GCSE Maths

"Go down deep enough into anything and you will find Mathematics." – Dean Schlicter

BROOK MEAD ACADEMY

Course Overview

Mathematics in the wider world is used as a tool to calculate, to compare, to contrast and to communicate. Without a mathematical framework, the work of scientists, engineers, economists, business owners and architects, among many others, would be impossible. But mathematics also has a beauty and richness of its own.

Mathematics is not just a collection of skills, but a way of thinking. We aim to inspire our pupils to appreciate the beauty of Mathematics, and to provide them with a toolbox of strategies that they can utilise in other subject areas, such as science, geography, and design technology, as well as in their everyday lives. GCSE Mathematics is not only a subject that every student must study, but one which provides the essential life-skill of numerical competency that is needed to run a household and to navigate the world of work.

What are the topics I will study?

• Number
• Algebra
• Ratio, proportion, and rates of change
• Geometry and Measures
• Statistics and Probability

What skills and knowledge will I develop?

In GCSE Mathematics lessons scholars will continue to use and apply standard mathematical techniques. They will also learn the skills needed to reason, interpret and communicate mathematically and be able to make deductions, inferences and draw conclusions from mathematical information. A key part of mathematics is solving problems including translating problems in mathematical or non-mathematical contexts into a process or series of mathematical procedures. Scholars learn to interpret results in the context of the given problem, and to evaluate the methods used, for efficiency and appropriateness to the problem.

Further reading

[AQA | GCSE | Mathematics | Specification at a glance](#)

https://www.mathscareers.org.uk

Qualification Details

- **Qualification**: GCSE
- **Exam board**: AQA
- Included in the EBACC award

Assessment Pathway

GCSE Mathematics has a Foundation tier (grades 1 – 5) and a Higher tier (grades 4 – 9). Students must take three papers at the same tier, two calculator and one non-calculator. Each paper is worth 80 marks, regardless of tier, and lasts for 90 minutes. There is no coursework component to the course.

Possible Careers

• Engineer
• Scientist
• Computer Scientist
• Statistician
• Economist
• Business

Examples:

Elon Musk (Engineering), Jeff Bezos (Business/finance), Sheryl Sandberg (Computing)

Employability Skills:

- **Problem Solving:** The ability to find a solution to a situation or challenge.
- **Aiming High:** The ability to set clear, tangible goals and devise a robust route to achieving them.

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