

Aviation House
125 Kingsway
London
WC2B 6SE

T 0300 123 1231
enquiries@ofsted.gov.uk
www.ofsted.gov.uk



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Ms R Allen
Headteacher
Rosebery School
White Horse Drive
Epsom
Surrey
KT18 7NQ

Dear Ms Allen

Ofsted 2014–15 subject survey inspection programme: mathematics

Thank you for your hospitality and cooperation, and that of your staff and students, during my visit on 4 and 5 February 2015 to look at work in mathematics.

The visit provided valuable information which will contribute to our national evaluation and reporting. Published reports are likely to list the names of the contributing institutions but individual institutions will not be identified in the main text without their consent.

The evidence used to inform the judgements included interviews with staff and students, scrutiny of relevant documentation, analysis of students' work, observation of eight lessons, six of which were undertaken jointly with senior staff.

The overall effectiveness of mathematics is good.

Leadership and management of mathematics are good.

- The mathematics department is well led. High-quality teaching and learning are its focus. Everyone in the departmental team is supported to achieve the best for students, and enjoys doing so.
- A wide range of professional development opportunities, including high-quality mathematics training from subject associations, enables members of the department to refresh their knowledge of good practice in mathematics teaching. What is learned by one member of the team is always disseminated to other colleagues.
- Development planning emphasises the provision of support for groups of students and a wide range of opportunities to encourage them to enjoy, and succeed in, mathematics. It does not, however, spell out clearly the detail of

the work required in each year group to manage the transition to the new National Curriculum. Work is underway, however, with no lack of willingness to ensure that necessary changes will be brought about.

- Performance is managed well, and the quality of teaching is judged accurately using an appropriately wide range of indicators. An occasional over-emphasis on judging classroom management strategies can detract from the rigour of the evaluation of the quality of mathematics learning.

The curriculum in mathematics is good.

- Teaching is supported by a bank of good-quality resources, some of which are from the National Centre for Excellence in the Teaching of Mathematics. Work at Key Stages 3 and 4 is currently organised into quite short units, which means that students do not always get chance to master key concepts in each area of mathematics, nor make important links across topics.
- Teachers are keen mathematicians and enjoy discussing various approaches to the teaching of mathematics. Such sharing of good practice is very useful but good ideas are not captured in schemes of work, and therefore approaches which are felt to be particularly effective are not necessarily adopted by everyone. This means that students' prior learning is not always built upon efficiently.
- More problem-solving approaches are being introduced successfully into Key Stage 3. Currently, they focus on practising application of specific skills towards the end of a topic, rather than also being used at different stages of the topic to support a more profound grasp of key concepts.
- Students have few opportunities to use information technology in lessons to support their learning.
- A very wide range of valuable opportunities for students, run by staff at lunch time and after school, supports students' good progress. These include drop-in clinics run by sixth formers and overseen by staff, and regular support sessions for A-level mathematicians. The department also enters students for national mathematics challenges, and plays a part in the school's university links for more able students in Key Stage 3.
- Very good links have been established with local primary schools to help the transition to the new National Curriculum to be smooth and successful. Useful partnerships also exist with other secondary schools around developments in A-level mathematics provision.

Teaching in mathematics is good.

- Teaching is consistently at least good across the department and some is outstanding. The department has worked successfully to ensure that recent turbulence in staffing has not compromised the quality of students' learning.
- Marking is regular and the combination of students' accurate, perceptive self-assessments and good quality feedback from many teachers means that students know how to improve their work.

- Teaching concentrates on the acquisition of a wide range of important mathematical knowledge and skills. This supports students to achieve very good GCSE grades but it does not always help them to achieve a deep understanding of mathematical concepts and associate key ideas across different topics. Teachers' questioning is often probing and tests how well students grasp the skills being taught, but not often their capacity for mathematical reasoning.

Achievement in mathematics is good.

- Students arrive at the school with above-average attainment by the end of Key Stage 2. They make outstanding progress over Key Stages 3 and 4 and a large proportion achieves high grades at GCSE. Outcomes in GCSE statistics and in additional mathematics are also very good.
- Students say that they are very well cared for and supported in mathematics. In lessons they concentrate on their work, listen carefully to teachers and benefit from the good teaching they receive.
- The progress made by disadvantaged students is boosted by good use of the pupil premium funds and a genuine sense of care for their achievement. These students have made good progress in recent years but the gap between their attainment and others in 2014 was still the equivalent of half a GCSE grade on average.
- A-level mathematics is a popular option in the sixth form. Many students go on to achieve high grades at A level and a good number to go on to Russell Group universities, Oxford and Cambridge. Overall, students' progress in the sixth form is much more in line with expectations, compared to their outstanding progress in Key Stages 3 and 4. This is because the teaching and learning styles which enable students to do so well at GCSE do not equip them equally well for A-level study, resulting in some students finding adapting to A-level work challenging.

Areas for improvement, which we discussed, include:

- developing a strategy to achieve fluent knowledge and deep understanding of key concepts in mathematics through increasing opportunities for problem solving and reasoning
- capturing high-quality teaching approaches in schemes of work.

I hope that these observations are useful as you continue to develop mathematics in the school.

As explained previously, this letter will be published on the Ofsted website. It may be used to inform decisions about any future inspection. A copy of this letter is also being sent to your local authority.

Yours sincerely

Alan Taylor-Bennett
Her Majesty's Inspector