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21 December 2009

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Dear Dr Diffey

Ofsted 2009-10 subject survey inspection programme: mathematics

Thank you for your hospitality and cooperation, and that of your staff, during my visit on 9 and 10 December 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.

The evidence used to inform the judgements made included interviews with staff and students, scrutiny of relevant documentation, analysis of students' work and observation of 11 lessons.

The overall effectiveness of the subject is good.

Achievement in mathematics

Achievement in mathematics is good.

- Students enter the school with broadly average standards. Over the last three years, standards in GCSE examinations have been rising so that in 2009 they are above average. The proportions of students who gained grades A* to C and A* or A both increased significantly from those for 2008.
- Lessons' observations and the school's data show that progress is good. Students say they enjoy mathematics because they find the work challenging and staff care for them very well as individuals.

- Results in A-level examinations have been weak over the last few years. However, students' increased confidence in mathematics and better GCSE results mean that more students are opting to study mathematics at A level and a greater proportion are completing the course. The school has rightly identified that it needs to build upon the momentum of improvements in Key Stage 4 to raise standards at A level.

Quality of teaching of mathematics

The quality of teaching of mathematics is good.

- The majority of the teaching is good with some that is outstanding. When teaching is at its best, there is a strong emphasis on developing students' understanding alongside practising skills.
- Lessons often involve a variety of different activities to interest and involve students, including through practical and group work. Some staff make good use of interactive whiteboards to engage students and to demonstrate the dynamic nature of some mathematical topics.
- Relationships between staff and students are excellent: behaviour is very good.
- Teachers are skilled in questioning students, using the responses to target future support or to exemplify and rectify misconceptions. While marking is often good, in some books it is superficial and does not adequately identify errors or inform students how to improve.

Quality of the mathematics curriculum

The quality of the mathematics curriculum is satisfactory.

- Schemes of work identify appropriate mathematical content targeted at students of differing levels. Activities to support teaching within lessons are being developed. While these include investigations and other ideas to promote students' learning, opportunities to use and apply mathematics are not identified systematically within the schemes.
- The large majority of students complete the higher tier GCSE course and also statistics GCSE in Years 9 and 10. Students are grateful for the large number of additional classes and revision sessions which they find useful in the run up to module examinations. Students who may otherwise not complete their education in Year 11 are supported well by attending a local college where they take relevant mathematical qualifications.
- The school takes part in additional activities which help students use their mathematics in different, and often more relevant, situations, for example the recent work on buying and selling oil as part of an enterprise project.
- Students use some elements of information and communication technology (ICT) to support their work within mathematics but do not all have the opportunity to use it to extend their understanding of areas like geometry and graphical work.

Effectiveness of leadership and management of mathematics

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

- The subject leader has a good overview of the key strengths and weaknesses in teaching within the department, based upon accurate lesson observations. The use of 'residencies' to support the school's drive to enable middle managers to become more effective leaders has been instrumental in developing the department's clear understanding of how it is going to continue improving. The drive and commitment of senior members within the department are evident and understood well by all.
- There is a well-constructed plan to carry on improving the overall quality of teaching and the pace of learning. Actions have already brought about significant improvement in results.

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

- Your work with other senior managers to ensure that the emphasis has shifted from the quality of teaching to the quality of learning has meant that there is now a greater concentration on students as learners and, consequently, the quality of teaching has improved.
- The departmental team meets regularly to discuss effective teaching strategies and lesson ideas but these are not always recorded in schemes of work.
- The strong focus by some teachers in developing lessons that support students' understanding means that students are better able to apply their mathematical knowledge to different scenarios. Hence their ability to tackle GCSE problems has improved. Students also say that this is why more of them stay on to study mathematics A level.

Areas for improvement, which we discussed, include:

- raising standards at A level
- improving the quality of teaching so that more lessons are good or outstanding by ensuring:
 - teaching consistently focuses on developing understanding as well as mathematical skills
 - marking informs students of any errors and informs them how to improve
- enhancing the curriculum by:
 - incorporating good teaching ideas within schemes of work
 - identifying opportunities for students to use and apply their mathematics and use ICT to enhance their learning.

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

Michael Smith
Her Majesty's Inspector