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Mr S Venross Principal Bristnall Hall Academy Bristnall Lane Oldbury West Midlands B68 9PA

Dear Mr Venross

# Ofsted 2012-13 subject survey inspection programme: mathematics

Thank you for your hospitality and cooperation, and that of your staff and students, during my visit on 12 and 13 February 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; observation of seven lessons and short visits to four other lessons.

### The overall effectiveness of mathematics requires improvement.

### Achievement in mathematics requires improvement.

- Students enter the academy with attainment that is well below average. Performance in GCSE examinations is improving, but the proportion of students who make better than expected progress is lower than that found nationally. This is because some students finish their GCSE course early and drop mathematics to focus on other subjects.
- Students engage well in their lessons. However some Year 11 students expressed a frustration with the frequency with which they sit modular examinations. This is all the more as they are entered for GCSE with two different awarding bodies. This affects their enjoyment of the subject.
- Students present their work well. In their books, they demonstrate a good facility in manipulating algebra and other techniques. Sometimes, however, their learning lacks a deep understanding of the processes

- involved. This is because the schemes of work do not consistently stress understanding.
- Students with special educational needs who were supported at 'school action' made much less progress than expected in their GCSE examinations in 2012. The progress of such students is now much improved. The progress of other groups of students in the academy shows no material differences.
- The academy's sixth form is new, and therefore has little historic examination data to show the progress that students make. Current sixthform students' written work shows confidence and assurance with the topics covered. Students are enjoying the A-level course.

### Teaching in mathematics is good.

- In many classes, the ratio of adults to students is higher than normally seen. Teaching assistants are, in most cases, well briefed and skilled in their roles. This support enables less-able students to make good progress and has been effective in increasing the progress of students with special education needs supported at 'school action'.
- Teachers assess students' progress well through their questioning and adjust their planning accordingly. The marking of students' books is regular and helpful.
- Teachers make good use of information and communication technology to illustrate concepts. Students in two Year 8 classes were studying enlargements. They gained rapid insight into the roles of the centre of the enlargement and the scale factor. Further developments, such as what happens if the scale factor is between 0 and 1, became more easily accessible.
- Although some students said that they found revision dull, lessons were observed where teachers taught such classes in ways that engaged students in very good quality learning, with high levels of students' participation and activity.
- Where supported by ideas from the scheme of work, teachers are skilled at enriching their teaching. They use real-life examples in percentages, such as actual taxation rates, and expect students to read and interpret data from a piece of text. Wall displays illustrate students' exploration of various topics, for example, Islamic patterns.

### The curriculum in mathematics requires improvement.

- Some students study statistics GCSE in place of mathematics in Year 11. Some others have stopped part way through the year in order to focus on their other subjects. These decisions are made in close discussion with students and their parents. Some students have not, however, reached their full potential in mathematics when they give up the subject.
- The scheme of work contains many topics where good ideas are provided for students to explore, use and apply mathematics. Students experience, for example, experiments in probability, the collection and presentation of

- data, exploring the patterns formed by matchsticks and measuring the heights of trees using trigonometry. Sometimes, however, the suggested lesson objectives focus too much on the acquisition of techniques rather than the development of deeper understanding.
- Good opportunities are provided to link with other subject areas. The mathematics and design and technology departments have a joint project to design a balloon race. Whole-academy curriculum days provide a context to promote STEM (science, technology, engineering and mathematics) subjects. One such opportunity, held at Alton Towers, was described by a sixth-form student as having an impact on his decision to study STEM subjects at A-level, including mathematics.

## Leadership and management of mathematics are good.

- The subject leader monitors students' achievement in great detail. Where underachievement is identified in any year group, she ensures that action is taken and that progress is monitored further. Academy leaders responded well to the insights from the 2012 results that some students with special educational needs had not done well enough in GCSE mathematics. Extra attention has been given to the needs of these students and this is proving effective.
- The subject leader monitors the quality of teaching and has led initiatives to improve teaching. These include visits to other schools with consequent plans to embed change. The quality of teaching has improved as a result.
- The subject leader and senior leaders have a good understanding of the strengths of teaching and where it needs to improve further. Minutes of department meetings show that teachers regularly and actively explore ways to develop their practice.

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

- making sure that students continue to study mathematics throughout Year
  11 so that they are able to reach their full potential
- placing additional emphasis on developing the understanding of mathematical concepts in the scheme of work and in teaching.

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

Robert Barbour Her Majesty's Inspector