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Mr P Tapp
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Dear Mr Tapp

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 22 and 23 June 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 students; scrutiny of relevant documentation; analysis of students' work; and observation of lessons.

Leadership and management of mathematics

- Students make rapid progress due to the strong commitment of the mathematics department. Teachers have high expectations and work well together to make sure students recognise their potential and are well supported in developing their skills in mathematics.
- Assessment is accurate and teachers use this information well in identifying gaps in learning and in planning the next steps for students. The subject leader has led on a model of regular assessment with feedback given to students who then correct their work
- Plans are in place to assess students' work without using national curriculum levels. Challenging targets will be set, based on reliable information on students' starting points as they begin Year 9.
- Leaders effectively support teaching in partner middle schools, providing help for developing teachers' subject knowledge and planning activities to challenge and engage students of all abilities but especially the most able.

The curriculum in mathematics

- The priority given to improving achievement for Year 11 and sixth-form students has not been matched by similar attention being given to making sure all teachers know how to teach the new national curriculum to students in Year 9.
- Students enjoy the interesting and challenging activities planned by some teachers, including problems to solve and mathematical ideas to explore further. However, not all have this opportunity, which restricts the development of their problem-solving skills.
- Plans to teach the new GCSE specifications are at an advanced stage. Students in Year 9 have completed 'bridging units' and some teachers have attended training to enable them to teach the new course.
- Students enjoy mathematical competitions such as mathematics challenges and quizzes but also supporting younger students in open day events, solving problems in a carousel of activities.

Teaching in mathematics

- Teachers talk enthusiastically about mathematics and their good subject knowledge is used well in planning to address weaknesses identified from assessments.
- High standards are expected and teachers insist on the correct use of mathematical terminology and key terms when students share their ideas. Teachers encourage students to explain their mathematical reasoning in discussions in class. Students apply these skills well in homework tasks which include the design of revision resources and posters to help them to learn their work.
- Students are sometimes given too many questions which are too similar and, consequently, they become overly reliant on using a rule or mechanically following a method, so that they do not think for themselves or develop a good understanding, showing mastery of the concepts covered.
- Some students are encouraged regularly to think more deeply about mathematics and to find things out for themselves. For instance, Year 9 students worked exceptionally well on an activity to find out about surds (numbers, like $\sqrt{2}$, which cannot be expressed exactly as fractions). All the students were able to define a surd correctly and some went on to find general rules for multiplying and dividing surds.

Achievement in mathematics

- Achievement at GCSE and at AS and A level is strong. Many students achieve much higher standards than might typically be expected based on their Key Stage 2 starting points, including students who are disabled or who have special educational needs. Students work hard in lessons and on their homework and take pride in their written work.

- Key Stage 4 students make much better progress than similar students nationally and the most able make exceptional progress. The improving trend in progress in mathematics is set to continue. It was seen, for example, in the confident way in which Year 10 students tackled questions on factorising quadratic expressions using the quadratic formula and the technique known as 'completing the square'.
- The school's data show that achievement of disadvantaged students is improving and gaps are narrowing quickly. While disadvantaged Year 11 students in 2014 made less progress than other students in the school, they made about the same progress as other students nationally. In 2014, disadvantaged students attained, on average, just over one GCSE grade below that of other students in the school and about two thirds of a grade lower than other students nationally.
- Most-able Key Stage 4 students are well supported in their mathematical development through studying a course in further mathematics. About 30 students complete the qualification very successfully each year.
- Sixth-form achievement is indicated to continue to improve, with a sharp rise in the proportion of students predicted to attain the highest grades at AS and A level.
- Not enough is known about students' starting points on entry to the school in Year 9, but this is set to change with the introduction of a standardised assessment. This will help teachers to quickly identify gaps in achievement for disadvantaged students compared with others and to monitor their progress from the start.

Areas for improvement, which we discussed, include:

- establishing a bank of good quality resources linked to the new Year 9 scheme of work for teachers to use to develop students' skills in problem solving
- ensuring all teachers know how to plan teaching approaches that promote mastery, avoiding any unnecessary repetition of topics already learnt, and using leaders' monitoring of students' work to identify and share best practice as well as to pinpoint where further support is needed
- using the planned baseline information for Year 9 to check on the progress being made by disadvantaged students to make sure gaps in achievement continue to close.

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 Staffordshire local authority.

Yours sincerely

Denah Jones
Her Majesty's Inspector