**Curriculum Information**

The study of Maths in school has always been essential, and arguably even more so now in this era of technology and AI. Key Stage 3-5 Maths encourages critical thinking and problem solving as well as developing fluency with number. In Abbeyfield Maths is embedded across the school curriculum as skills are used in subjects such as Geography, Science and Economics as well as in the financial maths covered in PSHE. Staff and students alike understand the importance of being mathematically literate in today’s world.

In Key Stage 3 we build on the Maths studied at primary school. As well as continuing to work on the recall of number facts, students begin to apply these skills more and are introduced to more Algebra, Shape and Statistics. Students see how skills such as multiplication can be extended to work with decimals, fractions and finding the area of 2D and 3D shapes. Students are also encouraged to use calculators when appropriate, and efficient and accurate use of the many calculator functions is modelled.

In Key Stage 4 the focus is on the two mathematical GCSEs that students take. GCSE Maths continues to develop the topics and skills covered at Key Stage 3, with each topic gone into in more detail. The GCSE Maths papers are separated into Non-Calculator and Calculator, so students continue to work on their fluency with mental maths as well as effective calculator use. In Year 10 students also sit GCSE Statistics which enables students to be able to calculate relevant statistics for data and to critically interpret statistics presented in diagrams and calculations. GCSE Statistics includes more writing than Maths as students have to describe statistical processes and findings using correct terminology and in context.

At Key Stage 5 we offer Core Maths for those who want to carry on some mathematical study after GCSEs but do not want to do a full A level. Core Maths is a more applied mathematical course, which builds on the statistics from GCSE as well as covering topics such as Tax, Interest Rates and Loans. A level Maths builds on GCSE Maths with further study of topics such as Algebra and Trigonometry as well as introducing new topics such as Calculus and Mechanics. A level Maths is a required qualification for many post-18 courses and is a desirable qualification for almost all university courses. We also offer AS Further Maths for our highest performing mathematicians which allows to explore new areas such as Complex Numbers and Polar Coordinates.

We offer the UK Maths Challenge at all three levels: Junior, Intermediate and Senior. These are challenging tests which involve problem solving and critical thinking. We often have students achieving Bronze, Silver and Gold awards which is an incredible accomplishment for those students

**GCSE specification:** AQA Mathematics – 8300 & Statistics – 8382

**Level 3 Mathematical Studies (Core Maths)**

**AS Level Further Mathematics:** AQA - 7366

**A Level Mathematics:** AQA - 7357