

Aviation House
125 Kingsway
London
WC2B 6SE

T 0300 123 1231
F 020 7421 6855
enquiries@ofsted.gov.uk
www.ofsted.gov.uk



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Mr B Levy
Headteacher
The King David High School
Eaton Road
Crumpsall
Manchester
M8 5DY

Dear Mr Levy

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 10 and 11 July 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 eight lessons, including three undertaken jointly with staff from the school, and one shorter visit to a sixth-form lesson.

The overall effectiveness of mathematics is satisfactory.

Achievement in mathematics

Achievement in mathematics is satisfactory.

- Students' attainment on entry to the school at age 11 is well above average and is similarly well above average by the end of Year 11. While all groups of students make satisfactory progress in mathematics, those students who join the school having attained Level 4 at Key Stage 2 do not consistently make the progress of which they are capable. Students following a range of mathematics courses in the sixth form make good and sometimes outstanding progress.
- Almost all students have a very positive attitude to mathematics and are keen to do well. They respond best when given opportunities to discuss their mathematics and be more actively involved in lessons. This does not happen in all lessons and students report that they sometimes spend too

long working from textbooks and worksheets emulating the methods and techniques they have been shown by their teacher. As a result, students sometimes lack confidence in tackling unfamiliar problems or in applying their skills, knowledge and understanding to problems set in context.

Quality of teaching in mathematics

The quality of teaching in mathematics is satisfactory.

- The impact of teaching over time is satisfactory rather than good because it is not consistently effective in promoting students' deeper understanding or in helping them to make links between different aspects of learning. An over-reliance on textbook-based approaches sometimes results in students' fragmented experience of the mathematics curriculum. A scrutiny of students' work shows that, in some instances, older students spend too long repeating work unnecessarily from previous years and younger students do not build effectively on the mathematics they learn in primary school. The frequency of marking of students' books varies and very little written feedback makes a positive impact on learning.
- Students made good progress in the majority of lessons observed. In the best lessons, teachers encouraged students to contribute their ideas and work collaboratively to solve problems. For example, in a Year 9 lesson exploring 'T-Totals', students enthusiastically explored the role of 'n' in nth term expressions that they had derived. In satisfactory teaching, all students work through a narrow range of similar questions from textbooks or worksheets. As a result, they spend too long using techniques they do not understand fully and are not challenged to tackle a diverse variety of problems, including the non-routine and unfamiliar. Inconsistencies in teachers' questioning strategies mean too few students are involved in discussing mathematics and the potential missed to use the rich source of assessment information to inform adaptations to teaching.

Quality of the curriculum in mathematics

The quality of the curriculum in mathematics is satisfactory.

- The curriculum provides suitable coverage of mathematical content, but is much less effective in developing all students' skills in using and applying mathematics. Although a bank of rich and open-ended tasks is being developed, medium-term plans do not indicate clearly how students' problem-solving skills will be assessed or developed progressively over time.
- The department's schemes of work are adequate but have weaknesses which are hindering more rapid improvement in teaching. In particular, as the leaders recognise, they provide little guidance on progression in key topics, on materials and resources to support learning, or on what depth or range of coverage is expected. Too great a reliance is placed on pathways through textbook schemes to meet the needs of different groups of students.

- Many students benefit from their involvement in a wide range of enrichment activities in mathematics, including in the sixth form.

Effectiveness of leadership and management in mathematics

The effectiveness of leadership and management in mathematics is satisfactory.

- The mathematics department comprises a supportive team of teachers who are determined to bring about further improvement. The impact of work to strengthen the use of assessment information can be seen in the improved outcomes anticipated for 2012. While the judgements made by the school's staff on jointly observed lessons were accurate, formal systems to monitor and evaluate the quality of provision in mathematics are in an early stage of development.
- In recent years, a series of changes made to choices of accreditation routes in Key Stage 4 has placed a significant managerial burden on the head of department. This has slowed the pace of improvement to provision and outcomes. Moreover, the distribution of existing management responsibilities within the department is not effective enough to provide the strong capacity required to promote more rapid improvement.

Areas for improvement, which we discussed, include:

- raising the quality of teaching by:
 - placing a greater emphasis on deepening students' understanding of mathematics, including through the progressive development of students' problem-solving skills
 - ensuring that students are more actively involved in lessons and have more frequent opportunities to learn collaboratively
- updating schemes of work to ensure adequate progression across all strands of mathematics and to provide guidance on teaching approaches and resources
- strengthening the leadership and management of mathematics by:
 - implementing a rigorous and robust programme of monitoring and evaluating the quality of provision in mathematics
 - ensuring a more effective distribution of roles and responsibilities across the mathematics team.

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

Lee Northern
Her Majesty's Inspector