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Mr N Christou
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Dear Mr Christou

Ofsted survey inspection programme – Science

Thank you for your hospitality and co-operation, and that of your staff, during my visit on 3-4 November 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 tracking the impact of recent initiatives and to investigate 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 students, scrutiny of relevant documentation, analysis of students' work and observation of five lessons.

The overall effectiveness of science was judged to be good.

Achievement and standards

Students' achievements are good and standards in science are above average.

- Students enter the school with attainment at Key Stage 2 slightly above the national average.
- Analyses show that progress from Key Stage 2 to Key Stage 3 in science improved in 2008 and was good.
- Attainment at Key Stage 3 in science improved in 2008 and was above national average. Around 80% of the students achieved at least level 5 and half achieved at least level 6.

- Girls and boys show similar attainment as do those from black or minority ethnic backgrounds and those for whom English is a second language.
- At Key stage 4 attainment has been above national average for a number of years. In 2008 A*- C pass rates for GCSE core science were 10% above average. Separate sciences at GCSE also showed good pass rates; however, additional science results were average. Overall the proportion of A* and A grades in the GCSE sciences was above national averages. Progress from Key Stage 3 to Key Stage 4 improved in 2008 and was good. No group by gender, ethnicity or ability made significantly different progress from any other.
- In 2008 the pass rate for A level biology was 100%. However the pass rates for chemistry and physics A levels were below national average. It was pleasing to note that the proportion of A and B grades in A level biology and chemistry was above national average.
- Work in class is of a good standard. Written work is well presented and shows a variety of tasks and activities. Students' oral responses in class are good and demonstrate a developing use of appropriate scientific vocabulary.
- Students work well with each other; they collaborate well and behave appropriately in the laboratories.

Quality of teaching and learning of science

Teaching and learning are good.

- Most lessons observed were good or better. This profile agrees well with the overall assessment of teaching and learning in the science team self evaluation report.
- Two lesson observations were undertaken jointly with school managers. The key strengths and areas for improvement noted were also in agreement with the school's view of teaching and learning.
- Lessons are well planned and teachers make good use of information communication technology (ICT) to engage and interest the students. Although the teachers are adept at using ICT, there are insufficient opportunities for students to use data loggers and other ICT in science lessons.
- In one lesson assessment for learning techniques were very effectively used to enhance students' progress. The science self assessment notes that this is an area for development.
- Teachers use a variety of short tasks, small group work and practical activities to keep students interested whilst learning by being active.
- In a minority of lessons the teachers talk for too long and students lose interest and become passive.
- Assessment is good and the central tracking system is beginning to allow more detailed analysis of the progress of different groups.

Quality of the curriculum

The quality of the science curriculum for Key Stages 3 and 4 is good and the sixth form curriculum is satisfactory.

- The revised Key Stage 3 science curriculum effectively meets the needs of the students and schemes of work are thorough and comprehensive.
- The Triple-E curriculum for Year 7 and Year 8 students is innovative and successful in integrating skills of analysis, evidence collecting and hypothesising into a wider cross-subject context.
- The Key Stage 4 science curriculum also meets the needs of the students. GCSE core science is completed in Year 10 and additional science in Year 11. In addition separate sciences are studied by the most able.
- Numbers of students electing to take science subjects in the sixth form have increased. However the choice is narrow and only biology, chemistry and physics are offered.
- Enrichment in the sciences has improved over the past year and an increasingly interesting variety of activities and trips now are on offer. The focus of some of these activities is to encourage gifted and talented students to engage with science. This was recognised as an area for development in the science self assessment.

Leadership and management of science

Leadership and management in science are good.

- The recently appointed head of science has brought about changes in the science department which have facilitated improvements.
- The day to day operations of the science department are well managed as is the timetable for split site working.
- Attainment has improved and staff morale is high. Revision of the Key Stage 3 curriculum was undertaken and the GCSE offer improved.
- The science self evaluation report is thorough and evaluative. It accurately identifies key strengths and areas for improvement.
- Tracking and monitoring of students' progress are sound.
- Some of the science laboratories are old and tired, but all are functional. The school has exciting plans for the design of the science accommodation in the new build.
- Specialist resources are sufficient to allow full access to the range of practical work expected from the science curriculum. The department is well and efficiently serviced by a team of technicians.
- Teachers are well qualified and the department has the full range of specialist expertise deployed well.
- The lesson observation system is robust and accurately identifies strengths and areas for development.

Areas for improvement, which we discussed, included:

- improving pass rates for A level chemistry and physics
- creating more ICT opportunities for students in science lessons

- continuing to develop assessment for learning.

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