



Curriculum

Newsletter

MATHS

What are your next steps?

Maths is an unparalleled subject. Maths endeavours to answer the "Why...?" questions

The study of maths ensures students become able to apply mathematical concepts to real life situations and to solve problems in a logical way. It encourages students to think sequentially and produce solutions numerical and algebraic formats. The study of maths prepares and equips students to understand and thrive in the world around them.

Curriculum intent

At Hermitage Academy, we believe that students deserve a rich, broad, and ambitious maths curriculum which equips them for their future. Our curriculum is based on the national programmes of study and lessons are accessible to all students in the class to create opportunities and build familiarity and accuracy in techniques and to allow students to use their skills in everyday life. We cover a variety of topics that allow students to excel in their learning in different fields. Students know that when they come to lessons, they will be entering a positive environment for learning where they learn new techniques and challenges are accepted.

We revisit topics throughout KS3 and 4 to consolidate understanding and encourage students to link their work with other areas to extend their thinking. We have a strong focus on developing problem-solving skills alongside mathematical content to ensure we develop resilient, independent learners ready to tackle GCSE and A-level maths.

Key Stage 3 Curriculum

During Key Stage 3 (Years 7 – 9), the curriculum looks to build on the work students have covered in primary school.

The national curriculum for mathematics aims to ensure that all pupils:

- become fluent in the fundamentals of mathematics.
- reason mathematically by following a line of enquiry, conjecturing relationships and generalisations.
- can solve problems by applying their mathematics to a variety of problems, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

Hermitage Academy aims to ensure that all students develop these skills and that they have the confidence to apply their mathematical knowledge across a range of subjects and situations. We want students to believe and know that they “can do mathematics”.

Key Stage 4 Curriculum

The approach at Key Stage 4 builds on Key Stage 3 Mathematics and cross curricular initiatives on thinking skills and independent working. It prepares learners to function mathematically in the world and provides a thorough grounding for further study in Mathematics.

During Key Stage 4 students are taught at the appropriate level a balanced variety of topics from areas of:

- Number
- Algebra
- Ratio, Proportion and Rates of Change
- Shape and Space
- Handling Data

Key Stage 5 Curriculum

Mathematics is one of the most highly respected and demanding A-Level courses and provides the foundation for the study of any scientific subject as well as a challenge in logical thinking and problem solving. A level chemistry, biology, physics, psychology and economics all include mathematical processes related to statistics, mechanics and other numerical skills, making it a

great course to accompany any of those subjects.

The A level maths course provides pupils with the opportunity to further develop their knowledge and understanding of many of the topics taught at Key stages 3 & 4, as well as introducing a number of new topics which are exclusive to Key stage 5. Several of these topics may be developed further at university level, meaning that the A level course provides excellent preparation for those pupils who wish to study a maths based subject at university.

Studying Maths can open doors ...

Maths is a great platform for a lot of rewarding careers, it is a keystone subject respected by universities and employers alike.

Statistician - working as statistician means dealing with data and helping to find practical solutions to problems. If you're keen on numbers, skilled in IT and like compiling information, this could be the role for you

Engineering – of all kinds, from structural engineering to computer engineering. All engineering involves maths.

Finance – working within finance could take you from selling stocks and shares and analysing stock markets to managing the finances of others as an accountant

Meteorologist - As a meteorologist, you'll study the weather and climate. You'll need to use computerised and mathematical models to make short and long-range weather forecasts and study climate patterns and conditions.