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Mrs D Godfrey-Phaure
Headteacher
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Dear Mrs Godfrey-Phaure

Ofsted 2011–12 subject survey inspection programme: science

Thank you for your hospitality and cooperation, and that of your staff and students, during my visit on 11 and 12 January 2012 to look at work in science.

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 11 lessons.

The overall effectiveness of science is good.

Achievement in science

Achievement in science is good.

- Students' attainment on entry to the school is below the national average and they make good progress in science from their starting points.
- The percentage of students gaining A* to C grades at GCSE has risen faster than the national rate over the last three years, and is now in line with the national average. This is a result of very effective targeted intervention for some students and a focus on improving the quality of teaching and learning. As a result of secure improvements in teaching, the rate of progress in lessons is accelerating.
- There are few very able students in the school, and thus a lower proportion of A and A* grades in science than found nationally. However,

this proportion is rising and is an area for improvement for the department.

- Except for the most able, all groups perform similarly and those students who are known to be eligible for free school meals perform slightly better in science than their peers.
- Students are very cooperative and well behaved, although they are sometimes passive in lessons. They carry out practical work very safely and sensibly.

Quality of teaching in science

The quality of teaching in science is good.

- The quality of teaching is improving as a result of focused professional development within the department. The head of department models outstanding practice for other teachers.
- In the best lessons, interesting, stimulating activities are carefully linked to precise learning objectives to ensure maximum learning. Students are actively engaged and take responsibility for their own learning. High-quality questioning is used to develop understanding.
- Weaker lessons are dominated by the teacher and opportunities for students to discuss and work out ideas independently are missed. Few open-ended activities are provided for more able students, and insufficient guidance is given to those who find the work more challenging.
- The department is provided with exceptionally good resources for information and communication technology, which are frequently used very effectively to support learning.
- A very reliable assessment system is well understood by staff and students, so everyone is aware of current progress in relation to ambitious individual targets. Although the marking policy is clear, subject-specific guidance on how to improve is not always provided. If advice is given, it may not be at a time in the topic when it will be of most use, nor are opportunities provided in lessons to make corrections to work.
- Health and safety procedures are managed very effectively by a very well trained and competent senior technician.

Quality of the curriculum in science

The quality of the curriculum in science is good.

- The curriculum at Key Stage 3 is broad, balanced and well supported by whole-school activities that stimulate interest; for example, a science investigation focus in enterprise week. Other extra-curricular activities are provided for gifted and talented students.
- The range of courses available at Key Stage 4 meets the needs of students. The proportion of students studying triple science is increasing and this course is running over three years. The development of investigative skills is well integrated into schemes of work.

- Although the department routinely considers and focuses on the development of students' literacy and numeracy skills, links with English and mathematics teachers to support this are underdeveloped.
- Students value the annual 'Meet the Scientists' day during science and engineering week, which provides them with the opportunity to find out about possible careers and talk to scientists from a range of different working environments.

Effectiveness of leadership and management in science

The effectiveness of leadership and management in science is good.

- The head of department has developed a cooperative team of staff. He acts as an effective role model and coach for teachers.
- Provision is monitored very comprehensively by the head of department and senior leaders in a cycle of activities throughout the year. Evaluation is thorough and the department's strengths and weaknesses, especially in relation to the quality of teaching and learning, are well understood.
- A wide range of activities is carried out to develop teachers' skills. This professional development is not driven by formal planning arising from monitoring and evaluation, nor is its impact on performance routinely measured.
- Careful assessment and tracking of students' progress lead to a very effective system for identifying students who are underachieving and provision of personalised mentoring and intervention. This is increasingly involving students beyond those at the grade C to D borderline.

Areas for improvement, which we discussed, include:

- enhancing students' literacy and numeracy skills by working with other departments to ensure progression and develop a common vocabulary
- providing more opportunities for students to work independently and to discuss ideas so they work things out for themselves
- accelerating the learning of more able students and those with special educational needs and/or disabilities by providing activities that meet their individual needs.

I hope that these observations are useful as you continue to develop science 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. A copy of this letter is also being sent to your local authority.

Yours sincerely

Mary Massey
Her Majesty's Inspector