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Mr K Hollins
Headteacher
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Dear Mr Hollins

Ofsted 2007-08 subject survey inspection programme science:

Thank you for your hospitality and co-operation, and that of your staff, during my visit on 04-05 March 2008 to look at work in science.

As outlined in my initial letter, as well as looking at key areas of science, the visit had a particular focus on transition within and between phases (KS2-KS3-KS4-post16); the range of learning experiences provided; the status and use of scientific enquiry and how science works; the range of science courses offered in Key Stage 4 to meet the needs of all pupils; the range of science courses offered post-16 to meet the needs of all students.

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 analysis of data, interviews with staff and learners, scrutiny of relevant documentation, students' work and observation of lessons.

The overall effectiveness of science was judged to be satisfactory.

Achievement and standards

Standards are broadly average and achievement is satisfactory.

- At Key Stage 3 standards are above average. In 2007 the proportion of students achieving at least level 5 was above average. Over half achieved level 6 or above. Both these figures were higher than in previous years.

Data for 2007 which take account of students' prior attainment and contextual factors show that students now make slightly better than average progress during Key Stage 3.

- At Key Stage 4 the proportion of students achieving two or more higher GCSE grades in science in 2007 was slightly above the national average. Given that students entered the school with slightly above average attainment this represents satisfactory progress.
- In the sixth form there is some variation in pass rates at GCE AS and A Level between subjects and in different years. Standards are broadly average. Value added data suggest that most students make satisfactory progress, although a few do not attain the grades that would be expected on the basis of GCSE results.
- Boys do better than girls in science.
- Behaviour is good.
- There are good opportunities for personal development through science, and these help to develop students' confidence and social skills, for example.

Quality of teaching and learning of science

Teaching and learning are satisfactory.

- Teachers are knowledgeable, committed and enthusiastic and have good subject knowledge.
- Of the lessons observed half were judged to be good.
- A good range of learning activities is provided, which help to motivate and interest students. Participation is good and inattention is rare.
- Some good use is made of practical and experimental work.
- Some appropriate use is made of information and communication technology (ICT), for example in presentations.
- There are some good opportunities for students to talk about their ideas in science lessons.
- Teachers make some good use of demonstrations.
- Students are generally positive about their science lessons and enjoy them.
- Most students have good attitudes to learning.
- Students generally know their target levels or grades, and whether they are on track to achieve these.
- Teachers have a good rapport with students and are supportive and encouraging. Humour is often used well.
- Lesson planning is of variable quality and in some cases focuses on structure and activities, without making clear how these will be used to move learning on for all students.
- Little differentiation was observed in lessons, even where there were students with widely differing abilities and individual targets.
- In some observed lessons there was insufficient reinforcement of key learning points.

Quality of the curriculum

The curriculum in science is good.

- A good range of science courses is offered at Key Stage 4. This includes triple science for those considering studying sciences at GCE A Level. There are plans to offer a vocational science course at Key Stage 4 from September 2008.
- The curriculum at Key Stage 3 is good, with a wide range of activities. There are plans to develop this further by providing an additional year 9 option for those interested in specialising in science.
- The sixth form curriculum is satisfactory. At present the sixth form does not offer a science progression pathway for students who take applied science at GCSE.
- There is an appropriate emphasis on scientific investigation. Lessons include plenty of practical and experimental work.

Leadership and management of science

Leadership and management of science are satisfactory.

- Strategies to raise attainment at Key Stage 3 have been successful.
- Leadership and management have not yet been successful in securing good progress at Key Stage 4 and in the sixth form.
- Day-to-day operational management is effective.
- A thorough analysis of examination results is carried out, and this is used to identify areas for improvement.
- Target setting is well established and there are regular progress reviews, with reports home.
- A range of strategies to raise achievement in science has been introduced and developed in recent years. This includes closer monitoring of progress at management level, more formal contact with parents, and refinements in individual target setting to ensure that targets are sufficiently challenging. Examination preparation and support have also been increased. It is too early to evaluate the full impact of these but early signs are encouraging.
- The head of biology has been proactive in leading and developing a number of well thought out initiatives, particularly in assessment for learning. Again it is too early to assess the full impact of these.
- Transitions are managed effectively. Students report that they receive good advice on their Key Stage 4 options. Appropriate use is made of time at the end of year 9 to begin preparation for GCSE courses.
- Some laboratories are old fashioned and shabby and do not provide a modern scientific learning environment. Few laboratories have interactive whiteboards.

Inclusion

The school's approach to inclusion in science is good.

- Teaching assistants provide effective support in lessons for students with additional needs.
- Teachers know their students well and have comprehensive information about individual students, including those with additional learning needs.
- There is good integration of students with a range of needs.

Areas for improvement, which we discussed, included:

- improving physical resources in science by updating older dilapidated laboratories and improving ICT resources in science
- continuing to improve teaching and learning to accelerate the progress of all students
- further developing strategies to raise achievement at key stage 4 and in the sixth form.

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

Ruth James
Her Majesty's Inspector