



What have students at St. Crispin's been taught to understand and be able to do?

Core Knowledge

Unit 7 - Algebra

Students will enjoy a full term of algebra at the start of year 9. Covering the rules of algebra, solving equations and introducing them to the world of quadratics and simultaneous equations. Students then continue to expand their work on graphing functions, consolidating work on linear functions and finding their functions, before drawing quadratic, cubic and reciprocal graphs. Students will represent inequalities on number lines and solving inequalities problems. They will then explore sequences, the rules of sequences and famous sequences such as the Fibonacci sequence.

Unit 8 - Ratio and Proportion

Students will revise all content on fractions, decimals, percentages and ratio. Then extend their understanding to repeated percentages change and reverse percentage change, including real life contexts including interest rates and sales. Pupils will then learn the difference between direct and inverse proportion and use these to solve problems.

Unit 9 - Shape and space

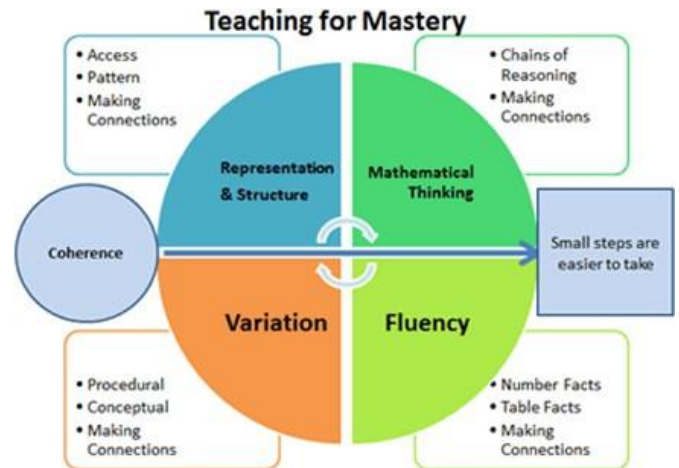
Students will revise all content on shape and space covered in year 8 then advance onto learning about bearings, Pythagoras and trigonometry, congruency and similarity and introduce them to the world of vectors and vector notation.

Unit 10 - Data handling

Students will revise all content on data handling covered in year 8 then advance onto learning about new graphs including box plots and finding averages from continuous grouped tables as well as the previously taught discrete tables. Probability will be revised and then extended to venn diagrams and set notation.

Full lists of the learning objectives per unit can be found [here](#).

Core Skills



Students in Year 8 are following our new mastery scheme of work developed alongside the NCETM and Maths Hub to ensure latest educational research is leading our pedagogical approach to teaching mathematics. Lessons are broken down into small connected steps that gradually unfold the concept, providing access for all children and leading to a generalisation of the concept and the ability to apply the concept to a range of contexts.

Core skills students will develop are to:

- Use manipulatives and pictorial representations to model mathematical problems
- Be able to reason mathematically
- To be able to follow mathematical processes but also apply knowledge from across the curriculum and make connections between their learning.

Students are pushed to develop their fluency in mathematics by having a large focus of every lesson on developing student's numeracy skills in every unit of work. Students are also given regular feedback and teacher modelling to encourage students to be able to write meticulous, detailed, and mathematically correct solutions so that students are able to communicate mathematically



Year 9 Maths continued



How has learning been assessed?

Students are assessed in two ways.

1. Informally using checkpoint activities, which are a teacher led lesson through an independent piece of work on all learning objectives in most recent unit. Checkpoints will occur through year 9. The timing of which can be seen on our scheme of work attachment above.
2. Formal summative assessments occur 2 times a year.
 - Assessment 5 - Tests all material from topic 1 in year 7 to the end of topic 7 in year 9
 - Assessment 6 - End of key stage exams - Tests all material from topic 1 in year 7 to the end of topic 10 in year 9.

What is coming up in the following year?

The same units of work are revisited in year 10 as part of the GCSE syllabus but going into greater depth and complexity of mathematics within them.