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Mrs E Davies
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Dear Mrs Davies

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 on 25 and 26 January 2012 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 four lessons and nine shorter visits to lessons, including some undertaken jointly with senior staff from the school.

The overall effectiveness of mathematics is inadequate.

Achievement in mathematics

Achievement in mathematics is inadequate.

- Attainment in mathematics by the end of Key Stage 4 is low and shows little sign of improvement. In 2011, only 44% achieved A* to C grades in GCSE mathematics which is well-below average and lower than in 2010. Students join the school with below average levels of attainment and in each of the last three years, a little over one third of Year 11 students made the expected three levels of progress from Key Stage 2. This represents inadequate progress overall and for all groups of students.
- A focus on targeted intervention, drawing on expertise provided through the partnership with a nearby sixth form college, is helping to support those students currently in Key Stage 4 in their preparation for GCSE examinations. However, expectations are not high enough across all year groups to overcome sufficiently rapidly the legacy of underachievement.

- Evidence collected during the inspection confirms that current standards remain low and students make inadequate progress in mathematics over time. Students with special educational needs and/or disabilities make progress in line with that of their peers, although they make better progress in targeted and small-group provision than in mainstream lessons, where tasks and activities are not always sufficiently well adapted to meet their needs. Similarly, evidence collected in relation to the achievement of more-able students shows that the teaching they receive does not adequately prepare them to reach the highest grades at GCSE.
- Students generally respond well to adults and to each other, and most are keen to do well. Although some students express concerns about their experiences in learning mathematics, many are appreciative of the support they receive from their teachers. The department has introduced additional curriculum time in Years 7 and 8 for extended project work in mathematics. However, many older students lack confidence when confronted with problems that are unstructured or set in unfamiliar contexts.

Quality of teaching in mathematics

The quality of teaching in mathematics is inadequate.

- Although the teaching seen during the inspection was satisfactory overall, the longer-term impact of teaching is inadequate. Very little teaching is effective in developing students' skills, knowledge or understanding progressively over time. As a result of teaching that is not consistently well matched to students' targets or prior attainment, learning is fragmented and students are unable to make links effectively with previous learning.
- Teaching focuses on patching gaps that develop in students' knowledge and understanding. It lacks sufficient depth to build students' understanding more securely. Too much teaching concentrates on developing students' facility in using rules, methods or algorithms that they do not understand clearly or on practising low-level skills in unimaginative ways. Systematic development of students' skills in using and applying mathematics is limited and opportunities to encourage discussion and collaborative learning are not always exploited well.
- Good learning was seen where students had to think more deeply about their mathematics. Low-attaining Year 8 students made good progress in an algebra lesson in which the teacher challenged them to describe shapes that corresponded to a range of algebraic expressions. The teacher had high expectations, used small-group work to provide peer support and asked excellent questions to probe understanding or develop students' thinking further.

Quality of the curriculum in mathematics

The quality of the curriculum in mathematics is inadequate.

- The curriculum is ineffective in ensuring adequate progression in students' learning. Schemes of work do not promote well consistency of standards

or common approaches across teaching groups. Very little collaborative development of schemes of work has taken place which means that they are insufficiently tailored to the needs or circumstances of the department. Strategies to ensure progression in all students' skills in using and applying mathematics are underdeveloped.

- Periodic assessment is not used well to identify underachievement or to measure the impact and effectiveness of teaching. Too much assessment information is inaccurate and unreliable, and does not usefully inform planning. It does not provide a sufficiently reliable basis for managers to quality assure provision in the department or to hold teachers to account for students' progress.

Effectiveness of leadership and management in mathematics

The effectiveness of leadership and management in mathematics is inadequate.

- Senior leaders are aware of the weaknesses in provision in mathematics and have taken robust action to address previous underperformance. Nevertheless, the pace of improvement remains slow because current actions are not addressing effectively enough the impact of students' underachievement over time.
- Leaders' views of the quality of teaching in mathematics are largely accurate. However, self-evaluation does not take a sufficiently broad range of evidence into account when judging the overall quality of provision.
- The mathematics department comprises a mutually supportive team of reflective practitioners who are determined to improve outcomes for students. However, the support and guidance received by teachers, some of whom are newly qualified, are inadequate and are having too little impact on raising expectations and reducing rapidly the extent of variation.

Areas for improvement, which we discussed, include:

- improving the impact of teaching on learning by:
  - ensuring that lessons build more effectively on students' prior learning by improving the quality of assessment
  - ensuring that teaching builds students' understanding effectively
  - extending and developing existing work to improve students' skills in using and applying mathematics
  - increasing opportunities for students to discuss mathematics with their teacher or in pairs and small groups
- developing collaboratively schemes of work that:
  - ensure that students' skills, knowledge and understanding are built progressively over time

  - incorporate a suitable assessment strategy to provide accurate information about students' progress and enable leaders to judge the impact of teaching on learning
  - provide clear guidance for teachers on agreed approaches, activities and resources to ensure greater consistency across the department.
- sharpening monitoring to identify inconsistencies and weaknesses, acting swiftly to tackle them and address underachievement.

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

This visit has raised concerns about the school's work in mathematics. I will report these to the Regional Director who will consider what action to take and may arrange an inspection of the whole school.

As explained previously, a copy of this letter will be published on the Ofsted website.

Yours sincerely

Lee Northern
Her Majesty's Inspector