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Dear Ms Quinn

Ofsted 2007-08 subject survey inspection programme: mathematics

Thank you for your hospitality and co-operation, and that of your staff, during my visit on 6 and 7 February 2008 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 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, mathematics, was judged to be good.

Achievement and standards

Achievement in mathematics is good. Standards are improving and are currently average.

- GCSE results in 2007 showed that the school was very close to its challenging target with well over half of the students gaining a higher level pass. The number of students who were absent or who failed to complete all of their modules brought down the overall achievement. A group of 28 Year 10 students entered GCSE mathematics; all gained a higher level pass and half gained an A or A* grade. This year, they are completing an additional mathematics course.

- The school responded to the 2007 results by making significant changes to the curriculum and course. Records show that Year 11 students are making good progress and often better. Year 10 and Year 9 students are now taught in mixed-age sets and they will be entered for GCSE when ready. This has ensured a greater focus on matching work to groups and has significantly reduced any unnecessary repetition. Students made at least good progress in the majority of lessons observed and responded very well to the challenging work.
- Sixth-form students made very good progress in the lesson observed.
- Students have challenging targets and are regularly assessed on their 'working-at grades'. Because the expectation of entering each student when ready has been introduced this year, systems to match 'working-at grades' to expected grades are not fully developed.
- Students' behaviour and concentration during the long lessons is very good and they say they enjoy mathematics. Some lower-attaining students said they found the opportunity to follow a variety of different activities within a lesson to be very enjoyable and far better than lessons in previous years.

Quality of teaching and learning of mathematics

The quality of teaching and learning of mathematics is good.

- Lesson plans are centrally produced with appropriate resources. Teachers discuss and share activities to ensure that they are good and likely to motivate students.
- Lessons comprise of a variety of activities which can last up to two and a half hours. Good use is made of practical work and investigations to engage students. All rooms have access to class sets of laptop computers which are used effectively, including by students who are working independently and following instructions for the next section of work. When students were observed studying geometry or graphs they did not have access to suitable software which would have enhanced their learning.
- Good relationships between staff and students and challenging work ensure that students achieve well in lessons.
- Assessment is good. Books are generally well marked, with students being shown the level at which they are working and given advice on how to improve. In a few cases, marking fails to inform students about the level of their work. Teachers make good use of questions to inform teaching or to pick up on misconceptions. They set high expectations of students, requiring full answers, with reasons behind their responses.

Quality of the mathematics curriculum

The quality of the mathematics curriculum is good.

- There have been major changes to the whole-school curriculum to allow greater choice and to improve personalisation. Lessons last for far longer than in conventional timetables and this allows for greater individualisation. Some Year 11 classes are run on a rotation, in response to students' requests, on specific revision topics. These are much valued by students.

- In Years 7 and 8, as well as mathematics lessons, students participate in resource-based learning around a theme. The discovery theme covers science and mathematics and enables students to use areas of mathematics in context as well as developing very good skills for working individually and in groups, and in problem solving.
- Schemes of work are matched to the level of work rather than the age of the students. There is a strong emphasis on problem solving, investigations, practical work and use of ICT. The school makes good use of its technology college status.
- The school runs a good family numeracy course for parents of pupils in their final year in primary schools. This supports their transfer effectively.
- Students study mathematics A level in Year 13. In Year 12, the school offers vocational A level courses, for which it has joint specialist status. It plans to offer AS mathematics next year.

Leadership and management of mathematics

The leadership and management of mathematics are good.

- The strong lead from the subject leader ensures a collegiate and well focused department. There is a strong emphasis on improving the quality of learning by improving the teaching.
- The department has a good understanding of its strengths and weaknesses and has responded very well to raising standards in Key Stage 4.
- Good support is given to new staff when they start at the school.

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

- The department has two advanced skills teachers who support teaching within the school and also with partner schools in a federation.
- Post holders are responsible for compiling lesson plans with good teaching activities. This supports the improvement in teaching.
- Observations are undertaken by the subject leader and then used to identify areas of improvement, both for individual teachers and also for the whole department. When appropriate, courses are attended and support is available from the local authority consultants.
- The introduction of resource-based learning and revised timetable has required teachers to look at different ways of delivering lessons particularly from the learner's viewpoint. This has led to more engaging lessons.

Inclusion

Inclusion in mathematics is good.

- The curriculum is very well matched to individual needs rather than age. Hence students are able to work at an appropriate level and pace.
- Good support is given for lower-attaining students and for those with learning difficulties.

Areas for improvement, which we discussed, included:

- ensuring assessments and 'working-at grades' are used consistently to identify when students are ready to be entered for examinations
- building on the good use of ICT in lessons by extending the range of applications available for students, and staff, to use.

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 local Learning and Skills Council 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