

MATHEMATICS CURRICULUM MAP 2023

Intent: The maths curriculum aims to develop confidence by providing students with the experience of solving problems by applying their mathematical knowledge. They will be guided in tackling real life situations by breaking questions down into a series of simpler steps which can be solved using techniques already mastered. We also hope to inspire pupils to enjoy maths both as a tool to be used in other areas of the curriculum as well as for its own sake. Throughout the curriculum we place a real emphasis on teaching mathematics from first principles, we want students to understand why they are told to approach problems in a particular way and to question the effectiveness of that approach. In key stage four the curriculum has been developed to guide students through the GCSE course by visiting each of the four key areas (algebra, statistics, number and shape) every term. Experience has shown that this is the best way of maintaining interest and enthusiasm and allows for an element of revision if required. For key stage five a similar regime is followed although flexibility is limited due to the nature of advanced Mathematics. It is believed that all students can realise their potential through the process of judicious practice and effective curriculum sequencing.

Year/Term	Half Term 1	Half Term 2	Half Term 3	Half Term 4	Half Term 5	Half Term 6
Year 10 (Higher)	<ul style="list-style-type: none"> • Basic number • Fractions, ratios and proportion • Statistical diagrams and averages • Number and sequences 	<ul style="list-style-type: none"> • Number and sequences • Ratio and proportion • Angles • Transformations, constructions and loci 	<ul style="list-style-type: none"> • Transformations, constructions and loci • Algebraic manipulation • Length, area and volume 	<ul style="list-style-type: none"> • Length, area and volume • Linear graphs • Right-angled triangles 	<ul style="list-style-type: none"> • Similarity • Exploring and applying probability • Powers and standard form 	<ul style="list-style-type: none"> • Equations and inequalities • Counting, accuracy, powers and surds

Year/Term	Half Term 1	Half Term 2	Half Term 3	Half Term 4	Half Term 5	Half Term 6
Year 11 (Higher)	<ul style="list-style-type: none"> Counting, accuracy, powers and surds Quadratic equations 	<ul style="list-style-type: none"> Quadratic equations Sampling and more complex diagrams Revision and review for Mock Exam 	<ul style="list-style-type: none"> Combined events Properties of circles 	<ul style="list-style-type: none"> Variation Triangles 	<ul style="list-style-type: none"> Graphs <ul style="list-style-type: none"> Algebraic fractions and functions Vector geometry 	<ul style="list-style-type: none"> Revision
Year 10 (Foundation)	<ul style="list-style-type: none"> Basic Number Measures and scale drawings Charts, tables and averages 	<ul style="list-style-type: none"> Charts, tables and averages Geometry and measures: Angles Number properties 	<ul style="list-style-type: none"> Approximations Decimals and fractions Linear graphs 	<ul style="list-style-type: none"> Linear graphs Expressions/formulae Ratio and proportion and rates of change: Ratio, speed and proportion 	<ul style="list-style-type: none"> Perimeter and area Transformations Probability and events 	<ul style="list-style-type: none"> Volumes and surface areas of prisms Linear equations
Year 11 (Foundation)	<ul style="list-style-type: none"> Percentages and compound measures and variation Statistics: Representation and interpretation 	<ul style="list-style-type: none"> Constructions and loci Geometry and measures: Curved shapes and pyramids Revision and review Mock examinations and revision 	<ul style="list-style-type: none"> Number and sequences Geometry and measures: Right-angled triangles 	<ul style="list-style-type: none"> Congruency and similarity Probability: Combined events Number: Powers and standard form 	<ul style="list-style-type: none"> Powers and standard form Simultaneous equations and linear inequalities Non-linear graphs 	<ul style="list-style-type: none"> Revision June examinations

Impact: To ensure that all students make good progress, students are formally assessed at the start of the course with an induction test and at the end of each topic (every two to three weeks depending on the length of the topic). Home work is given out once a week. It is related to the work being studied in class and will help students prepare for the topic test. Performance at the homework together with results of the tests be recorded so that progress can be closely monitored. Through the curriculum we aim to develop student's appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity for the subject. The success of this will be monitored through engagement in enrichment activities such as the UKMT maths challenge, and uptake of the subject at KS5.