

Aviation House
125 Kingsway
London
WC2B 6SE

T 0300 123 1231
F 020 7421 6855
enquiries@ofsted.gov.uk
www.ofsted.gov.uk



22 March 2011

Ms C Dallas
Broadland High School
Tunstead Road
Hoveton
Norwich
NR12 8QN

Dear Ms Dallas

Ofsted 2010–11 subject survey inspection programme: mathematics

Thank you for your hospitality and cooperation, and that of your staff and students, during my visit on 7 and 8 March 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 seven lessons (including two conducted jointly with senior staff); and shorter visits to five other lessons.

The overall effectiveness of mathematics is satisfactory.

Achievement in mathematics

Achievement in mathematics is satisfactory.

- Students arrive at the school with higher than average attainment in mathematics. Their progress over their time at the school is satisfactory and leads to attainment at the end of Key Stage 4 that is similarly above average. In addition to all students passing GCSE mathematics, over a third gain a GCSE in statistics and a free standing mathematics qualification (FSMQ) in calculus or finance. All groups of students achieve in line with expectations, although more boys than girls opt for the extra qualifications.
- Mathematics is a popular subject: the departmental ethos is very positive. Students' behaviour is focused on learning, and many students show a quiet but strong interest in their work. They can speak about their learning confidently and students of all abilities show pride in their achievements.

Students listen attentively to explanations and are keen to apply their learning. They are less willing to ask questions, challenge thinking or suggest alternative approaches, but many have the capacity to do so.

- Students with special educational needs and/or disabilities make appropriate progress because of the satisfactory teaching, and the well-targeted extra support some receive.
- No formal mechanisms capture and use students' views and insights in developing the department's work. This is a significant missed opportunity because your students are reflective and perceptive about their learning.

Quality of teaching in mathematics

The quality of teaching in mathematics is satisfactory.

- Teaching is consistently at least satisfactory and has elements of good practice. It emphasises understanding of mathematical ideas. For example, in a lesson on indices, students were given the opportunity to identify the outcomes of various operations involving powers and, in doing so, arrived at the 'rules' through the good understanding they developed in the process. However, students are sometimes capable of moving more rapidly through the work and have too few opportunities to undertake challenging work.
- Teachers explain clearly and structure learning logically. However, questioning is often directed at moving the lesson forward collaboratively and is not used sufficiently diagnostically. Too often, it fails to probe the extent and depth of students' understanding, limiting the teachers' capacity to respond by changing pace or using a different teaching strategy. Mini-whiteboards and other visual signals are used to obtain feedback, but these techniques are not used often enough to provide a continual dialogue in the learning. Students' written work is checked regularly, but no mechanisms exist to develop their responses to this feedback.
- Opportunities to develop the use of information and communication technology (ICT) are provided in the schemes of work at each key stage but there are no checks to ensure that all students have a consistent experience. The use of ICT is significantly less frequent in Key Stage 4 than in earlier years, although some good use is made of graphical calculators in both key stages. Students are set homework involving the use of computers, and many value this as good support and an opportunity to practice the skills they learn in lessons.
- Teachers provide good quality care and assistance to individuals in lessons; they are generous with their time outside lessons to support students.

Quality of the curriculum in mathematics

The quality of the curriculum in mathematics is satisfactory.

- The department makes important contributions to the development of thinking and learning skills by dedicating one lesson each fortnight in Years 7 and 8 to a programme designed to encourage the use and application of

mathematics in novel contexts. No systems exist to gauge students' progress in the development of these skills, however.

- The provision of GCSE statistics and FSMQs in the Key Stage 4 options structure caters well for the interests and needs of students. The department offers effective support for the development of the functional skills of the very small number of students following vocational qualifications through extra informal classes after school.
- Schemes of work lay out the expected learning clearly, indicating resources and timescales, but do not provide sufficient information about preferred teaching approaches to key ideas and concepts. Work has begun, in collaboration with the local authority's adviser, on re-writing the schemes to build stronger progression through all aspects of mathematics.
- The school's mathematics specialism makes a good contribution to the subject's status and to students' experiences of it. Students have many opportunities to engage with a range of mathematical activities over the course of a year, from fantasy stock market games to mathematical limericks. The school makes useful contributions to the development of mathematics teaching and learning in local primary schools and it works to support improving achievement in two local secondary schools.

Effectiveness of leadership and management in mathematics

Leadership and management in mathematics are satisfactory.

- The acting head of department is new in post and is beginning to identify ways of remodelling the curriculum and aspects of teaching to improve progress. This is being done in such a way as to preserve existing strengths and channel the creativity and willingness of the team to drive up the achievement and level of aspiration of students.
- Self-evaluation contributes usefully to development planning but lacks rigour at times. Judgements are consequently sometimes optimistic and lack the insight to focus energy and commitment where it can have most effect.
- Improved monitoring of students' achievement is beginning to provide important information about some students' slower progress, enabling more rapid and better targeted responses.

Areas for improvement, which we discussed, include:

- establishing ways of involving students in improving aspects of the work of the department by capturing their ideas and opinions
- encouraging students to be more actively involved in their learning, debating and challenging their own and other students' ideas and methods
- developing teachers' skills of continually gauging understanding by using varied techniques, including high-quality questioning, and responding to the information obtained to promote better progress in all lessons
- prioritising those issues in the departmental development plan that will make the biggest difference and ensuring that evaluation is regular, rigorous and precisely focused.

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

Alan Taylor-Bennett
Her Majesty's Inspector