

Aviation House
125 Kingsway
London
WC2B 6SE

T 0300 123 1231
F 020 7421 6855
enquiries@ofsted.gov.uk
www.ofsted.gov.uk



30 May 2012

Mr T Boyes
Headteacher
Queensbridge School
Queensbridge Road
Moseley
Birmingham
B13 8QB

Dear Mr Boyes

Ofsted 2012–13 subject survey inspection programme: mathematics

Thank you for your hospitality and cooperation, and that of your staff and students, during my visit on 22 and 23 May 2012 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; and observation of seven lessons and brief visits to five additional lessons.

The overall effectiveness of mathematics is good.

Achievement in mathematics

Achievement in mathematics is good.

- Students make good progress. Results at GCSE have risen substantially over a four-year period. This includes the proportion of students gaining the highest grades of A and A* which was low and has increased sharply. Students from a variety of ethnic backgrounds are all making good progress. This year, 17 students in Year 11 followed an additional mathematics course, and analysis of their work shows facility and confidence with topics such as calculus and trigonometric equations. These students enjoyed this course and are highly motivated and interested in the subject.
- Students enjoy mathematics and work well together in pairs and groups. In a Year 9 lower-ability set, students worked together to explore the

number patterns and formulae resulting from various matchstick patterns. They worked with enthusiasm and made rapid progress.

- Students in Year 7 from a wide variety of mathematics sets showed confidence with solving equations and simplifying expressions. However, they were less sure about the purpose of algebra, whereas students in Years 10 and 11 could give cogent reasons and showed an understanding of its importance.

Quality of teaching in mathematics

The quality of teaching in mathematics is good.

- The relationships between teachers and students are very good and the climate for learning is very positive throughout the department. Teachers have good subject knowledge and explain mathematical concepts clearly. Lessons begin with starter activities which are effective in engaging students' interest quickly and reminding them of recent work. Teachers emphasise the key mathematical vocabulary in each lesson and, as a result, some students' mathematical vocabulary is in fact richer than their everyday vocabulary. The marking of students' work is thorough, and teachers identify and explain errors that arise.
- Teachers make good use of students working in pairs or groups. In a Year 9 class, students were exploring transformations. The teacher had prepared cards that needed to be matched for shapes that were mathematically similar. Some of the more complicated cases provoked discussion and debate. This activity therefore helped to deepen students' understanding of the concept of similarity. In another Year 9 class, students walked up and down a number line, following certain instructions, and so enhanced their understanding of positive and negative numbers.
- Teachers also make good use of students' responses to questions to shape their lessons. Small whiteboards are used effectively for students to display answers. In a lesson on formulae, a teacher used students' responses to assess their understanding very quickly. She gave different work to three groups based on this feedback, including extension work, while she worked intensively to support a further group.

Quality of the curriculum in mathematics

The quality of the curriculum in mathematics is satisfactory.

- A clear plan for the teaching of mathematical topics through the school provides for a good continuity of students' experience. From this, teachers produce medium-term plans. Students have some opportunities to explore within mathematics, and some have used information and communication technology as a tool to explore, for example, transformations. However, the department's scheme of work gives very little guidance on what activities are used and in which topic. As a result, the opportunities for students to investigate within mathematics and to apply mathematics are restricted, and are also uneven across teaching groups.

- The school's curriculum as a whole has innovative features including extensive use of themed weeks. Mathematics makes a valuable contribution to, for example, a Year 8 project exploring sport. Students collect and analyse data on their performance and also look at the trajectory of objects when thrown. Further practical and investigative work takes place in Year 11. However, overall, the use of mathematics on these weeks is below its potential.

Effectiveness of leadership and management in mathematics

The effectiveness of leadership and management in mathematics is good.

- In the whole-school inspection in January 2011, a key issue for improvement was to raise standards, including in mathematics, by monitoring the progress of individuals and groups of students. This has been very successfully implemented. High-quality assessment of each student's progress is undertaken at regular intervals in all year groups. Where students are behind their expected progress, detailed plans are produced based on their particular needs. One focus has been to enhance the progress of students known to be eligible for free school meals. As a result, progress of students and groups of students has improved sharply in a relatively short period. This assessment practice is now exemplary, and its effective implementation in a short time indicates good capacity for further improvement.
- The subject leader has been effective in forming a team which has a strong shared purpose for the highest achievement of each student. Monitoring of teaching and of students' books is thorough and the department is guided by a good development plan which is reviewed regularly. For further professional development, the whole department is booked to attend a course in Manchester in July which is related to the plan's objectives.

Areas for improvement, which we discussed, include:

- extending the opportunities that students have to explore within mathematics and to apply mathematics, including with information and communication technology, and to map these opportunities within the department's scheme of work.

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

As explained previously, a copy of 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

Robert Barbour
Her Majesty's Inspector