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Mr N Blundell  
Principal  
Bristol Cathedral Choir School  
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Dear Mr Blundell

### **Ofsted 2011–12 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 2012 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 five lessons and a 'learning walk'.

The overall effectiveness of mathematics is outstanding.

#### **Achievement in mathematics**

Achievement in mathematics is outstanding.

- Students enter the school with attainment which is above average. All students and groups of students make outstanding progress. Results have improved rapidly in recent years so that attainment at GCSE is high. The proportion of students who gain grades A\* or A in mathematics rose from 26.7% in 2010 to 36.7% in 2011 and students making the expected levels of progress have risen from 77% to 91% in the same time. The school's current attainment and progress data, observation of lessons, and scrutiny of students' work indicate that standards will rise again this year.
- Students have very positive attitudes to mathematics. Behaviour observed was exemplary: students work exceptionally well in groups and on their own.

- In lessons, students make consistently good and often outstanding progress because work is challenging. The emphasis on developing thinking and reasoning skills is clear and students have regular opportunities to develop these skills further through investigational activities.

### **Quality of teaching in mathematics**

The quality of teaching in mathematics is outstanding.

- Lessons are very engaging and challenging. Teachers have high expectations of their classes and ensure that students use correct mathematical language and methods. Understanding is developed through proving concepts from first principles; for example, in a Year 9 lesson, students were finding coefficients for quadratic sequences they had generated. They derived a rule for how to find the coefficients by substituting into the general formula for a quadratic and solving these algebraic equations.
- Misconceptions are explored in lessons and students are often asked to identify common errors. This allows for discussions to take place which deepens and enhances learning. Work is set out very clearly with each stage of working shown.
- Teachers are very adept at questioning so that students give full answers. This not only allows teachers to assess how well students are progressing but also enables students to have an in-depth understanding of how to extend their learning.
- Relationships are excellent; students respect each other and their teachers. Teaching assistants are deployed very well to engage and support individual students. Group work and discussion lessons are a feature of the department's work. This in turn develops the students' mathematical reasoning skills

### **Quality of the curriculum in mathematics**

The quality of the curriculum in mathematics is outstanding.

- Schemes of work are comprehensive and give clear guidance on how to build upon and extend prior learning. Opportunities for problem solving and investigative approaches are regular.
- Links are being forged outside of the school to enhance students' engagement with mathematics, for example, the engineering education scheme and links with a local accountancy firm which provides mentors for students.
- Information and communication technology (ICT) is used to model mathematical scenarios and to promote conceptual understanding. This was evident in a Year 12 lesson where students were finding all possible solutions to a trigonometric equation. Through visual presentation and use of the interactive whiteboard, students could see the repeating pattern of the curves and mark on this which angles gave the required values.

- Individual support is given to students by their class teacher. Teachers focus on all GCSE grade borderlines and ensure that appropriate guidance and intervention are provided for students to achieve their targets.

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

The effectiveness of leadership and management in mathematics is outstanding.

- You have a very clear vision of striving for excellence. This ambition has been shared by the mathematics team who, under the excellent leadership of the subject leader, has brought about great improvements. He has a very clear overview of individuals' strengths and a realistic understanding of what needs to be further improved. All of this demonstrates excellent capacity to improve.
- Challenging performance targets are set for each member of the department to bring about the highest of expectations on students' achievement but also personalised professional development is given to support and develop each member of the team.
- Effective delegation strategies ensure that each member of the team has some responsibility within the mathematics department or across the school.

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

- developing a whole-school approach to numeracy across the curriculum
- sharing the expertise of the mathematics team throughout the school to model outstanding practice and bring about further improvement.

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

**Simon Rowe**  
**Additional Inspector**