



THE LONDON ORATORY SCHOOL

DEPARTMENT OF MATHEMATICS

Key Stages 3 and 4 (First to Fifth Form)

The six-form intake is streamed into two bands and is allocated to forms on that basis. In the first and second year, pupils are taught in their form groups for most subjects, including Mathematics. From the third year, pupils are set each year, allowing the most talented mathematicians from any form to be taught together. The top ability set follow the normal curriculum but at a faster pace and in greater depth, with the intention of presenting them for both GCSE and FSMQ Additional Mathematics in fifth form.

Pupils sit internal school tests every term and prepare for the Edexcel GCSE, with the vast majority sitting the Higher tier test. In the first year of the new GCSE exam, 95% of pupils achieved a grade 4 or higher, with 45% at 7 or above and 8% at grade 9. The school's Progress 8 score of 0.53 was well above average.

Although the course is textbook-based and all pupils have their own text books for school and home use, members of the department are encouraged to adopt a variety of approaches including exposition and discussion, investigations, experiments and the use of alternative texts. Members of the department share resources and are keen to embrace technology and complement lessons with web-based learning. Teachers can book ICT suites, and sets of laptops are available for class use. All classrooms are equipped with interactive projectors and boards supporting Promethean ActivStudio as well as the standard Microsoft Office suite; members of the department also make regular use of specialist software such as Geogebra, Omnigraph and Desmos.

Sixth Form

Mathematics is one of the most popular A level choices in the sixth form, with over 170 pupils preparing for Edexcel A levels in Mathematics and Further Mathematics. There are currently six A level Mathematics groups in the Lower Sixth and five in the Upper Sixth.

One group each year takes both Mathematics and Further Mathematics; in recent years approximately 20 pupils in each year have sat Further Mathematics, an encouraging sign of the value pupils place on the subject. Typically about 10 pupils a year go on to read Mathematics or a related degree at University, the vast majority to Russell Group universities, and we have enjoyed success with pupils winning places at Oxbridge, Imperial College and Warwick.

In the last 5 years 73% of pupils have achieved grades A*-B at Mathematics, and 76% grades A*-B at Further Mathematics.

Department structure

The work of the department amounts to the equivalent of about 10 full time posts covering the teaching of mathematics throughout the school. A standard teaching allocation is 30 periods of

40 or 45 minutes, giving 5 periods of non-contact time. Staff can expect to take their share of classes at all levels of age and ability including A-level, thus sharing in the available experience, which is particularly important for the younger and less experienced members of the department. The opportunity to teach Further Maths at A Level may be available to a suitably experienced member of staff.

A number of duties are shared among the members of the department and all are expected to help with the setting and marking of school tests, internal examinations and report writing. Although department meetings held on a regular basis through the year, the department still relies heavily for its smooth running on a continuing dialogue between all its members. It is essential that staff feel able to discuss their problems and ideas, their work and that of their pupils. We have a dedicated Maths Office which is a pleasant place to work and encourages sharing of best teaching practice.

Extra-curricular Mathematics

There is a great interest in extra-curricular maths in the school, organised as the Euclidean Society. There is a weekly maths club where pupils tackle such conundrums as 3D noughts and crosses and Mobius Strips.

Pupils are entered for the UKMT Mathematical Challenges, with a number of pupils passing through each year to the follow-on Kangaroo and Olympiad rounds. We enter teams for the 3 regional team challenges (years 7-9, year 10 and years 11-13), with pupils prepared at a separate weekly lunch time club where pupils can also work on the UKMT mentoring problems. In recent years we have also participated in the Hans Woyda Competition.

It is expected that staff will support and encourage extra-curricular Mathematics as part of the department's high standing in the school.