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Mr J Shapland  
Headteacher  
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Dear Mr Shapland

### **Ofsted 2012–13 subject survey inspection programme: science**

Thank you for your hospitality and cooperation, and that of your staff and students, during my visit on 2 and 3 May 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 the observation of seven lessons.

The overall effectiveness of science is good.

#### **Achievement in science**

Achievement in science is satisfactory.

- In 2011 the proportion of students gaining two or more GCSE A\* to C grades in science declined to 55%. However, the proportion of students gaining A\* to C grades in the single 'core science' improved to 79%. Attainment in GCSE separate sciences was high.
- Isolated staffing difficulties resulted in students of GCSE applied science making poor progress in 2011. Managers and teachers have worked hard to resolve the situation and school tracking data now indicate that performance in core and additional science will improve.
- Pass rates at A level were above average, while those at AS level were average. The proportion of sixth form students gaining A\* to B grades was slightly below national averages.

- Each year a high proportion of students progress to take sciences in the sixth form, and continue on to study science, technology, engineering or mathematics subjects at university.
- Standards of work in lessons are above average. Students work hard and show enthusiasm for science. Student behaviour is generally good and the school has a caring and encouraging atmosphere.

### **Quality of teaching in science**

The quality of teaching in science is good.

- Teachers plan their science lessons well, with practical activities integral into the work. In the best lessons, starter activities were interesting and relevant and students were actively engaged straight away.
- These lessons contained appropriately differentiated activities to meet the needs and abilities of the students. In two good lessons, carousels of short practical activities successfully helped students revise topics and gain in confidence when answering examination questions.
- However, in some lessons, teachers planned and carried out whole-class activities. Little evidence was shown of differentiated activities that met the full range of student needs and abilities.
- Students work safely in the laboratories and show developing confidence using scientific terminology both orally and in writing.
- Students' books and files show a good volume of work and reflect the high expectations of their teachers. Their work is regularly marked and contains helpful comments on how to improve. However, some marking is inconsistent and, in a minority of cases, teachers' comments are not followed up.
- Tracking and monitoring of students' progress have improved over the past three years. Regular assessments are in place and teachers are well aware of the progress being made by their classes. Predicted grades are now more robust and students are confident that their target grades are both sensible and challenging.

### **Quality of the curriculum in science**

The quality of the curriculum in science is good.

- Students in Year 9 are prepared for the GCSE curriculum and helped to gain practical skills and improve their confidence. The most able in Years 10 and 11 take GCSE separate sciences and the remainder take GCSE core and additional science.
- Enrichment activities in science are good and succeed in enthusing and interesting students. A wide range of talks by visiting speakers and visits to museums and conferences is in place. Recently some A-level physics students attended an inspiring talk by Professor Higgs and other pupils have visited the Joint European Torus laboratory and Wellcome Trust.

- Older students are involved in successful science and mathematics work with pupils in local first schools. Over the past month a group of students devised and led two sessions for pupils involving solving scientific and mathematical problems.

### **Effectiveness of leadership and management in science**

The effectiveness of leadership and management in science is good.

- Over the past three years, the head and deputy head of science have brought better organisation to learning and assessment in science. Data are now well recorded and analysed, and as a result, predicted outcomes for students are more accurate.
- Senior leaders provide good support for the sciences. Resources are in good supply and technical support for practical investigations is effective and well managed.
- The school's advanced skills teacher has worked hard to improve the rigour of lesson observations and to provide relevant coaching and support for teachers to develop and improve their practice. In addition, science teachers have attended a good range of relevant professional training and updating. Science staff are well qualified and have degrees in physics, chemistry and biology.
- The science self-assessment report is well thought through and accurately identifies key strengths and areas for improvement.

### **Areas for improvement, which we discussed, include:**

- raising attainment in GCSE sciences and those achieving high grades at Advanced level
- ensuring that all lessons are planned to provide differentiated activities to meet the full range of students' abilities
- making sure that teachers' comments on marked work are followed up so that students make the best progress they can.

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

**Alex Falconer**  
**Her Majesty's Inspector**