



Year 9 Maths



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

Core Knowledge

Unit 1 - Non Calculator Fractions, Decimals & Percentages -Students will review fractions, decimals and percentages learnt in year 7. They will then take this into greater depth of knowledge.

Unit 2 - Linear graphs and gradient - Students will review graphs learnt in year 8 and will develop this to learn how to find gradients of a line and use this to write equations in the form $y=mx + c$.

Unit 3 - Transformations- Students will learn about performing the four transformations and describing each.

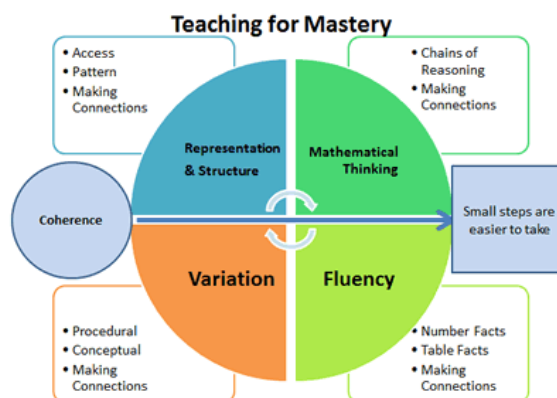
Unit 4 - Non calculator Ratio and Proportion - Students will begin learning about ratio and proportions. This includes ratio Notation and Problems and will include many manipulatives for students to help understanding.

Unit 5 - Angles and similarity - Students begin by recapping learning from year 8. This is then developed to include angles in polygons and angles/sides in similar shapes.

Unit 6- Pythagoras and trigonometry- Students will recap Pythagoras from year 7 and apply to many problems and into 3D scenarios. Once this is done students will learn about trigonometry.

Unit 7- Probability - Students will study theoretical and experimental

Core Skills



Students in year 9 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



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probabilities. After this they will begin to use two way tables and venn diagrams

Unit 8 -Maps and constructions -

Students will use compasses and protractors to use maps and bearings. After this they will use their compasses to construct Loci and triangles and drawing plans and elevations.

Unit 9- Percentages Calculator

methods- Students aiming towards a Higher grade at GCSE will begin to use decimal multipliers and use this to find compound interest and reverse percentages.

Students aiming towards a foundation paper at GCSE will review fractions and percentages of an amount. Following this they will review order of operations.

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

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.

Resources



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Our scheme of work in year 9 is based upon the MathsPad Core Curriculum book 3 and the MathsPad Support Curriculum book 3. Students use these books in lessons and have logins for the following websites to use at home:

1. <https://www.mathspad.co.uk/> - with lessons and activities linking to their textbooks. Students can be set homework on this website.

If parents wish to purchase a copy of the textbook to use at home they can be purchased at the following links:

[Core curriculum book 3](#) and
[Support curriculum book 3](#)

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.
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 5 in year 9
Assessment 6 - End of key stage exams - Tests all material from studied from year 7 to year 9.
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What is coming up in the following year?

Students will follow our GCSE Curriculum and will study many of the same topics whilst interleaving and developing complexity of questions for students.



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