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Mr M Patterson  
Headteacher  
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Dear Mr Patterson

### **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 with Alan Taylor-Bennett HMI on 8 and 9 November 2010 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 12 lessons and brief visits to six others.

The overall effectiveness of mathematics is good.

### **Achievement in mathematics**

Achievement in mathematics is good.

- Attainment is above average in mathematics and Chesterton students make better progress on average than similar students elsewhere. Two major factors in this success are the flexibility of the curriculum and the strong programme of academic monitoring and support.
- Students' skills in using and applying mathematics are not as well developed as their skills in other aspects of the subject.
- Most students are conscientious, well motivated and keen to succeed. However, a minority of lower attaining students in Years 10 and 11 show limited interest in mathematics, and this hinders progress in some lessons.
- Mathematics is a popular subject with high attaining students, many of whom progress to A-level courses at local sixth form colleges.

## **Quality of teaching of mathematics**

The quality of teaching of mathematics is good.

- Teaching is good in the clear majority of lessons where teachers focus on developing students' understanding. In some lessons, teaching is outstanding. In the best cases, teachers use exploratory approaches that encourage students to think for themselves; they circulate the class as students work to assess their understanding and progress, and adapt their subsequent teaching accordingly.
- Although all teachers share the mathematics faculty's aim of including exploratory work to develop students' understanding, they are at different stages in their expertise with this style of teaching.
- Teaching and learning are satisfactory in a minority of lessons. Sometimes this is due to an over-reliance on the teacher presenting a topic and giving students rules to remember, rather than providing them with opportunities to apply their existing knowledge to new situations. In other cases, the lesson is not adapted to meet students' emerging needs, because the teacher does not tackle misconceptions and difficulties as they arise.
- Marking is regular and usually helpful in guiding students in how to improve. Much classwork is self-marked but, in a few cases, this process is not monitored closely enough by the teacher.
- There is limited evidence in lessons of work being adapted to meet the specific needs of individual students, such as those with special educational needs and those at an early stage of learning English.

## **Quality of the mathematics curriculum**

The quality of the mathematics curriculum is good.

- There is a flexible approach to the curriculum to meet the needs of different groups of students. Attainment is boosted by a very strong system of academic guidance and support, based on close monitoring of students' progress. Teachers also give good informal support outside lessons, which students appreciate.
- The school has invested significant resources to create extra classes. For example, some students are taught in single-sex classes; there are 'refocus groups' for students who have given up an optional subject to concentrate on mathematics, English and their other subjects; and there are booster groups, to help students who are in danger of missing their target grades. High attaining students take GCSE early followed by a course of additional mathematics. There is good liaison with post-16 providers in this matter.
- Good use is made of a virtual learning environment (VLE) that allows teachers to set and mark homework using the internet. The VLE also provides additional learning resources for independent revision.
- The schemes of work provide a solid basis for teachers' lesson planning. There are many suggestions for activities that allow students to explore

mathematical ideas. However, they have not been organised to ensure a clear progression in students' skills of using and applying mathematics.

### **Effectiveness of leadership and management of mathematics**

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

- The school's capacity for improvement in mathematics is evident in the rising trend of GCSE results. There is a strong drive from the senior leadership team and the joint heads of faculty to further improve outcomes for students.
- The faculty's development plan sets out a clear vision for improving teaching and learning to enhance students' understanding and enjoyment of mathematics. The faculty has a strong team spirit, with all staff sharing this ambition.
- The faculty is well organised and its leaders monitor and evaluate teaching and learning regularly and accurately. Although there are some policy and guidance documents, they do not specify the faculty's preferred teaching approaches to different topics or articulate fully what it considers good teaching to look like.

### **Areas for improvement, which we discussed, include:**

- ensuring that teaching and learning are consistently good or better by:
  - making explicit how to build students' mathematical understanding and develop their skills in using and applying mathematics
  - agreeing the most effective approaches to teaching different topics in mathematics, incorporating the guidance in departmental documents and monitoring the quality of teaching with reference to this guidance
  - providing suitable professional development and coaching to enhance teachers' skills in teaching in the desired ways and in using assessment within lessons to guide future teaching
- reviewing the schemes of work to ensure that students develop their skills progressively in using and applying mathematics.

I hope 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

**Stephen Abbott**  
**Her Majesty's Inspector**