Westcliff High School for Girls

Mathematics Department

The Mathematics Department is a strong and successful department, committed to improving teaching methods to provide the greatest benefit to the students. Teamwork is an essential key to this, with each member of staff participating fully in the work of the Department.

The Department consists of seven full-time and two part-time members. The Department's facilities are excellent and include a suite of five classrooms, a smaller Sixth Form teaching room, and an office, in which each teacher has a working area with access to a computer and printer. There is also a large storeroom for textbooks, equipment, worksheets and examination papers. The Department has interactive whiteboards in all six mathematics classrooms which are used in most lessons. There is access to the IT network to work with mathematics software, in particular graph drawing and data handling packages.

The school has a six form entry. In Year 7 the girls are taught in form groups until the start of Year 8, when they are set. The students are split into two equal populations, from each of these a set 1 is formed with the remainder forming two set 2's. All sets follow the same scheme of work and are taught in parallel.

At the start of KS4 one accelerated maths group is formed and it completes the GCSE Mathematics syllabus by the end of Year 10. This group goes on to study the Free Standing Unit in Mathematics, which it taken with their GCSE at the end of Year 11. The remaining students study the higher linear Edexcel GCSE Mathematics specification, which they all take at the end of Year 11. This allows the lower ability sets more time for consolidation and for the higher ability sets to work on some topics of the A level specification.

In Years 7, 8 and 9 we have adopted the approach advocated by the Mathematics Enhancement Programme (MEP) using both the Exploring Maths and STP Mathematics series of textbooks. The pupils enjoy this highly interactive method as it links well to their junior school experience. In KS4 'Essential Mathematics for GCSE' by Michael White is used by the all the sets. The Oxford GCSE Maths (Higher) book is used as a supplement.

Years 7 to 9 have three 1-hour periods of Mathematics each week, whilst Years 10 and 11 have seven 1- hour periods a fortnight. Homework is set either after each lesson or twice a fortnight, depending on the year group.

In the Sixth Form, Mathematics is one of the most popular A Level subjects where the Edexcel linear specification is followed. The course is divided into 3 components, pure mathematics, statistics and mechanics. The time allocation is 9 hours and fortnight, with two members of staff teaching each group. Students complete the full A Level at the end of Year 13.

A number of students opt to take an accelerated course in Year 12, which means they complete the full A level in one year. They can then take Further Mathematics, either as an AS or A level in Year 13.

The Department is keen to promote the enjoyment of mathematics. As part of this, students are encouraged to attempt the NRICH monthly mathematics puzzles and each year students are entered for the UKMT Maths Challenges and Maths Feast competition.

March 2019