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16 July 2015

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Dear Ms Haynes

Ofsted 2014–15 subject survey inspection programme: mathematics

Thank you for your hospitality and cooperation, and that of your staff and students, during my visit on 1 and 2 July 2015 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 evaluation of strengths and weaknesses included interviews with staff, and scrutiny of documents including the college's improvement plan and the system for assessing students' progress in mathematics. I observed teaching in seven lessons, looked at work in students' books, and spoke with students about their learning in mathematics.

Leadership and management of mathematics

- College leaders recognise that achievement in mathematics needs to be improved. However, they have not taken effective action to tackle specific weakness, such as the low performance of disadvantaged students. The college's plans for improvement in mathematics lack detail, particularly about how the impact of planned actions will be measured.
- The checks that college leaders make on students' books focus too much on compliance and not enough on the curriculum and the quality of work that students produce. As a result, in classes where teaching is less effective, subject-specific weaknesses are not identified early enough, and the progress that students make is not as good as it should be.
- The college has developed new arrangements for assessment in mathematics in light of the curriculum changes. The college's Specialist Leader in Education is working with local schools, across the Teaching School Alliance, to develop and share best practice in assessment.

- Staff training has a high profile at Tendring. The Specialist Leader in Education for mathematics regularly leads professional development sessions, not only for staff at the college but also for other schools in the Alliance and beyond. During this inspection, a consultant from the Academies Enterprise Trust was supporting a training session on the new GCSE courses, which will be introduced in 2015.
- College leaders track and analyse the progress of students closely in order to identify those at risk of underperformance and ensure that actions are taken to support their progress. However, not enough attention is given to the performance of different groups, particularly disadvantaged students whose attainment has fallen, despite the significant additional funding that the college receives to support this group of students.

The curriculum in mathematics

- The college has introduced the new mathematics curriculum across Key Stage 3. College leaders have provided good training for teachers and college leaders developed a new scheme of work, along with resources to support teaching and learning. The scheme supports fully the aims of the new national curriculum with regard to fluency, problem solving and reasoning. It is already having a positive impact. The amount of repetitive tasks that students complete in lessons has been reduced and students have more opportunities to use and apply their mathematical knowledge and understanding within different contexts.
- Good use is made of information technology to support learning. During this inspection, sixth-form students solved algebraic and graphical problems using modelling software. This activity was highly effective in challenging students and developing their reasoning skills. Interactive whiteboards are often used to provide models that support conceptual development. For example in a lesson on geometry, the teacher used a digital tool to demonstrate the link between angles and rotation.
- A recent focus on encouraging more students to study mathematics at A level has been extremely successful, as has the promotion of girls taking the subject beyond GCSE.

Teaching in mathematics

- Although the quality of teaching is generally effective, it varies too much in some important ways across the college. While many teachers build skilfully on students' responses and make pertinent teaching points, on other occasions, teachers fail to use students' oral and written responses to identify errors and help them to move on in their learning.
- In many lessons, students become proficient by practising newly learnt methods. However, the overuse of calculators sometimes means that students are not encouraged to calculate mentally on a regular basis. Nor do they use standard written methods often enough to ensure fluency.
- Teaching assistants are well deployed to support learning in mathematics lessons. As well as providing 1-1 support, they also lead groups. One such

group has made particularly rapid improvement over this academic year and has also developed extremely positive attitudes to mathematics.

- Teachers do not always adhere to the agreed marking policy. As a result the quality of written feedback that teachers provide for students varies. Some high quality marking was seen, where teachers accurately identified and corrected misconceptions, which helped students to progress quickly in their learning. Elsewhere, however, basic misconceptions in students' work were missed and mistakes repeated without challenge.

Achievement in mathematics

- Based on the results of 'first entry', progress and attainment were significantly below national averages at GCSE in 2014, having been significantly above for the previous two years. The college's own data indicate that results are likely to improve this year.
- The relatively small number of students who study A-level mathematics make good progress and achieve well. Considerably more students have indicated that they want to study mathematics next year in Year 12.
- The college's data suggest that disadvantaged students' attainment at GCSE will be much better this year and the gap will narrow. In Key Stage 3, disadvantaged students currently make less progress than their peers. The college uses some pupil premium funding to provide additional staffing but has not explored potential barriers to learning mathematics for these students.
- Students generally have very good attitudes to learning. They demonstrate good resilience when they find work difficult. However, in some classes, particularly where the quality of marking is weak, few students show pride in their work or take care over presentation.

Areas for improvement, which we discussed, include:

- increasing the rigour of monitoring, bringing a sharp focus to subject-specific issues
- strengthening teaching and learning by ensuring that all teachers follow the college's agreed marking policy
- making sure that disadvantaged students in Key Stage 3 make better progress so that their attainment matches more closely that of their peers.

I hope that these observations are useful as you continue to develop mathematics in the college. 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 and the Department for Education.

Yours sincerely

Paul Tomkow
Her Majesty's Inspector