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11 November 2009

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Dear Mr Flowers

Ofsted 2009-10 subject survey inspection programme: mathematics

Thank you for your hospitality and cooperation, and that of your staff, during my visit, with Jane Jones HMI, on 4 and 5 November 2009 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 the effectiveness of the school's approaches to improving the quality of teaching and learning 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. All feedback letters will be published on the Ofsted website at the end of each half term.

The evidence used to inform the judgements included interviews with students and staff, scrutiny of relevant documentation, analysis of students' work and observation of 10 lessons.

The overall effectiveness of mathematics is inadequate.

Achievement in mathematics

Achievement in mathematics is inadequate.

- Attainment at Key Stage 4 is well below the national average. Provisional data for 2009 suggest that the significant improvement in GCSE results in 2008 was not sustained. Standards at Key Stage 3 are also well below average and remain steady rather than rising.
- Students enter the school with attainment that is below average and many more than is typical join at times other than the start of Year 7. Their

experiences of mathematics differ widely but, in relation to their varied starting points, students make satisfactory progress in lessons and over their time in the school. Some progress well, but not enough make the good progress needed to raise attainment rapidly. Since attainment remains low, and there is no secure trend of improvement at either key stage, students' achievement is judged to be inadequate.

- Sixth-form students studying GCSE mathematics make satisfactory progress.
- There is some variation, year by year, in the performance of different groups of students but no consistent pattern of underachievement by any particular group.

Quality of teaching of mathematics

The quality of teaching of mathematics is satisfactory.

- Teachers develop positive relationships with their students. Many use good questioning skills, together with paired and group work, to help students to learn through discussing and explaining their ideas. Teachers provide good support for individual students who need extra help. Teaching assistants provide similarly good support for those with special educational needs and/or disabilities.
- Most teachers make good use of mini-whiteboards in lessons to assess students' understanding and to ensure that all are involved in responding to questions.
- Weaknesses in some teachers' subject knowledge sometimes lead to an inappropriate choice of activities or imprecise use of mathematical vocabulary. Some teaching focuses too much on mastering techniques rather than developing students' understanding of the underlying concepts. Not all teaching takes sufficient account of the range of abilities within the class; as a result, some students are not challenged sufficiently.
- Students appreciate the support that teachers provide through revision classes; they also like the computer-based learning programme that helps them to consolidate their learning. They know their target grades and levels but would benefit from additional guidance on how to attain the next level.

Quality of the mathematics curriculum

The quality of the mathematics curriculum is satisfactory.

- The school offers students a good range of qualifications in mathematics, including in numeracy, statistics and functional skills and some students benefit from 'study plus' lessons. The school's commitment to inclusion is demonstrated through new curricular developments, which focus well on catering for a wide range of needs. Systems for coaching and mentoring are effective in promoting engagement in learning for students who are at

risk of becoming disaffected or who are in danger of not reaching the higher GCSE grades.

- New schemes of work give appropriate attention to developing key mathematical processes, but have yet to have full impact in the classroom. The schemes are not supplemented with clear guidance on the approaches to adopt to secure conceptual understanding and develop reasoning skills. Similarly, only limited guidance is provided on the use of information and communication technology (ICT).
- Many younger students benefit from being in the closely supported transition groups. A scheme of work aimed specifically at these groups is needed to ensure that all students in these groups make progress in mathematics that matches their gains in personal development.
- Students show satisfactory attitudes to mathematics overall. They particularly enjoy cross-curricular days and opportunities to use ICT in their learning.

Effectiveness of leadership and management of mathematics

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

- Good whole-school management structures, such as the use of data, scrutiny of students' books and teachers' lesson plans, and 'learning walks', are having a positive impact on provision in mathematics. However, feedback from lesson observations and learning walks should focus more on issues specifically related to the teaching of mathematics, in addition to generic teaching skills. Self-evaluation is broadly accurate and development planning has an appropriate focus on improving teaching and raising standards.
- The teachers in the mathematics department work together well and offer mutual support. Managers, though, currently provide insufficient support and guidance for non-specialist teachers of mathematics, particularly on subject-specific pedagogy. Different teachers' expertise could be shared more effectively to promote consistently good practice in teaching mathematics.
- Managers' monitoring of provision is not sharp enough to ensure that all students receive their entitlement to using and applying mathematics, and that all classes cover the scheme of work in appropriate breadth and depth.

Subject issue: the effectiveness of the school's approaches to improving the quality of teaching and learning in mathematics

- Teachers are consistent in their use of the school's Critical Skills Programme. However, this consistency does not extend to approaches to teaching mathematical topics.
- The school has provided appropriate training and support for teachers in the department, including for new members of staff. More subject-specific

support is required for non-specialists, many of whom have good generic teaching skills but less expertise in securing understanding and progression in mathematics.

Areas for improvement, which we discussed, include:

- ensuring that students make consistently good progress to reach higher standards, particularly at GCSE
- improving teaching from satisfactory to good through:
 - providing more subject-specific guidance on teaching particular topics
 - giving greater emphasis to promoting students' understanding and reasoning skills
 - ensuring teachers use mathematical vocabulary accurately and with confidence
- ensuring that all students have appropriate opportunities to develop their skills in using and applying mathematics
- monitoring subject provision more closely to support more rapid improvement.

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

As explained in our previous letter, 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

Paul Chambers
Her Majesty's Inspector