

GCSE Maths



ALSOP HIGH SCHOOL

AIM: GCSE Maths aims to help students develop a knowledge and understanding of:

- Develop fluent knowledge, skills and understanding of maths methods and concepts.
- Acquire, select and apply mathematical techniques to solve problems
- Reason mathematically, make deductions and draw conclusions.
- Interpret and communicate information in a variety of forms.

All GCSE exams in Maths will include questions that allow students to draw on elements from within and across different topic areas, and questions that allow students to provide extended responses.

Where will it take you?

Maths is for everyone. It is essential to everyday life, critical to science, technology and engineering and necessary for financial competence. It is diverse, engaging and essential in equipping students with the right skills to reach their future destination, whatever that may be. All college courses, apprenticeships and jobs require GCSE Maths most require at least a grade 4. With the competitive environment that exists today, all pupils should try to achieve the best grade they possibly can.

Mathematics is essential for life. It is used in all careers and many further education courses. It has no limitations and employers seek to employ people who have the GCSE Mathematics grade 4 or above. People with a Mathematical degree and other qualifications can go into: Accounting; Medicine; Engineering; Forensic Pathology; Finance; Business; Consultancy; Teaching; IT; Games Development; Scientific Research; Programming; Civil Service; Design; Construction and Astrophysics, to name a few...

What will you learn?

You will study all of the Maths specification which fits into the broad topics of:

- **Number**
- **Algebra**
- **Ratio, Proportion & Rates of Change**
- **Geometry & Measures**
- **Probability**
- **Statistics**

How will you learn?

You will learn through direct teaching in the classroom with opportunities to carry out investigations, study theory, work in groups and have exam practice. You will also learn through online and independent study and homework.

What skills will you need to be successful in this subject?

There is a strong emphasis on mathematical reasoning, problem solving and the fluent use of mathematical techniques. Students will need to demonstrate that they can reason and interpret mathematically, select and use the appropriate mathematical methods or skills in order to be able to solve problems in both mathematical and non-mathematical contexts. All of this requires perseverance.

What homework can you expect?

You can expect weekly homework throughout KS4 which will take a range of forms including online assignments and paper booklets to complete. These must always be done to the best of your ability; sub-standard work will not be accepted.

Additional requirements

GCSE Maths has a Foundation tier (grades 1-5) and a Higher tier (grades 4-9). Students must take three question papers at the same tier. There will be two calculator papers and one non-calculator paper. All papers will include a mix of question styles, from short, single-mark questions to multi-step problems. The mathematical demand increases as a student progresses through the paper.

For all question papers, students are expected to have mathematical instruments available for use in the exam. These instruments are defined as: pencil (for use in diagrams only), ruler, pair of compasses, protractor. A calculator is required for use in two out of the three papers. It is essential for any student to have a scientific calculator which they are familiar with in lessons and in the exams.

For further information please see Mr McCallan