A LEVEL
Mathematics & Further Mathematics

Welcome to BRGS Mathematics department. We have over 140 students studying A Level mathematics in sixth form and for the last few years we have been one of the most chosen subject choices for A Level.

We pride ourselves on working hard to gain the best outcomes possible for our students and the results reflect that. Working with you, we strive to make sure that, whatever your reasons for doing the course, you flourish within the subject.

Mathematics is not always seen as an easy subject, and sometimes it is not. However, it forms the bedrock of so many different future pathways and it is clear to see why it is such a facilitating subject.

Below we have given some further information about studying Mathematics and Further Mathematics at BRGS Sixth Form. Please do take your time to read through it and feel free to ask any of the staff any questions. If you need further information, then please email jenna.smith@brgs.staracademies.org.uk

The Team

Mrs J Smith,   Director of Learning: Mathematics & Computing

Miss L Whittaker,   Deputy Director of Learning Mathematics

Mr Reeves	Mrs Chapman	Mr W Seddon	Miss Ogle
Miss Webber	Mr Wilbraham	Mr Milnes	Mrs Easby

Mathematics Results

	A*	A*-A	A*-B	A*-C	A*-D
2022/2023	14%	45%	74%	85%	95%

Further Mathematics Results

	A*	A*-A	A*-B	A*-C	A*-D
2022/2023	29%	50%	71%	79%	93%

Entry Requirements

- To study A level Mathematics at BRGS, you will need a **minimum** of: Grade 6
- To study A level Further Mathematics at BRGS, you will need a **minimum** of: Grade 7

A Level Mathematics

We study with the Pearson awarding body for A-level. On Pearson's website you will be able to find more detailed information as to what is contained in the specification (specification code: 9MA0).

There are some overarching themes within mathematics that will be taught over the two years, these consist of

Mathematical argument, language and proof

Mathematical problem solving

Mathematical modelling

These form the backbone through which all the content will be taught. The course is split to allow for two thirds of it to concentrate on the Pure maths this will cover following topics:

Proof; Algebra and functions; Coordinate geometry in the (x,y) plane; Sequences and series; Trigonometry; Exponentials and logarithms; Differentiation; Integration; Numerical methods; Vectors.

The final third will be split between Statistics and Mechanics topics such as:

Statistical sampling; Data presentation and interpretation; Probability; Statistical distributions; Statistical hypothesis Testing; Quantities and units in mechanics; Kinematics; Forces and Newton's laws; Moments.

This will be ongoing over the two years of the course with all the examinations being taken at the end of Year 13.

Students who study mathematics go on to cover a wide range of degrees such as:

Architecture; Biology; Business studies; Chemistry; Civil Engineering; Clinical Medicine; Computer science; Economics; Electronic and Electrical Engineering; Finance; Management studies; Mechanical Engineering; Pharmacology, Toxicology and Pharmacy; Physics; Politics; Pre-clinical Medicine; Psychology and more!

A Level Further Mathematics

We also study with the Pearson awarding body for A-level Further Mathematics. On Pearson's website you will be able to find a more detailed information as to what is contained in the specifications (specification code: 9FM0). Like the A-level mathematics the overarching themes still permeate through the topics. The general topics that the exam board covers are:

Complex numbers; Differential equations; Further Vectors work; Further Calculus; Hyperbolic functions; Matrices; Proof and some series work. If you wish to know more about the general Further Mathematics content, then please speak to a member of the team.

University courses Further Mathematics is listed as useful for:

Actuarial Science/Studies; Aeronautical Engineering; Biochemistry; Biomedical Sciences (including Medical Science); Chemical Engineering; Chemistry; Computing; Dentistry; Electrical/Electronic Engineering; Engineering (General); Mathematics; Mechanical Engineering; Medicine; Optometry (Ophthalmic Optics); Physics; and Veterinary Science.