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Mrs L Brooks
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Dear Mrs Brooks

Ofsted 2013–14 subject survey inspection programme: mathematics

Thank you for your hospitality and cooperation, and that of your staff and students, during my visit on 20 and 21 January 2014 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 students and the Chair of Governors; scrutiny of relevant documentation; analysis of students' work; and observation of 11 lessons.

The overall effectiveness of mathematics is good.

Achievement in mathematics is good.

- Students' achievement in mathematics is improving rapidly throughout the school. In all year groups, most students are making good progress from their different starting points. Senior leaders have pinpointed certain groups for extra support to make sure that no group underachieves. The attainment and progress of students at AS and A level is broadly average.
- Achievement had dipped in mathematics in 2013 with disappointing GCSE results. In 2012 and 2013, fewer students had made better than expected progress compared to national figures. One positive feature of the 2013 results was that students for whom the school receives the pupil premium achieved nearly as well as other students. The gap in attainment was cut from a nearly a grade in 2012 to less than a third of a grade. The pupil premium is extra government funding to support students in service families and those in local authority care or eligible for free school meals.

- Students enjoy mathematics. They show determination in their learning, persevering with topics until they succeed. Their conceptual understanding is developing because teachers provide them with some opportunities to explore ideas and think for themselves. Students also learn through repetition and practice of methods they have been shown.
- Students develop some problem-solving skills from the variety of question types they experience. However, the extent varies from topic to topic. Students are able to apply their arithmetic skills in real-life contexts such as planning and budgeting for a short break to London.

Teaching in mathematics is good.

- Teaching leads to good learning over time. It includes a mix of exploratory work, mathematical investigations and applications of mathematics as well as direct instruction through worked examples. Teachers vary in the emphasis they give to different aspects of learning, so a topic may be taught in more depth by one teacher and less by another.
- Lessons include a reasonable amount of time for students to work independently. This allows their teachers to check on them as they work and to intervene with extra challenge or support. Some teachers do this better than others, so students are occasionally confused longer than necessary.
- The teaching seen was predominantly good, but none were judged outstanding. Occasionally, aspects required improvement, for example in relation to the sequencing of the work, the quality of explanations or the reshaping of lessons to reflect students' responses.
- Marking is regular and provides students with guidance on how to improve. Recently, teachers have begun to include follow-up questions within their comments, to check that students have learned from the advice they were given. Some aspects of the whole-school marking policy are not easy to apply in mathematics, particularly where work is wrong.

The curriculum in mathematics is good.

- The impact of the curriculum is to enable good learning and progress over time. All students experience some lessons designed to promote problem-solving skills, conceptual understanding and the application of mathematics in real-life contexts, though there is some unevenness in their experiences. Students who are at risk of underachievement are identified rapidly and provided with effective support.
- The schemes of work, which are closely related to the text-books used, provide an adequate framework for lesson planning. They are supported by commercial interactive white-board resources. Work to enhance the schemes of work is being undertaken in partnership with another school.
- Teachers discuss how best to teach different aspects of the subject and share their ideas. However, this is not captured within the schemes of work and teachers do not always interpret them in a consistent way. This leads to some unhelpful variation in the depth of coverage of topics.

- The department has created a calculation and data handling booklet to tell teachers of other subjects how these topics are taught in mathematics. The school also subscribes to mathematical teaching websites that students can access at home. These features mean that mathematics learning is reinforced in a variety of contexts.

Leadership and management of mathematics are good.

- Senior leaders and governors have taken decisive action in response to the weaker GCSE results in 2013. A senior leader with mathematics expertise has been appointed to work with the thoughtful subject leader to make teaching more consistent and to improve students' understanding.
- Leaders monitor teaching and learning carefully. Their feedback and targets set for teachers relate to students' progress and to the teaching standards. However, the feedback is not always mathematics-specific. Teachers are given well-judged professional development opportunities.
- Leaders check carefully on the performance of different groups of students and intervene where necessary to improve the progress of groups at risk of underachievement. For example, they recognise the critical need for continuity of learning in mathematics and are working to reduce persistent absence among some groups.
- The school uses its membership of the Pilgrim Learning Trust well to gain an external perspective on the quality of mathematics provision.

Areas for improvement, which we discussed, include:

- increasing the emphasis on developing students' conceptual understanding by developing departmental guidelines on how best to teach different topics to promote deep learning
- ensuring subject-specific needs are considered by senior leaders, for example: by allowing variations in the whole-school marking policy to suit the distinctive nature of mathematics; and, by giving more mathematical exemplification when discussing lesson observations with teachers.

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

As explained previously, this letter will be published on the Ofsted website. It may be used to inform decisions about any future inspection.

Yours sincerely

Stephen Abbott
Her Majesty's Inspector