles (DF Groups)	Autumn Term 1	Foundation students will have the opportunity to reflect on their learning from Year 9 and will begin to combine topics to extend their understanding of angles in the 2D plane by consolidating their learning and building on exam experience and problem-solving questions.		
Equations – Linear / Quadratic (MIXE Groups)	Autumn Term 1	Higher students will be exploring the various ways of solving equations, developing their understanding of linear in the quadratic context. All students will be drawing on previous knowledge and connecting graphical methods from Year 9 with more traditional algebraic methods.		Science
Linear Equations (DF Groups)	Autumn Term 1	Foundation students will have the opportunity to build on their understanding from Year 9 by solving linear equations. Students will start this journey by revising a variety of algebraic methods as well as building up confidence and opportunities to develop problem solving skills.		Science

Percentages (All Groups)	Autumn Term 2	Building on the knowledge of calculating percentages attained in Year 7, students will begin to discover their broad use in the real world and gain an appreciation of the multiplicative properties of percentages.	Opportunities for students to exploring real applications of percentages including banking, mortgages and loans.	
Inequalities	Autumn Term 2	Students will start by exploring the difference between inequalities and equations. Students will build on their previous algebra skills to apply them to a variety of different inequality topics.		
Compound Measures	Autumn Term 2 and Spring 1	Students recap using multipliers and how this can be used to convert metric units both as a linear, area and volume relationship. Students will further develop this knowledge and work with compound units such as speed and density.	'M' Groups will have the opportunity to take part in the UKMT Intermediate Challenge.	Science
Ratio and Proportion	Autumn Term 2 and Spring 1	Drawing on previous knowledge from Year 7 and 8, students will be revising, revisiting and extending their understanding of ratio linking it to topics that they have studied in Year 9. They will extend on their ratio knowledge, students will learn to formulise proportional relationships with the use of algebra and the unitary method.	Students will have an opportunity to explore fractals by exploring Sierpinski's Triangle and Koch's snowflake.	Science, Art and Geography
WTMs	Spring 2	Guiding students through a shadow paper before students complete a full paper themselves again builds up the confidence of students by gradually introducing full papers.	Students will be shown how to complete a paper by an expert talking them through step-by-step allowing opportunities for students to transition from topic-based assessments to GCSE papers.	
Area, Volume and Similarity	Spring 2	Building on previous knowledge from Year 8 and 9, students will be given the opportunity to revisit, revise and extend their understanding of area, volume and similarity of three dimensional shapes.		

Simultaneous Equations	Spring 2	Moving into solving linear and quadratic equations simultaneously using the foundations that students have built up over Year 9 and 10.	Further Maths students will extend their learning by studying simultaneous equation using three unknowns and see how it is used at A Level.	
Sequences	Spring 2	Students will be building on prior knowledge from Year 8 with an opportunity to explore a different number patterns such as Fibonacci and Triangular Numbers. Students will be given the opportunity to revise the nth term of a linear sequence before extending this to finding the nth term of a quadratic sequence.	Further Maths students will have an opportunity to explore limits of sequences and begin to make links with A Level.	History
Probability	Summer 1	An opportunity for all students to revisit and revise their fractional and decimal skills in the world of Probability.		
Transformations	Summer 1	Students will be moving two dimensions shapes through reflections, rotations, translations and enlargements.	This module will introduced by looking at the works of Escher.	Art
Prompted Exams (PPEs)	Summer 2	Full set of PPE papers completed in exam hall, giving students that full exam experience.		