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1 April 2010

Mr M Post
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Dear Mr Post

Ofsted 2009-10 subject survey inspection programme: mathematics

Thank you for your hospitality and cooperation, and that of the staff and students, during my visit on 15 and 16 March 2010 to look at work in mathematics.

As outlined in our initial letter, as well as looking at key areas of the subject, the visit had a particular focus on how well the curriculum secures progression in mathematical understanding for every student.

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.

The evidence used to inform the judgements included interviews with staff and learners; scrutiny of relevant documentation; analysis of students' work; observation of nine lessons; and short visits to four others.

The overall effectiveness of mathematics is outstanding.

Achievement in mathematics

Achievement in mathematics is outstanding.

- Attainment in mathematics is very high. A large majority of students gain grade A or A* at GCSE, and most of these continue to study mathematics in the sixth form. In 2009, more than half of the Year 13 cohort gained the top grades at A level.
- Students have positive attitudes to mathematics. Their understanding builds over time because they do lots of mathematics that makes them think. They make outstanding progress because mathematical principles

are explained well and because they work through plenty of exercises that become progressively more difficult, reflecting teachers' high expectations.

- The school has developed a good reputation for working with students on the autistic spectrum and those with dyslexia or dyspraxia. In 2009, for example, the 13% of Year 11 students who have special educational needs and/or disabilities made even better progress than the year group as a whole.
- Students reach high standards of competence in basic techniques and learn to apply these techniques flexibly. They develop independent learning skills because they regularly tackle challenging questions. They are spurred on by regular assessments and, despite a competitive atmosphere, they often support each other's learning.

Quality of teaching of mathematics

The quality of teaching of mathematics is good.

- Most lessons use a fairly traditional approach, in which the teacher provides an introduction to a topic, works through one or two examples and then sets an exercise. This works very well because the teachers have very strong subject knowledge which allows them to present mathematics as a connected whole. They draw out ideas from students through effective questioning and pay close attention to important details.
- Marking in books is of inconsistent quality. Students mark a lot of their own work and there is not always enough detailed marking by teachers of key questions. However, teachers make good use of opportunities during lessons to assess students' progress, providing additional support or greater challenge to meet their individual needs. In addition, the system of regular formal assessments helps students to identify how to improve.

Quality of the mathematics curriculum

The quality of the mathematics curriculum is good.

- A critical feature of the school's success in mathematics is its approach to examination entry. The school does not enter students early for GCSE, preferring to cover key topics like fractions, algebra and graphical understanding in greater depth. As a result, students enjoy mathematics and make a smooth transition to advanced work.
- The department offers very good academic support to ensure that all students reach challenging targets. The support for students with special educational needs and/or low prior attainment is very well focused.
- The standard curriculum is enriched for the most able students by activities such as team competitions and the various national mathematics challenges. Optional classes preparing students for Cambridge University's sixth-term entry papers, means that even the very brightest are stretched.
- The curriculum is kept under review and a lower starting point has been introduced for the minority of students that enter Year 7 with average or below average prior attainment in mathematics. However, many other schemes of work provide little guidance on how topics should be taught.

Effectiveness of leadership and management of mathematics

The effectiveness of the leadership and management of mathematics is outstanding.

- Staff are trusted to use sensible approaches in their teaching because they have good subject expertise. Lesson observations contain only a limited evaluation of the impact of the chosen teaching approach. Lesson observation and learning walks by you provide information on provision, but this is less formalised. However, senior leaders and the head of department monitor students' progress closely, via a system of common assessments. Any inequalities in provision are therefore identified through their impact on outcomes.
- Self-evaluation in mathematics is rigorous and the performance of different groups of students is analysed carefully. The department's track record of improvement is very impressive. The capacity for further improvement is strong because senior leaders value the subject and have developed a clever strategy for recruiting well-qualified staff.

Subject issue: how well the curriculum secures progression in mathematical understanding for every pupil

- The school encourages progression in mathematical understanding by employing teachers with a very good understanding of mathematics and then mentoring them through informal but well-established professional development to extend their pedagogy. However, little of this is evident in the department's curriculum documentation and there is little guidance on the 'using and applying mathematics' element of the curriculum.

Areas for improvement, which we discussed, include:

- reviewing the schemes of work, to ensure that they reflect the existing strengths of teaching and incorporate 'using and applying mathematics'
- improving the consistency of marking quality by clarifying its purpose and by introducing a quality assurance procedure.

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

As we explained previously, a copy of this letter will be sent to your local authority and will be published on the Ofsted website. It will also be available to the team for your next institutional inspection.

Yours sincerely

Stephen Abbott
Her Majesty's Inspector