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Mrs Z Hill
Principal
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Dear Mrs Hill

Ofsted 2011–12 subject survey inspection programme: mathematics

Thank you for your hospitality and cooperation, and that of the staff and students, during my visit with my colleague Simon Rowe, Additional Inspector, on 1 and 2 November 2011 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, including some staff from partner primary schools and the local college of further education, and groups of students; scrutiny of relevant documents; analysis of students' work; observation of 12 lessons, the majority with members of the leadership team; and two learning walks.

The overall effectiveness of mathematics is outstanding.

Achievement in mathematics

Achievement in mathematics is good.

- Students enter the academy with attainment which is well below average. They make outstanding progress. Results have improved rapidly in recent years so that attainment at GCSE is average. The proportion of students who gain grades A* to C has risen from 47.3% in 2009 to 67.6% in 2011.
- The strong emphasis on supporting students of all abilities has meant that lower-attaining students make excellent progress from their starting points as do those with special education needs and/or disabilities. Higher attaining students in 2011 successfully completed an AS qualification.
- Students have very positive attitudes to mathematics. Behaviour observed was excellent; students enjoy the subject. They are very proud of the

academy because they feel that their needs are very well met and staff care about how well they are doing in mathematics.

- In lessons, students make consistently good and often outstanding progress because work is very well matched to individuals' needs and lessons focus on developing understanding of the concepts being taught.

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. For example, teaching of algebra builds consistently upon secure foundations and understanding to make sure students develop good mathematical practice and do not use 'tricks' which are not always mathematically sound.
- Teachers are skilled in identifying the level of work needed to extend students of differing abilities and then matching the work to their needs. Students are often grouped within a class so that they begin the work at different starting points and then progress relative to their prior knowledge. Time is not wasted because students are all engaged in extending their learning.
- 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 and, at times, groups of students. They do not do the work for students but question them well so that students complete tasks independently and hence improve their understanding.

Quality of the curriculum in mathematics

The quality of the curriculum in mathematics is good.

- Schemes of work are comprehensive and give clear guidance on how to build upon prior learning. Additional time for mathematics, as part of the 'rich curriculum', is used very effectively to engage Year 11 students in revision for examinations and also to extend their knowledge and confidence in areas which have been identified as needing further support.
- Students are sometimes taught in single-sex groups. Most students say that this helps them work – girls because they do not feel intimidated by the boys if they answer incorrectly, and boys because they feel their efforts are better appreciated by other boys.
- Students of all ages have opportunities to use and apply mathematics. In Key Stage 3, students have specific lessons on using and applying their mathematics. Key Stage 4 students are completing a twin pair pilot GCSE qualification. They are concentrating on the mathematics methods GCSE in

Year 10 and then applying this knowledge during Year 11 as they prepare for the applications GCSE.

- Students often access support and homework through a commercial mathematics package. Students also use information and communication technology (ICT) to model mathematical scenarios. However, students have limited opportunities to develop their geometry and graphical work using ICT. While the academy has an overview of where mathematics is taught in different subjects, it does not have a clear strategy for developing key mathematical concepts across the curriculum.

Effectiveness of leadership and management in mathematics

The effectiveness of leadership and management in mathematics is outstanding.

- You have a very dynamic vision and exuberance for the academy to continually improve. This ambition has been shared by the mathematics team who, under the excellent leadership of the subject leader, has brought about very great improvements. She 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.
- The team has a very good understanding of what it is trying to achieve and provides outstanding mutual support to ensure that all staff know how to fulfil this. In particular, the underpinning appreciation of how to develop students' understanding and how this ensures highly effective learning is excellent.
- The academy is highly regarded by other schools within the area and offers very valued support for primary colleagues and their pupils. This partnership working is regarded as very effective; primary colleagues feel their work is appreciated. The local college of further education works very well with the academy, especially in establishing its AS courses.

Areas for improvement, which we discussed, include:

- extending opportunities for students to use a wider variety of ICT resources to extend their learning of geometry and graphical work
- developing a strategy to support students to develop their mathematics across a wide range of subjects and a consistent approach to utilising key mathematical concepts across all relevant subjects.

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

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

Michael Smith
Her Majesty's Inspector