Poole Grammar School

Mathematics Department

Personnel

From September 2019 the department will include of a Head of Department, a Second in department, a KS5 Coordinator and six other teachers. Two staff split their time between teaching Mathematics and leading outreach work in further mathematics and in subject specialism training in the South West. All teachers are graduates in Mathematics or in a Mathematics related subject and all share a passion for teaching mathematics effectively and making it interesting for students. Subject knowledge and collaboration between teachers both contribute to the excellent ongoing professional development of all members of the mathematics team. Three members of the department teach Further Mathematics at A-level and most teach Mathematics at A-level.

**Curriculum**

The school operates on a fortnightly timetable and on a teaching allocation of five hours per class per fortnight for years 7,8 and 9. In Years 7 and 8 the classes are mixed ability as pupils remain in tutor groups for their lessons. In Y9, pupils are placed in sets according to their ability. The present system for setting, from Y9 onward, is that the six tutor groups are split into two blocks of four Mathematics classes. In each block there are sets 1 and 2 who follow both the GCSE and the FM level 2 courses. The other two sets in each block are mixed ability and focus on the GCSE course. All classes do the Higher level GCSE. This approach has led to excellent progress at Key Stages 3 and 4 due to the high teacher pupil ratio in the GCSE sets and the accelerated learning in sets 1 and 2.

The department follows the AQA Higher level linear course at KS4 and the AQA Level 2 Certificate in Further Mathematics as an additional course for set 1 and 2 classes. This means that almost 100 students are now able take their mathematics beyond GCSE by the end of KS4. The effect of the GCSE FM course has been to provide strong preparation for the study of both Mathematics and Further Mathematics at Advanced level and to maintain the study of Further Mathematics at Advanced Level. The numbers of students who choose to study Mathematics or both Mathematics and Further Mathematics at A-level are very healthy and we have recently added Core Mathematics to our post 16 offer. 100 students regularly choose a post-16 course in mathematics .each year.

The set of skills within the department makes for a very positive learning environment for teachers as well as students and a significant part of department meeting time is devoted to developing our teaching skills and sharing new resources. This is particularly relevant in view of the recent curriculum changes at key stages 4 and 5. Our current focus is on assessment against the new grading structure and on the increase in rigour and demand both at GCSE and A-level; also on how we may use this increased level of challenge to prepare candidates better for A-level.

# Student Achievement

GCSE and A level results are available from the school web site, [www.poolegrammar.com](http://www.poolegrammar.com) and can also be accessed as an appendix to this document.

Typically we expect at least 80 students to gain a grade 8 or 9 at GCSE with 39 students gaining a 9 in 2018. In a typical year group of 180, a consistent 65% of students gain at least a grade 7 in mathematics. In the AQA FM level 2 qualification, 60 out of 100 entries would expect to gain an A (7) or above, with 30 gaining an A\* (8) or above . At A-level, results are in line with ALPS indicators. 73.4% of candidates gained an A\* to B grade in Maths in 2018 and 67% in 2017. 93 out of 94 A-level entries gained an E or better in 2018. Ensuring that students make an effective KS4 to KS5 transition remains an important aspect of our work year on year. In particular, we have focussed on ways in which we can improve A-level outcomes for those students with lower ALPS indicators.

#### Accommodation and resources

The department has a suite of six dedicated mathematics rooms, each equipped with a whiteboard and data projector. The enthusiasm within the department means that there is a high level of expertise in the use of Mathematics related software and equipment (for example, graph plotters and dynamic geometry) and an enthusiasm for sharing and developing teaching methods. Online subscriptions currently include Mymaths, MathsBox and Kerboodle at all key stages. Text books are used to support learning but teaching is definitely not text-book reliant. The mathematics teachers’ office provides an excellent workspace for six teachers and there is good storage provision for our resources. Much mathematics related discussion and sharing of expertise takes place in this area, which is a real hub for our informal professional development.

##### Extra curricular

These activities mainly take the form of Mathematics Challenges and Mathematics Conferences. We participate in the UKMT Individual and Team Mathematics Challenges at junior, intermediate and senior levels with typically 20% of entrants reaching later stages of the individual competitions. Both of our junior and senior teams qualified for the national finals in the UKMT team challenges in 2018. Y10 and Y12 students are also offered trips to events organised by the AMSP (Advanced Maths Support Programme).

We offer STEP and AEA level Mathematics tuition to students who require these qualifications for their University courses.

There are also Y13 mathematics ambassadors, typically six of them, who assist with open evenings and the maths lunch time support sessions offered to both main school and Y12/13 students twice each week.

##### Teacher Training

Poole Grammar School is also very involved in the professional development of mathematics teachers. Our school accommodates a nationally funded TSST programme to train teachers from other subject disciplines to become mathematics teachers. Teachers in the department provide this training

The Post

We are looking for a teacher with an enthusiasm for mathematics, who can teach from Y7 to Y13 and who would enjoy the opportunity to teach at A-level. It is suited to new entrants to the profession as well as more experienced teachers. This position would be an excellent opportunity for somebody wishing to work in an environment where the focus is not only on learning real mathematics and helping students achieve at the highest level, but also on differentiating effectively at the upper end of the ability spectrum. There will definitely be potential for the person appointed to develop their teaching at all levels and to gain from being part of a very collaborative team of enthusiastic mathematics educators. The successful candidate should complement and add value to an already high performing teaching team. They will have a passion for both the subject, mathematics and the art of teaching mathematics and they will seek to make a significant impact both within and beyond the class room. Academic results, and the development of teaching, learning and assessment are all areas to which the successful candidate might contribute.

As already mentioned, the school has also been awarded a government grant to train teachers who wish to convert to mathematics or those who are qualified to teach mathematics but have had a career break. This training is offered by the department and coordinated by one of our teachers. Again, this offers another opportunity for professional development.

You will be a key member of a dynamic department situated in an area of outstanding natural beauty with the Jurassic coast only a few minutes away. This is coupled with working in a school renowned for the friendliness of its staffroom and the potential of its pupils, where teachers and pupils share the learning experience and strive together for outstanding progress.

**A J Baker**

**Head Teacher**

**February 2019**

**Appendix**

**AS and A- level results from 2017**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  | No. of Subject Entries | Passes A-E | % A\* - B |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| 2018 | A\* | A | B | C | D | E | U |
| Mathematics Further  | 6 | 2 | 2 | 0 | 0 | 0 | 0 | 10 | 10 | 100 |
| Mathematics  | 23 | 27 | 19 | 11 | 9 | 4 | 1 | 94 | 93 | 73.4 |
|  2017 |  |  |  |  |  |  |  |  |  |  |
| Mathematics Further | 4 | 1 | 3 |  |  |  |  |  | 8 | 100 |
| Mathematics | 12 | 14 | 17 | 8 | 4 | 6 | 3 | 64 | 61 | 67 |
|  |  |  |  |  |  |  |  |  |  |  |

**GCSE results from 2017**

Attainment:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Grade | 9 | 8 | 7 | 6 | 5 | 4 | 3 |
| 2018 | 38 | 45 | 29 | 37 | 22 | 7 | 1 |
| 2017 | 41 | 31 | 47 | 41 | 13 | 1 |  |

 **83** grades 8 and 9 (2018) **72** grades 8 and 9 (2017).

**Further Maths Level 2 2018**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Grade | A^ | A\* | A | B | C | U |
| No. | 13 | 16 | 30 | 23 | 15 | 4 |
| % | 12.9 | 15.8 | 29.7 | 22.7 | 14.9 | 4 |