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Mr P Crompton
Headteacher
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Dear Mr Crompton

Ofsted 2011–12 subject survey inspection programme: mathematics

Thank you for your hospitality and cooperation, and that of the staff and students, during my visit on 14 and 15 November 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; scrutiny of relevant documentation; analysis of students' work; observation of four lessons; and short visits to a further 10 lessons.

The overall effectiveness of mathematics is outstanding.

Achievement in mathematics

Achievement in mathematics is outstanding.

- Attainment is very high and rising. The proportion of Year 11 students gaining grade A* to C passes in GCSE mathematics is much higher than average and a high proportion achieve grades A and A*. Pass rates at A level are high with students achieving better grades than expected, given their starting points.
- Students make excellent progress in Key Stages 3 and 4 and obtain much stronger GCSE results than their prior attainment would suggest. A high proportion of students go on to AS and A-level mathematics courses in the sixth form and study for a mathematics or mathematics-related degree.
- Students' work across all years is of an extremely high standard. Students develop a very good grasp of underlying concepts and are able to make

links between different topics. They like to apply their learning in new situations and have a confident and methodical approach to solving problems. They enjoy the subject, especially investigations and the satisfaction of solving a difficult problem.

Quality of teaching in mathematics

The quality of teaching in mathematics is outstanding.

- All teachers are specialist mathematicians who have excellent subject knowledge and an obvious passion for the subject that is transmitted to students. Lessons are planned very effectively and teachers use a wide range of activities and resources to challenge students' thinking and engage their interest. Strong links are made to earlier work and to real life applications so that students appreciate the value of any new learning. Lessons are lively and learning moves at a fast but very well-judged pace.
- Teachers use their excellent questioning skills to check understanding and tease out misconceptions. High-quality verbal feedback ensures that students know what they need to do to improve but the quality of marking and written feedback is less consistent. Students have the confidence to question and put forward ideas and they are comfortable discussing mistakes they have made to help others. Teachers make very good use of incorrect solutions that include common mistakes.
- The focus on developing students' skills of analysis and evaluation is very strong. Students use mathematical language well. The exceptionally effective dialogue between teacher and students, and between students, makes a major contribution to the excellent learning taking place.

Quality of the curriculum in mathematics

The quality of the curriculum in mathematics is outstanding.

- The curriculum is planned extremely well. It is very responsive and under constant review. The strong emphasis is on developing an appreciation of mathematics and its underlying concepts rather than learning to use algorithms to pass examinations. Teachers take every opportunity to whet students' appetite for more advanced work.
- Students in the main school are taught in sets with narrow ability ranges, helping teachers plan lessons that meet everyone's needs. Students at all levels say they appreciate being in a group with others of similar ability.
- Students do not follow a text book but have a mathematics software package for homework and revision. Helpful revision booklets are also provided. Teachers share resources very well, adapting them to match their individual styles and to meet the specific needs of their students.
- Topics are taught in 'bite-sized chunks'. Students say this provides variety with regular opportunities to consolidate learning as topics are revisited.
- Close links with partner primary schools, including a joint project, ease transition from Years 6 to 7. Cross-curricular projects are increasingly used to promote links between science, technology and mathematics.

- The Key Stage 3 curriculum is planned extremely well and gives teachers the flexibility to teach topics in the order that suits their group. A detailed tracking system monitors individuals' coverage and mastery of each topic.
- The departmental team keeps abreast of latest developments and is piloting the double GCSE. Decisions about modular or linear examinations and entry patterns are made on a group-by-group basis each year. The school does not enter the most able GCSE students early but prefers to give them every chance to get an A* grade and uses Free Standing Mathematics Qualifications to provide additional challenge.
- Sixth formers have a good choice of mathematics options, including further mathematics, and preparation for university entry tests.

Effectiveness of leadership and management in mathematics

The effectiveness of leadership and management in mathematics is outstanding.

- The head of department provides very strong and dynamic leadership and is ably supported by a tight-knit team of talented specialists who are committed to continuous improvement. The department attracts a high calibre field for any vacancies. Mathematics receives excellent support from the senior team.
- Students' progress is monitored very effectively, ensuring that underperformance is identified and addressed very quickly leaving no need for an extensive intervention programme in Year 11. A specialist teaching assistant is part of the team, facilitating close liaison with teachers and the ongoing development of her subject expertise.
- Self-evaluation is very accurate and development plans are ambitious. Professional development is planned carefully and linked to performance management targets. Members of the team have different strengths and teaching styles and learn effectively from each other. Support for newly qualified teachers is of high quality.

An area for improvement, which we discussed, includes:

- improving the consistency and quality of written feedback and marking.

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

Jan Bennett
Her Majesty's Inspector