

Year 7 Maths

The Year 7 curriculum is part of an overarching five year spiral which is designed so that students re-visit topic areas on numerous occasions throughout their time at school. This is to allow 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. In year 7 there is a focus on developing reasoning and problem solving in the first half term through investigative work and this continues to be embedded throughout the rest of the curriculum.

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)	- Investigations on area and sequences - Four operations	- Place value and negative numbers - Measures, perimeter and area - Expressions and formulae	- Fractions, decimals and percentage - Angles and 2D shapes - Graphs	- Whole number and decimal calculations - Statistics - Transformations and symmetry	- Equations - Factors, multiples, indices and surds - Constructions and 3D shape	- Sequences - Ratio and proportion - Probability
Assessment		Topic reviews Aiming High 1 Assessment	Topic reviews	Topic reviews Spring Term Assessment	Topic reviews	Topic reviews Aiming High 2 Assessment

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.