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Ms C Lennon
Principal
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Dear Ms Lennon

# **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 23 and 24 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; and visits to 23 lessons sometimes accompanied by departmental leaders.

# The overall effectiveness of mathematics requires improvement.

#### Leadership and management of mathematics are good.

- Senior leaders, the head of department and the departmental team are committed to developing students' conceptual understanding and problem-solving skills alongside an enjoyment of mathematics and the best possible examination results. The head of department has determination, enthusiasm and a love of the subject. He has rebuilt the team this year and deploys them well. The vice principal is also a valuable and highly skilled member of the team.
- The members of the team, all subject specialists, have different skills and experience, and they work together very effectively. They learn from each other, share resources and plan together. They are well informed about the latest developments and are keen to try out new ideas.
- Leaders at all levels are relentless in their drive to provide high-quality teaching. Bespoke support is available to help teachers improve their

practice but leaders take decisive action if this fails. The department had major staffing issues in 2013/14 when a number of key teachers left within a short space of time and the situation was exacerbated by long-term illness. The school found it impossible to recruit suitable replacements, especially mid-year, but are now back to full strength. Leaders are trying innovative ways attract and develop high calibre new teachers including an intern system through which new graduates, who are former Brigshaw students, are employed as teaching assistants. They benefit from a variety of experiences to enhance their career prospects and which, the school hopes, might encourage them into teaching.

■ Students are set challenging targets and their progress is monitored closely so that any underperformance can be addressed quickly. Systems for monitoring the quality of provision are robust. Leaders have an accurate view of the department's strengths and weaknesses.

## The curriculum in mathematics is good.

- Curriculum planning is strong. The new national curriculum has been introduced in Key Stage 3 accompanied by a new scheme of work that is being enhanced and developed in the light of experience. The team was quick to identify possible gaps in students' knowledge, resulting from changes to the curriculum, and actions to address such deficits are in place. Plans for the new GCSE have been researched well and teaching has begun in Year 9. The additional mathematics qualification is used to provide challenge for the most able students and to give them a taste of A level. The team keeps abreast of proposed changes to the sixth-form curriculum.
- External networking is good and best practice from elsewhere is utilised well. For example, new approaches to lesson planning brought from Shanghai are being deployed to improve the quality of teaching.
- The department works closely with local primary schools to ease primarysecondary transition, for example, by organising primary mathematics challenge events and agreeing common methods of calculation. Joint work on a new system to replace national curriculum levels is part of a continuous approach to mathematics across the phases.
- Support is readily available to students in and out of lessons; they say this is a major strength of the department's work. Interventions are planned and targeted well. Year 11 students appreciate the regular tests that lead to personalised support and are motivated by their improving test grades.
- The Student Mathematics Committee meets weekly to look at ways to promote an enjoyment of mathematics across the school. A Science Technology Engineering and Mathematics (STEM) club, led by one of the interns, has been formed as a result of the committee's lobbying.

## **Teaching in mathematics is good.**

■ Teachers use detailed information about each student well to determine seating arrangements, target questions and plan work that caters for everyone's needs. Lessons include a good range of varied activities that

- stimulate and enhance learning. Teachers make good use of interactive whiteboards to illustrate explanations.
- Teachers use their subject knowledge very effectively to build understanding incrementally and will backtrack if necessary to shore up cracks in underlying learning. They anticipate barriers to learning and take action to avoid them. Incorrect answers are utilised well.
- Teachers have good questioning skills. They direct questions effectively and ask penetrating follow-up questions that stretch thinking or tease out misconceptions. The dialogue between students and teachers, and between students themselves, is very productive. Humour is used well.
- The quality of marking is improving and feedback is increasingly detailed and helpful. Most students now correct work, do additional practice questions when necessary or attempt extra, more challenging problems.

# **Achievement in mathematics requires improvement.**

- The GCSE mathematics results dipped in 2014 and fell to below average, due largely to last year's staffing problems. Current Year 11 students' performance in monthly tests indicates that results will bounce back this year. A-level results were also adversely affected by staffing issues last year but the school is forecasting marked improvement this summer. Work in students' books and the progress made in lessons, including in the sixth form, support the school's view.
- The 2014 GCSE results showed that the gap in attainment of disadvantaged and other students widened. Indications that the gap is closing are clear, especially lower down the school, as a result of more focused support from teachers and intervention work. The most able students are increasingly challenged to reach their full potential and data show that able, disadvantaged students are rapidly closing the gap on their peers.
- In lessons, students are very willing to share ideas and help each other. They ask questions and are keen to understand underlying concepts. When helping each other, they also try to explain the thinking behind the method. They enjoy solving challenging problems.

### Areas for improvement, which we discussed, include:

 ensuring that achievement continues to improve and that the gap in attainment of disadvantaged and other students closes quickly.

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

Jan Bennett

Her Majesty's Inspector