



# MATHEMATICS & FURTHER MATHEMATICS

A-LEVEL

**Examination Board: AQA**

## Course content:

In Maths A-level you will cover two different aspects of Mathematics: Pure and Applied Maths. Pure Maths involves further work on quadratic equations, algebraic skills, calculus and co-ordinate geometry. All students study a mix of Applied Maths which covers:-

- Mechanics: dealing with physical situations, including kinematics (speed and acceleration), momentum, forces, centres of mass and Newton's laws of motion.
- Statistics: learning about how to use different models to interpret data.

In Further Maths A-level, the same areas are covered but to greater depth.

## Assessment:

Maths: The course is examined at the end through three exam papers that cover all aspects of the course.

Further Maths: The course is examined at the end through three exam papers that cover all aspects of the course.

## Skills acquired:

In the Pure topics you extend your understanding of algebra, graphs and geometry from GCSE and start to learn about functions, calculus and applying techniques to real-life situations. You will learn how to present a mathematical argument logically. In the applied sections you will learn to model real situations mathematically. In Mechanics you will use the skills learnt in Pure Maths to understand why things move as they do. In Statistics you will learn how to use different models to interpret data.

## Links with other subjects:

Maths A-level is very useful to students studying Science A-levels, particularly Chemistry and Physics. It is also relevant in Business Studies. Maths can complement subjects such as Languages or Music. Mechanics links easily to the Physics course and Statistics is useful in any subjects where you need to analyse data such as Geography and Psychology.

## Possible careers:

Students who studied Maths A-level have gone on to study Science-based degrees, Maths, Engineering, Accountancy, Computing, ICT and a wide range of other subjects. It is often an essential requirement for University courses in these areas. Science or ICT-based courses often have a mathematical element at least in the first year.

## Prior experience:

As the Pure work builds on ideas met at GCSE level, it is essential to achieve a grade 7 or better to begin the A-level course. For Further Maths this needs to be a grade 8 or better. Students will also take an algebra entry test.

## Student comments:

*"The course follows on easily from GCSE Higher level, extending ideas and exploring new areas."*

*"The teachers expect a high volume of work from us, but are always ready to help with difficulties. They mark our work quickly and give great feedback"*

*"I felt really well prepared for my exams, thanks to all the revision and past papers we did"*