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06 November 2006

Mr K Wadsworth Headteacher Hitchin Boys' School Grammar School Walk Hitchin Hertfordshire SG5 1JB

Dear Mr Wadsworth

Ofsted 2006-07 survey inspection programme – mathematics

Thank you for your hospitality and co-operation, and that of your staff, during my visit on 30 and 31 October 2006 to look at work in mathematics. As outlined in my initial letter, as well as looking at key areas of the subject, the visit had a particular focus on students' enjoyment and understanding of 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.

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

The overall effectiveness of the subject, mathematics, was judged to be good.

Achievement and standards

Achievement in mathematics is good.

- Students' attainment on entry is above average. Standards at ages 14 and 16 improved considerably in 2006 and are well above average. Students from different ethnic groups achieve equally well. Students with learning difficulties achieve at least as well as other students. Achievement post-16 is satisfactory.
- Students are generally well motivated and show mainly positive attitudes in mathematics lessons. Teachers all aim to get students to think mathematically, a strategy that is more successful for those with good classroom control.

Quality of teaching and learning

The quality of teaching and learning is good.

- The department has a strong core of effective teachers who have good subject knowledge and teaching skills. They are alert to students' misconceptions. These teachers are prepared to take risks to make their lessons inspiring. They work on the principle that mathematical problems are intrinsically interesting and students will be motivated to solve them if they are presented in an appealing way. Their enthusiasm shines through, and their lessons are mostly well-paced and consistent with the school's mathematics aims.
- There is a good informal support network, with frequent discussions about effective practice. This is valuable for less experienced teachers, who teach at least satisfactorily, with good elements. They are mathematically competent but are not always aware of the conceptual difficulties that can arise for students.
- Nearly all teachers ensure that students spend a significant part of lesson time
 working through exercises to consolidate their learning, and this gives them the
 opportunity to observe and assess students informally as they work, intervening
 as required. This approach is particularly effective when the exercises include
 enough variation to make students think carefully about what they are doing.
- Marking is variable in quantity and quality. Some teachers mark diagnostically and provide guidance to help students improve, while others use mainly ticks and crosses. Some are less insistent than others on high standards of presentation.

Quality of the curriculum

The mathematics curriculum is good.

- The department has well stated aims for teaching mathematics which emphasise understanding and enjoyment. The scheme of work has good features, including guidance on how to teach key topics, which was an area for improvement in the last inspection. It includes references to textbooks and the National Strategy and specifies work on using and applying mathematics and the use of ICT. Although there are adequate practical resources, not all teachers use them regularly because there is limited guidance on how they might enhance learning.
- The school's specialist status includes a well received community element in mathematics, which helps to raise attainment in local primary schools. There is also strong encouragement for students to enjoy mathematics, for example through mathematics challenges and through the 'NRich' club. The department sensibly resists entering students early for GCSE mathematics, preferring to cover GCSE topics in depth to provide a secure basis for advanced level work.

Leadership and management

Leadership and management of mathematics are good overall.

 The head of department provides a clear philosophy that mathematics should be enjoyed and understood. The departmental handbook is well designed with clearly stated policies and the scheme of work encourages a consistent approach to key topics. Effective leadership has maintained a strong teaching team during a period of high turnover and has improved the progress of the most able students. Your lesson observations are effective and provide constructive and pertinent feedback. Departmental monitoring and evaluation is satisfactory, but standard processes such as scrutinising mark books, planning documents and students' work, are not yet built in to the department's routine. The departmental development plan is adequate although actions, timescales and success criteria are not sharply enough defined.

Subject issue: students' enjoyment and understanding of mathematics

Mathematics is presented by most teachers with the expectation that students will understand the underlying concepts. They make sure that students get enough practice with a variety of contexts. Students are content to do plenty of exercises because they see themselves improving. In addition, the rich extra-curricular provision enhances enjoyment. Most students have positive attitudes to mathematics and generally expect the work to make sense. Some would like more practical work and to have more opportunities to apply mathematics to real-life situations.

Inclusion

The school tracks students' overall progress and intervenes accordingly, but the department has not formalised its monitoring systems. Nevertheless, it has identified the need to improve progress for able students in Key Stage 4. The department's special educational needs policy is clearly stated, practical and easy to follow. It includes a reminder that low attaining students should not simply get a diet of basic skills. There is effective support for students who do not speak English fluently.

Areas for improvement, which we discussed, included:

- enhancing guidance in the scheme of work to ensure that all teachers make good use of practical resources that help students to understand key concepts
- formalising arrangements for monitoring and evaluation within the mathematics department to ensure consistency in the quality of planning and marking.

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

As I explained previously, a copy of this letter will be sent to your local authority and will be published on Ofsted's website. It will also be available to the team for your next institutional inspection.

Yours sincerely

Stephen Abbott Her Majesty's Inspector