

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 M Rodaway
Headteacher
Calday Grange Grammar School
Grammar School Lane
West Kirby
Wirral
Merseyside
CH48 8GG

Dear Mr Rodaway

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 29 and 30 January 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; and observation of six lessons, together with shorter visits to seven other lessons.

The overall effectiveness of mathematics is good.

Achievement in mathematics

Achievement in mathematics is good.

- Attainment is consistently well above average. Almost all students gain a GCSE pass at grade C or above; over half gain the highest A* and A grades.
- Students make good, and sometimes outstanding, progress in Years 7 to 11. Relative to their starting points, students make more progress than similar students nationally. The proportion of students making at least the expected three levels of progress is high; the proportion making at least four levels of progress also compares favourably with national figures.

- All groups, including disabled students and those with special educational needs, make good progress. Gaps between the achievement of different groups are small and follow no consistent pattern.
- In the sixth form, attainment is closer to the national average. Relative to their performance at GCSE, students make progress in line with expectations. In 2012, students in Year 12 made more progress than those in Year 13.
- Students show positive attitudes to mathematics and behave very well. They enjoy working in groups to discuss and refine their ideas, but also value the opportunity to work individually to consolidate their learning. Students show perseverance; they are willing to try out their ideas and generally do not give up when faced with an unfamiliar problem. They are able to apply a range of algebraic techniques well to solve complex equations; they are less confident in setting up their own algebraic expressions or equations in order to solve problems.

Quality of teaching in mathematics

The quality of teaching in mathematics is good.

- Teaching over time is of a consistently good quality and some is outstanding. Teaching has an appropriate focus on developing students' conceptual understanding as well as developing skills and techniques.
- Teachers ensure that, over time, lessons contain a suitable range of different activities. They include regular opportunities for students to investigate mathematical ideas, for example through using sorting or matching activities to deepen their understanding. Although teachers employ a broad variety of resources, the range of information and communication technology used is limited.
- Much teaching is characterised by selecting work that is appropriately demanding. Teachers show good subject knowledge to plan lessons that show a clear progression of ideas. They usually include examples that deepen and extend students' understanding, including addressing 'non-standard' presentations of questions. Sometimes, teachers miss opportunities to prove or justify mathematical results.
- Teachers use questioning well to encourage students to think more deeply; this helps students to use mathematical language confidently and to express their ideas clearly.

Quality of the curriculum in mathematics

The quality of the curriculum in mathematics is good.

- The schemes of work for Key Stages 3 and 4 and for the sixth form cover all requirements and meet students' needs. The schemes provide a good structure and are enhanced with references or electronic links to additional materials that are designed to enrich students' learning.

- The scheme of work in Key Stage 3 is under review. Leaders have appropriate plans to develop the curriculum focusing on depth of understanding rather than accelerated learning.
- Approximately 40% of students in Year 11 choose to study advanced mathematics in the sixth form, with additional students joining from other local schools. Roughly three quarters of the students completing AS mathematics continue their studies to complete the A2 examination. In most years, between 10 and 15 students study further mathematics.
- The school identified that the previous policy of entering students for GCSE early may not have given everyone the best chance of gaining the highest grades. Following an extensive professional review of this practice, leaders have made appropriate changes to this policy.

Effectiveness of leadership and management of mathematics

The effectiveness of leadership and management of mathematics is good.

- Although standards remain high, measures of attainment and progress in 2012 were slightly below those in 2011. Leaders are increasingly able to monitor the progress of groups and individuals against expectations as they move through the school. Data provided by the school suggest that current Year 11 students will more than reverse the drop in 2012 and that those higher standards can be maintained in future years.
- Self-assessment is broadly accurate. Leaders monitor the quality of teaching through observations and scrutiny of students' books. Department meetings, together with more informal contacts, enable staff to exchange ideas and share good practice. Although there is a good measure of consistency in teaching approaches, some record of agreed approaches may be beneficial.
- Leaders and managers recognise that, in recent years, too many Year 12 students failed to complete the year successfully. Actions to address this, including additional guidance, re-organising teaching groups and reviewing the curriculum, have led to much better retention to date for the current Year 12.

Areas for improvement, which we discussed, include:

- ensuring that, where possible, teachers prove or justify mathematical results in Key Stages 3 and 4.

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

Paul Chambers
Her Majesty's Inspector