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Ms J Beaumont  
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Dear Ms Beaumont

Ofsted survey inspection programme – Science

Thank you for your hospitality and cooperation, and that of your staff, during my visit, on 23 and 24 September 2009, to look at work in science.

As outlined in my initial letter, as well as looking at key areas of the subject, the visit had a particular focus on evaluating the impact of recent initiatives and investigating the need for future developments.

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. All feedback letters will be published on the Ofsted website at the end of each half term.

The evidence used to inform the judgements made included: interviews with staff and learners; scrutiny of relevant documentation; analysis of students' work; and observation of eight lessons.

The overall effectiveness of science is satisfactory.

Achievement in science

Students' achievements are satisfactory and standards in science are in line with national averages.

- At Key Stage 3, students' attainment in science is satisfactory.
- In 2009, achievements in Year 11 were broadly in line with national averages.
- Students' progress from Key Stage 2 to Key Stage 4 is around that predicted from their prior attainment.

- In 2009, the A-level pass rates for chemistry and physics were good but slightly below the national average for biology. However, the higher grade pass rates for all three subjects were good.
- Progress in the sciences in sixth form is broadly in line with that predicted by prior attainment.
- The standard of students' work in the laboratories, and in their exercise books and files, is good. Students record their findings in an appropriate variety of ways and their analysis of data is developing well.
- Behaviour in lessons is good. Teachers have created a positive working ethos in lessons and the students respond accordingly. However, in a minority of lessons a few students were less engaged.

## Quality of teaching in science

Teaching and learning in science are good.

- Eight lessons were observed: four were good and four satisfactory.
- Most lessons are planned well. Teachers are confident in their subject knowledge and in their ability to manage the students' behaviour well.
- Science lessons have clear objectives which are shared with the students. There is a good working atmosphere in the classes.
- Where teaching assistants were present, they were confident in giving appropriate support to specific groups of students.
- Science lessons are well resourced and, in the practical activities seen, the students worked safely.
- In the best lessons, the students were fully engaged and worked with enthusiasm. Teachers encouraged them to develop their ideas when responding orally to directed questions.
- Time management was less successful. Some lessons started late and some starter activities went on for too long.
- Enthusiasts in the science team have prepared and shared good quality electronic teaching resources for the full range of science programmes. Teachers have access to a developing bank of resources, which is helping to raise standards.
- Assessment is good and developing rapidly. Science teachers now use assessment data with some confidence. Last summer, the centrally held monitoring data allowed some targeted intervention in Key Stage 4. This year, such data will allow even earlier intervention across the key stages.
- Students' work is marked regularly and usually contains encouraging and relevant comments on how to improve. However, the quality and usefulness of written feedback is inconsistent.
- Students are positive about their studies and enjoy practical work. Those in the sixth form and at Key Stage 4 speak with confidence about their targets and the levels they have reached.

## Quality of the science curriculum

The science curriculum is satisfactory.

- The Year 7 science curriculum has been extensively reviewed and rewritten. It now puts more emphasis on how science works and more open-ended investigations. This development has proved popular with the students and given the science team a shared sense of achievement and success.
- However, as the managers recognise, the Year 8 and Year 9 programmes of work are too content-heavy.
- The school uses GCSE core and additional science to meet the needs of all Key Stage 4 students. Managers recognise the need to investigate the possibility of offering separate sciences to the most able and to develop a programme to help the least able improve their performance.
- The school offers biology, chemistry and physics in the sixth form. Managers realise that the narrow offer in Key Stage 4 and in the sixth form does not provide any vocational options to the students.
- Enrichment activities in science are satisfactory. The science club is popular and there is a range of trips and visits to engage and enthuse the students.

## Effectiveness of leadership and management in science

Leadership and management in science are good.

- Senior managers fully support the development of science in the school. Recent planned changes in staffing have brought about improvements in the strategic and operational management of the sciences.
- The science faculty and the subject departments are managed well. Day-to-day timetabling and laboratory management are good.
- Technical support for the sciences is very good and organised very well.
- Teachers are well-qualified and there is a full complement of specialisms to teach biology, chemistry and physics. Specialist resources are good and the laboratories are fit for purpose.
- Continuing professional development is organised well. Science teachers have access to a range of external updates, internal training and further study to develop their professional skills.
- The science development plan contains much that is sensible. However, there is too much emphasis on sixth form subjects and not enough on curriculum development. Some targets are not sufficiently specific.

Areas for improvement, which we discussed, include:

- improving attainment at Key Stage 3 and Key Stage 4
- improving the proportion of teaching and learning that is at least good
- revising the Key Stage 3 science curriculum for Years 8 and 9
- deciding how the Key Stage 4 curriculum can best meet the needs of the most and the least able students.

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

As I explained in my previous letter, a copy of this letter will be sent to your local authority and will be published on the Ofsted website. It will also be available to the team for your next institutional inspection.

Yours sincerely

Alex Falconer  
Her Majesty's Inspector