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Ms S Beevers Headteacher Broadgreen International School, A Technology College Queens Drive Liverpool Merseyside L13 5UQ

Dear Ms Beevers

# **Ofsted 2013–14 subject survey inspection programme: mathematics**

Thank you for your hospitality and cooperation, and that of your staff and students, during my visit on 24 and 25 June 2013 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 five lessons, together with shorter visits to eight additional lessons.

# The overall effectiveness of mathematics is good.

# Achievement in mathematics is good.

- Attainment is below average. For example, in 2012 the proportion of students gaining A\* to C in GCSE mathematics was 54% compared with the national average of 70%
- Students known to be eligible for the pupil premium attain roughly one GCSE grade lower than other students. In 2012, the gap between their attainment and that of other students was similar to that in 2011; data supplied by the school indicates that the gap has narrowed for students currently in Year 11.
- Although progress measures remain below average, they are improving strongly. For example, the percentage making the expected progress rose by 10 percentage points from 2011 to 2012 and data from early GCSE

entries and other inspection evidence show that improvements are secure and being built upon.

- The progress of the most able students is stronger than that of other groups and matches national norms. Recent results show boys making better progress than girls.
- In the sixth form, most students studying mathematics as part of the International Baccalaureate meet their targets. Students studying for a GCSE qualification achieve well.
- Students generally have positive attitudes to mathematics. They respond well to the tasks set and work well with others, such as when taking part in paired activities. They have a good sense of number but lack confidence when working algebraically. Able students take time to consider their response to problems and are developing independence; some less-able students persevere when faced with difficulties but others give up easily.

#### Teaching in mathematics is good.

- Teachers give an appropriate emphasis to developing students' conceptual understanding, as well as their fluency with techniques. They make good use of resources, including sorting and matching activities, to generate discussion and promote effective learning.
- In lessons, teachers make regular reference to the level or grade of the work being covered and this helps students to understand how well they are doing. Where possible, teachers take opportunities to give examples of the usefulness of mathematics. They are beginning to give more emphasis to developing students' problem-solving skills.
- Teachers plan lessons that include a variety of activities; some lessons include work at different levels of ability so that students face work that includes a suitable degree of challenge.
- Some teaching gives too much time for students to work on routine examples and, as a result, they do not get the chance to tackle more demanding questions or solve problems.

#### The curriculum in mathematics is good.

- The curriculum is appropriate for students' needs. All students study GCSE mathematics and almost all attain a grade A\* to G. Students in the top set in Year 11 study additionally for GCSE statistics.
- In the sixth form, all students study mathematics at some level as part of their studies for the International Baccalaureate. Those wishing to improve their GCSE grade benefit from timetabled sessions.
- The schemes of work for Key Stage 4 and for the sixth form follow closely the awarding body's specifications. In Key Stage 3, the scheme is under review, with a much-revised scheme planned for use from next September. Although electronic links to teaching materials are not currently available, the revised scheme, developed in collaboration with other local schools, will provide links to recommended materials.

- An intervention programme, aimed at accelerating the progress of students identified as underachieving, is delivered to small groups during registration time. The school's monitoring records show that the programme is having a positive impact on students' achievement.
- The school uses early entry for GCSE for all students. The relative success of the most able students suggests that students are not disadvantaged by the school's policy.

# Leadership and management of mathematics are good.

- GCSE results are on an upward trend. For example, the proportion of students gaining an A\* to C grade has increased from 44% in 2010 to 54% in 2012, with evidence that further increases are likely this year. The school's records show that teaching quality has also risen. These improvements, together with accurate self-evaluation, demonstrate the department's good capacity to improve.
- Members of the department have enhanced their professional practice through a range of opportunities, including an in-school programme on developing teaching skills and attendance at external courses. Staff discuss alternative teaching approaches informally, including when planning lessons together. More formally recorded recommended teaching approaches, agreed by members of the department, would strengthen the progression in students' learning over time.
- The department's improvement plan focuses on suitable issues but its effectiveness could be enhanced by including a broader range of targets for students' achievement.

# Areas for improvement, which we discussed, include:

- ensuring that teachers provide opportunities for all students to encounter the more demanding questions that enable them to demonstrate their understanding
- agreeing on common teaching approaches to selected topics to aid progression.

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

As explained previously, 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

Paul Chambers Her Majesty's Inspector