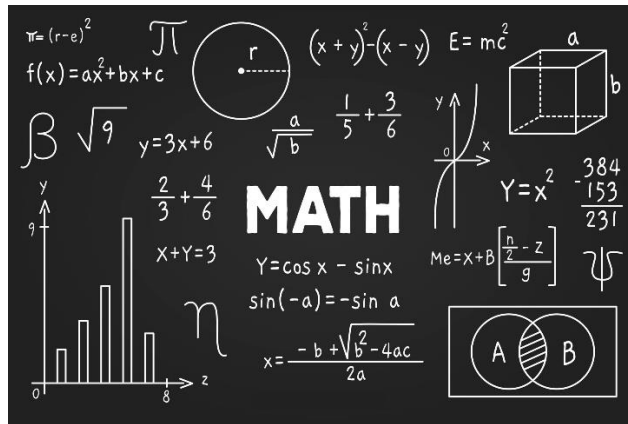# MATHEMATICS

The intention of the Mathematics department is to offer a wide curriculum to all students that covers the key elements of number, algebra, ratio and proportion, geometry, statistics and probability. The curriculum constantly builds upon prior knowledge from primary school and then between the years and key stages. Students are given examples of everyday use of the mathematics that they learn, including various career opportunities.

We aim to enthuse students in their studies in Mathematics and to stretch themselves by challenging their understanding of why certain concepts and or processes work. Students study an enriched curriculum which challenges their thinking through problem solving. They are encouraged to extend their knowledge in the different elements studied and are constantly introduced to new concepts. We intend to allow students the opportunities to apply their skills to problem solving involving logical thinking, accuracy and the ability to make links between the different topics. Students are also encouraged to make mistakes and then given the opportunity to learn from these. We also look to develop student's IT skills through the effective use of calculators.

We aim to have a large uptake of Mathematics at Key Stage 5 including A-level Mathematics and Further Mathematics. The broad A-level curriculum exposes students to new ideas including Binomial Expansion, Calculus, Logarithms and Mechanics, which sparks curiosity. Students are encouraged to work independently and collaboratively and develop their mathematical thinking to a high level. We will develop the use of their calculator skills further, by using graphical calculators. Students are encouraged to reflect on their learning and seek ways of using their knowledge to lead on to higher studies and skilled careers.

Through discussion, questions and student explanations, we aim to develop the literacy skills of all of our students and encourage the use of technical language.