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Mr P Morris
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Dear Mr Morris

Ofsted 2010–11 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 June 2010 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 nine lessons and short visits to four others. The timing of the visit meant that it was not possible to observe any sixth-form lessons or talk to sixth-form students.

The overall effectiveness of mathematics is satisfactory.

Achievement in mathematics

Achievement in mathematics is satisfactory.

- The proportion of students gaining grade C or better in GCSE mathematics is close to the national figure. However, when the performance of all students is taken into account, attainment is below average. This is partly because a few students do not gain a grade at all and partly because the proportion of students gaining A and A* grades is below average.
- In lessons, students learn techniques and practise them but do not always demonstrate understanding. Many students at all levels are hampered by their inability to recall essential facts and techniques quickly. However,

their learning is boosted by a strong revision programme in the final year which helps most of them to meet their examination targets.

- Lower attaining students, who take GCSE mathematics in Year 11, make better than average progress. Higher attaining students make satisfactory progress up to Year 10, when they take the GCSE examination, but too many are allowed to settle for grade C when they could do better with another year of study. Around 25 of the highest attaining students follow an additional mathematics course in Year 11, with limited success. Most of the other early entrants follow a financial capability course rather than mathematics in Year 11. The success rate on this course is high.
- Students' behaviour and attitudes to learning are satisfactory. Many are well motivated, concentrate in class and seek help as necessary. However, some students are less well engaged by the teaching approaches used and work slowly, showing little enjoyment.

Quality of teaching of mathematics

The quality of teaching of mathematics is satisfactory.

- Most lessons follow a standard format which includes a starter activity based on previous learning, followed by the teacher showing students something new. Students then tackle an exercise of similar questions.
- While most students eventually gain GCSE grade C or better by working in this way, their problem-solving skills are underdeveloped. This is because teachers do not set enough questions where the student has to identify an intermediate step in the solution or modify the standard method.
- Teachers often give examples of careers where mathematics might be useful. However, they rarely present mathematics in context and do not do enough to promote understanding or to allow students to make sense of the methods they are shown.
- Marking is often good, providing guidance on the level of work and the next steps. In a few cases, there are recurring comments about lack of work, but no evidence that the student is required to catch up.
- Teachers offer booster lessons and after-school revision programmes that help students to meet examination targets. They make good use of test paper analyses to identify whole-class and individual topics for revision.
- Teachers circulate when students are working and provide individual help but do not always check that every student is making progress. Teaching assistants provide good general support, but are rarely given a more specific teaching role, for example with a small group.

Quality of the mathematics curriculum

The quality of the mathematics curriculum is satisfactory.

- The curriculum offers a range of opportunities including early entry to GCSE and financial capability qualifications. This has helped to increase the A* to C pass rate, but is less successful in meeting the needs of the

most able mathematicians. There is not enough encouragement for students who obtain B and C grades in Year 10 to improve their grades by retaking the examination in Year 11. As a result, students are not prepared well enough for further study of mathematics.

- The schemes of work provide a satisfactory guide to what should be taught and when. There are links to textbooks and other resources but little guidance is available on teaching approaches that might build understanding, or on the depth of coverage needed in each topic. Too many classes are unhelpfully split between two teachers.
- The expectation that every lesson will have a starter activity and that students will copy out the lesson objective means that teaching time is not always used efficiently. Many starters provide an opportunity to rehearse skills needed later in the lesson, but teachers do not always act on the information those sessions provide about students' prior knowledge.

Effectiveness of leadership and management of mathematics

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

- The monitoring of teaching and learning is thorough, with regular lesson observations and checks on marking. The school's own assessments of teaching are a little generous because they do not take enough account of the development of students' understanding or the slower progress of some groups of students.
- The department has a good team spirit because teachers support each other well. However, this is mainly through informal arrangements. In team meetings, insufficient time is allocated to improving teaching and learning through sharing good practice, and to developing common teaching approaches.
- Management of the department is satisfactory. Though meetings are regular, they do not always lead to clear, time-limited action points to drive forward other improvements. Leaders and managers have demonstrated their capacity to improve the A* to C pass rate in mathematics, but they have not ensured that all students reach their potential by setting targets for A* and A grades or for the average grade for the cohort.

Areas for improvement, which we discussed, include:

- raising achievement, especially for more able students, by:
 - putting more emphasis on teaching for understanding
 - developing intervention programmes to improve students' recall of number facts and routine procedures
 - making better use of time by reducing the time spent copying learning objectives and by using fewer, more engaging starters
 - reviewing the curriculum for able students

- improving the quality of teaching by:
 - providing formalised opportunities for teachers to discuss teaching and learning and to learn from each other
 - enhancing the schemes of work with more guidance on the depth and quantity of work to be covered in each topic and on teaching approaches that convey the big ideas and build understanding over time
 - training teachers to monitor students' engagement, learning and understanding during lessons, so that teaching approaches can be adjusted accordingly
- increasing the drive for improvement by:
 - setting targets for A* and A grades and for the average grade for the cohort
 - taking more account in lesson observations of how well teachers promote understanding and of the progress of different groups of students.

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 sent to your local authority and will be published on the Ofsted website under the URN for your school. It will also be available to the team for your next institutional inspection.

Yours sincerely

Stephen Abbott
Her Majesty's Inspector