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Dear Miss Dagwell

Ofsted 2010–11 subject survey inspection programme: mathematics

Thank you for your hospitality and cooperation, and that of your staff and students, during my visit on 18 and 19 January 2011 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; a scrutiny of relevant documentation; analyses of students' work; observation of six lessons (including two joint observations with senior staff); and brief visits to four other lessons.

The overall effectiveness of mathematics is satisfactory.

Achievement in mathematics

Achievement in mathematics is satisfactory.

- Students' attainment is improving and it is now close to the national average. The proportion of students obtaining the highest grades at GCSE has been below the national average over recent years. Students' achievement at this level, as shown in class work and in assessment, is improving.
- Students' progress in mathematics is satisfactory and improving. The considerable changes being introduced in the curriculum and to assessment schemes are generating a greater sense of confidence among students in the quality of their work.

- Until recently, more able students have tended to make less progress than expected. Their achievement is improving because there are now clearer expectations of these students and more challenge built into the teaching.
- Behaviour in lessons is good; the majority of students are attentive and cooperative, and they enjoy mathematics. Because of the new scheme of work, many are beginning to see connections between their knowledge in different topics, giving them a clearer sense of how mathematical skills may be applied in new contexts. However, too few students are sufficiently critical of their understanding. They rarely ask probing questions or seek clarification about specific points in lessons.
- Too few opportunities exist for students' views about their learning in mathematics to influence the work of the faculty.

Quality of teaching of mathematics

The quality of teaching of mathematics is satisfactory.

- Teaching is at least satisfactory across the faculty with some existing and developing strengths. For example, teachers make good use of assessment information. They communicate appropriate levels of expectation, and regularly monitor students' progress towards them. Many teachers use a range of ways to gauge understanding in lessons and use this information to inform their teaching.
- Teaching has been stimulated by the development of the new scheme of work introduced this year. As a consequence, there is a more coherent development of concepts in mathematics. Agreed approaches to teaching certain topics are beginning to emerge as a result.
- The quality and extent of marking in books are variable with no sense of agreement across the faculty of its purpose. Assessments are undertaken and marked regularly, and they contribute to teachers' understanding of students' strengths and weaknesses.
- Much of the questioning in lessons is aimed at eliciting specific responses rather than generating ideas and discussion. Students are keen to work in small groups to talk about their understanding and share ideas but have too few opportunities for this.
- The use of information and communication technology (ICT) to support students' learning is limited. Teachers sometimes use good ICT resources to assist them with whole-class teaching, but students rarely have opportunities in school to use computers or graphical calculators. Students are encouraged to use computer-based resources for homework.
- A range of support is provided for students who need additional help with mathematics, or who are not making the expected progress. About 50 students each year benefit from a course of 10 weekly sessions on an individual basis, to resolve specific problem areas. Special needs teachers also provide additional support for some. The head of faculty monitors progress closely and responds promptly if a student begins to fall behind.

Quality of the mathematics curriculum

The quality of the mathematics curriculum is satisfactory.

- The practice of using a significant proportion of higher attaining students' time in Year 10 to follow the GCSE statistics course has been discontinued. This has improved the continuity of their experience of the full range of mathematics in Year 10 and has significantly increased their capacity to make good progress over Key Stage 4.
- All students are entered for GCSE and this meets their needs well. There is no provision for challenge beyond this level at present. Many students are entered for GCSE in the November of their Year 11 to provide them and their teachers with high-quality feedback about their attainment, and encourage some to work towards specific target grades the following summer. This is currently felt to be a good use of time and resources but the strategy will be re-evaluated regularly.
- The reworking of the mathematics scheme of work in all years has been refreshing to the work of the faculty. Although this has involved a considerable input of time and effort, it has resulted in a better grasp of the nature of progression of students, and a closer association of the curriculum with assessment. Many of the benefits of this new scheme of work have not been realised yet owing to its recent implementation but it has the capacity to provide well for students' needs in the future.
- Opportunities to develop students' use and application of mathematics in investigative work are being built into the new scheme of work, but there is no agreed faculty system to gauge students' progress in this area of mathematics. Coverage of this aspect of mathematics has been patchy in the past.

Effectiveness of leadership and management of mathematics

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

- The recent major changes to the way in which mathematics is taught across all five year groups are a consequence of the vision and commitment of the head of faculty. She has guided the production and implementation of the new scheme of work with vigour and staff have responded positively. Morale in the faculty is good.
- This new provision has the capacity to improve achievement by building in better progression in mathematical knowledge and understanding in all years. Unnecessary repetition has been eliminated and students of different abilities are offered more consistent challenge and support.
- The quality of teaching is improving as a result of the better curriculum and assessment schemes being implemented. As an aspect of this work, staff are encouraged more often to discuss ways of approaching topics and share this information in the schemes of work.

- Development plans do not state precisely enough how evaluation of the new scheme of work will influence future practice. The new assessment scheme has the capacity to provide good-quality feedback on students' progress and also offers useful opportunities to evaluate the impact of the new curriculum.

Areas for improvement, which we discussed, include:

- using a greater range of teaching strategies in lessons, such as group work, the use of ICT, and a variety of questioning styles to encourage more reflection by students and a deeper understanding of ideas
- developing a faculty approach to the assessment of students' use and application of mathematics
- establishing success criteria and milestones to gauge the effectiveness of the curriculum changes underway, to inform future developments
- developing strong connections between the new curriculum and assessment systems so that the effectiveness of provision can be continually evaluated by analysing students' progress.

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 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

Alan Taylor-Bennett
Her Majesty's Inspector