



Year 9 Maths



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

Core Knowledge	Core Skills
<ul style="list-style-type: none">• Number – whole number and decimal calculations• Geometry – measures, perimeter and area• Algebra – expressions and formulae• Number – fractions, decimals and percentages• Geometry – angles and shapes• Algebra – graphs• Number – decimal calculations• Data handling – statistical representations• Geometry – transformations and scale• Algebra – equations• Number – powers and roots• Geometry – constructions• Algebra – sequences• Geometry – 3D shapes• Number – ratio and proportion• Data handling – probability• Functional maths.	<p>Students in Year 9 are following our historic Key Stage 3 curriculum. It is a spiral design curriculum where we repeat each topic at the same time each year, recapping previous learning and going deeper into the topic. By revisiting the key skills of number, algebra, geometry and data we ensure deep understanding and the ability to make links to skills across the curriculum.</p> <p>Core skills students will develop are to:</p> <ul style="list-style-type: none">• 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. <p>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.</p> <p>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.</p>

How has learning been assessed?

Students take summative assessments at the end of every half term.

Students also sit a formal summative end of Key Stage 3 assessment in the hall at the end of the academic year to provide setting data for GCSE.

What is coming up in the following year?

The same topics are extended upon at GCSE with new material appropriate to their tier of entry – foundation or higher.



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Core Knowledge

Unit 1 - Cyber security

My Digital World: Exploring Online Issues:

- Website Reliability and Quality of Sources of Information
- Safe & Effective Searching
- Copyright Issues
- Online Dangers
- Strategies to Stay Safe.

Unit 2 - Flow charts and binary

This unit will cover an introduction to visual algorithms and to advance on data representation learnt in Year 8.

Unit 3 - Computer systems and legislation

- Hardware
- Software
- Ethics.

Unit 4 - Inside a computer system

- Networks
- Logic Gates
- Malware
- System Security
- Von Neumann.

Unit 5 + 6 - Programming

- ROM & RAM
- Print/String
- Variables
- Selection
- Iteration
- User Input
- Lists
- File Handling.

Core Skills

- Develop computational thinking
- Evaluate and apply ICT to solve problems
- Gain practical experience of writing computer programs
- Use a variety of programming languages.



Year 9 Computing continued



How has learning been assessed?

Students complete project based tasks within lessons that are submitted for assessment.

What is coming up in the following year?

If students continue onto GCSE Computer Science they will extend their knowledge developed in Year 9 and become far more competent programmers.