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Mrs B Rhymaun
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Dear Mrs Rhymaun

Ofsted 2010–11 subject survey inspection programme: mathematics

Thank you for your hospitality and cooperation, and that of the staff and students, during my visit on 26 and 27 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 school gained academy status in December 2010, under new regulations applying to schools that were judged outstanding in their previous inspections. This is the first inspection of the school as an academy.

The evidence used to inform the judgements included: interviews with staff and students; scrutiny of relevant documentation; analysis of students' work; and observation of 11 lessons.

The overall effectiveness of mathematics is outstanding.

Achievement in mathematics

Achievement in mathematics is outstanding.

- Standards are above average on entry in Year 7. Students make outstanding progress during their time in the school and attain high standards in GCSE and A-level examinations.
- Students enjoy learning mathematics and make consistently good or better progress in lessons. They seek to understand the underlying principles and work hard to secure high levels of competence. They contribute well to classroom discussion and support each others' learning.

In each key stage, they develop the skills they need to succeed at the next stage of their mathematical education.

- Students with special educational needs and/or disabilities learn equally well. Students with impaired hearing benefit from the good support for their needs in lessons and the extra classes, where sign language and visual representations help to develop their understanding further.

Quality of teaching of mathematics

The quality of teaching of mathematics is outstanding.

- Teaching is consistently good or better. Teachers provide a variety of activities to ensure that lessons are enjoyable and that learning proceeds at a good pace. Mathematics lessons include regular opportunities for students to use and apply their existing knowledge in new contexts.
- Teachers have high expectations and the confidence to plan lessons that put the onus on students to explore mathematical ideas for themselves. The teachers' very good subject knowledge means that they are well placed to guide students towards fruitful approaches. Importantly, teachers achieve a good balance between these exploratory activities and independent work on exercises and problems that help students to consolidate their skills and extend their knowledge.
- Students give good explanations of their reasoning, because teachers ask probing questions that help them to articulate their understanding. When students are working independently, teachers circulate to check on their progress. In the best lessons, teachers use the information they gather in this way to enhance later parts of the lesson and to give further support and challenge as necessary.
- Students mostly get good advice on how to improve their work because their work is marked regularly and accurately. Occasionally, however, teachers do not give enough advice on how students should set out their work. For example, many students do not make correct use of the equals sign, either omitting it when it is needed, or using it as an all-purpose connective between expressions that are not equal.
- Students benefit from the willingness of all teachers to provide advice and guidance outside of lesson time. Many attend extra lessons after school to prepare themselves for examinations or to brush up on areas of weakness. Students' progress is monitored very carefully, with appropriate intervention for any who are in danger of falling behind.

Quality of the mathematics curriculum

The quality of the mathematics curriculum is outstanding.

- The policy on examination entry is kept under constant review and decisions are made with students' best interests in mind. For example, early entry is used sensibly to motivate Year 11 students in the middle sets, who take the Foundation Tier GCSE in November and, if they gain a C grade, progress to the Higher Tier to extend their learning.

- In contrast, the school no longer enters its best students early for GCSE, having noted that some did not achieve their full potential. Instead, they are taught beyond the GCSE specification to develop a higher standard of algebra, trigonometry and other topics that underpin further study. By the end of Year 11 they are well placed to secure high GCSE grades and a Free-Standing Mathematics Qualification in additional mathematics. This approach provides a very good foundation for further strong progress in A-level mathematics and further mathematics.
- The most experienced teachers share a common, exploratory approach to teaching, but this is not always explicit in departmental documentation. The recently adopted Key Stage 3 scheme of work includes imaginative activities that encourage students to think for themselves, but those for Key Stages 4 and 5 are more utilitarian, indicating the topics to be covered but offering little guidance on how best to teach them.
- Mathematics makes an outstanding contribution to enriching the whole-school curriculum, for example in citizenship, financial capability and enterprise education. Students enjoy the annual 'maths theme' weeks and many take part in the individual and team UK Mathematics Challenges. Some attention is paid to the history and cultural significance of mathematics, but the few library books that might support students' wider reading are rarely borrowed.

Effectiveness of leadership and management of mathematics

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

- In recent years, attainment has risen steadily in mathematics and students' progress has accelerated. Senior leaders set challenging targets, but allow the department to strike a sensible balance between providing a well-rounded mathematical education and getting good results. Darrick Wood students therefore get the best of both worlds.
- The department's capacity to improve further is enhanced by the strong team spirit in mathematics and the thoughtful approach to professional development. For example, two teachers are working for Master of Education degrees in mathematics, while first-time A-level teachers are supported well through mentoring and helped to extend their subject knowledge via the Further Mathematics Network. The school's strategy of involvement in initial teacher training aids recruitment. Teachers regularly share good teaching ideas, but not in a systematic way.
- Self-evaluation is based on rigorous monitoring, including regular lesson observation and checks on matters such as teachers' planning, marking, record-keeping and use of homework. Outcomes for different student groups are analysed carefully to identify any inequalities. As a result, the departmental action plan is very well focused on improvement priorities.

Areas for improvement, which we discussed, include:

- promoting students' understanding of mathematical culture, including the importance of precision and correctness by:
 - improving the range and take-up of relevant library books and other resources
 - using informal assessment and marking to encourage the correct use of mathematical notation
- developing guidelines on the department's preferred teaching approaches and lines of progression for key topics in mathematics.

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.

Yours sincerely

Stephen Abbott
Her Majesty's Inspector