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Ms R Allott  
Headteacher  
Cheam High School  
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Dear Ms Allott

### **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 27 and 28 February 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; and observation of parts of 13 lessons.

The overall effectiveness of mathematics is outstanding.

### **Achievement in mathematics**

Achievement in mathematics is outstanding.

- Students make outstanding progress from broadly average starting points to reach standards that are above average at Key Stage 3 and significantly above average at Key Stage 4. Almost a third of students gained GCSE grades A\* or A in 2011. The school's very inclusive approach is demonstrated by the extremely high entry for GCSE with no failures and the narrowing of the gap between the progress of students known to be eligible for free school meals and their peers.
- The school's records show strong progress across all years, and this is also apparent in lessons and students' work. The records indicate that all groups of students are currently on track to make above average progress by the end of Key Stage 4 and that the previous gender gaps have closed.

- In the sixth form, students make good progress, albeit stronger in mathematics than in further mathematics. In 2011, progress at AS level rose substantially to significantly above average.
- Students are confident in applying their skills and in learning through making mistakes. They are very keen to do well and committed to mathematics, as reflected in their perseverance during lessons and the increasingly large number that go on to study it in the sixth form. Many show independence and initiative.

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

The quality of teaching in mathematics is outstanding.

- Teachers use their strong subject knowledge and careful monitoring of each student's progress to structure lessons extremely well and customise activities to individual needs. They radiate enthusiasm, high expectations and a deep commitment to raising progress, which increases students' confidence that they can succeed and helps them to make excellent progress. Students try hard and know that they can rely on strong teaching as well as extensive, caring support outside lessons.
- Teachers provide clear explanations and use a variety of teaching styles to motivate students and develop concepts, such as practical activities where students learn about graphs by standing on coordinate grids. In many lessons, students think hard about problems, but sometimes the teacher-led structure of the lesson limits their opportunity to develop understanding and independence or find their own way to overcome difficulties.
- Probing questions are targeted well to gauge and enhance students' learning. Mini-whiteboards and self-assessment are used effectively to monitor performance. However, occasionally teachers do not check everyone's progress well enough throughout the lesson, which can be difficult when room for them to move between desks is limited. Teachers give constructive feedback orally and in writing, which often identifies misconceptions. Clarifying the next steps a student needs to take and following this up are areas the school is currently strengthening. Nevertheless, some work is unmarked by students or teachers so it is hard for students to know whether it is correct.

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

The quality of the curriculum in mathematics is outstanding.

- Provision is customised extremely well to meet students' needs following thorough monitoring of progress and analysis of areas of strength and weakness. Flexibility of entry for qualifications and the extensive range of support outside lessons enable students to aspire to and meet challenging targets. Close work with parents on supporting their children's learning and with pupils before they join the school contributes well to this. Many enrichment opportunities such as quizzes, mathematics ambassadors and a club for high attainers foster enjoyment, achievement and responsibility.

- Schemes of work are constantly updated to meet changing requirements. They ensure that all students have many opportunities to develop their thinking and reasoning skills, and to solve problems, particularly in real-life contexts. They draw well on information and communication technology to convey ideas. They contain useful guidance and links to well-chosen resources for students of different attainment, including many conceptual introductions that help them understand the methods they learn, although these are not used consistently. New courses are introduced, evaluated and adapted, such as Use of mathematics and GCSE statistics.

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

The effectiveness of leadership and management in mathematics is outstanding.

- Thorough monitoring, tracking and evaluation have led to continued improvement in outcomes and provision over the past four years. The excellent way in which the subject leader inspires and guides the team of staff has catalysed and supported their professional development, with evident impact on students' involvement, enjoyment and achievement. Students speak very highly of the commitment of the mathematics staff, who share responsibilities and all make an important contribution.
- The wealth of evidence from lesson observations, monitoring of students' books and collection of their views leads rapidly to focused action points and demonstrable impact. The development plan contains a wide range of such actions, but without emphasising the priorities and how their impact on teaching and outcomes will be measured. Feedback from lesson observations has clearly led to continued improvement, for example in the use of questioning and self-assessment, although records do not consistently evaluate the progress of groups of students, development of understanding or monitoring of learning. Observations carried out jointly with the inspector were accurate and identified perceptively the important areas for development. Overall evaluations are also accurate.

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

- ensuring that teaching is consistently outstanding through focusing more on developing understanding, thinking and independence, and monitoring everyone's progress throughout lessons, and by evaluating these points more sharply
- identifying priorities in development planning, with success criteria expressed in terms of measurable impact on outcomes.

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

**Gill Close**

**Her Majesty's Inspector**