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Mr T Carroll
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Dear Mr Carroll

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 with Stephen Abbott HMI on 13 and 14 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 and students; scrutiny of relevant documentation; analysis of students' work; and observation of 13 lessons.

The overall effectiveness of mathematics requires improvement.

Achievement in mathematics requires improvement.

- Students enter the school with levels of attainment that are slightly below the national average. At the end of Year 11, their attainment is above national average. However, students do not make the progress expected of them at AS and A level. Inspection evidence including the school's own data provides signs that achievement is improving in key Stage 5.
- Students who are eligible for the pupil premium, extra government funding to support students known to be eligible for free school meals, those in local authority care and students with a parent or carer in the armed forces, attain just less than a grade below their peers at GCSE. The gap between their attainment and that of their peers is narrowing.
- Students generally use mathematical techniques correctly through emulating teachers' methods but their conceptual understanding is

insecure, which makes it more challenging for them to solve more complex problems

Teaching in mathematics requires improvement.

- Teaching primarily focuses on developing students' skills in mathematical techniques rather than the underlying concepts. This approach has enabled students to be successful in the GCSE examinations but has not given them the depth of understanding to be successful at Key Stage 5.
- Teachers do not routinely insist on students showing each step of working. As a result, if errors are made, the teacher is unable to identify whether a student has made an arithmetical slip or has a misconception. Likewise, the student is not easily able to check the working and correct mistakes.
- Good relationships and students' positive attitudes to learning are a feature of lessons. Planning for lessons shows that the differing needs of students are considered and work is set at different levels.
- The quality of marking has improved since the new marking policy has been implemented. Students have increasing opportunities to respond to teachers' comments about how to improve their progress.

The curriculum in mathematics requires improvement.

- The curriculum provides a wide coverage of mathematical content but gives less attention to the development of problem-solving and investigational skills which are needed to deepen students' conceptual understanding. Schemes of work ensure teachers cover certain topics but provide insufficient guidance to teachers on approaches agreed by the department on how these should be delivered.
- Some positive links have been made with local businesses to extend students' experience of mathematics beyond the classroom. Students also take part in national mathematics competitions.
- Students value the wide range of extra sessions and support available to them outside of lesson times.

Leadership and management of mathematics require improvement.

- Subject reviews at Key Stage 4 and Key Stage 5 conducted by school leaders, show an understanding of some of the key areas for development with regard to improving achievement.
- The quality of teaching is monitored regularly through formal lesson observations, short visits to lessons and work scrutiny. However, written reports of lesson observations lack reference specifically to mathematical content and to what learning has taken place.
- Judgements made by senior leaders on the quality of teaching and learning in jointly observed lessons during the inspection were in agreement with inspectors' evaluations.

Areas for improvement, which we discussed, include:

- ensuring that schemes of work:
 - provide guidance for teachers on how to develop students' conceptual understanding through the way topics are taught
 - underpin progression in mathematics concepts and skills from Year 7 to Year 11
 - provide a secure foundation for post-16 study of mathematics
- improving the quality of teaching by:
 - conducting an in-depth analysis of the strengths and areas for development within aspects of teaching across the mathematics department
 - providing professional development activities to meet whole-department and individual teachers' needs.

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

Simon Rowe
Her Majesty's Inspector