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26 January 2011

Mr S Dool  
Headteacher  
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Dear Mr Dool

### **Ofsted 2010-11 subject survey inspection programme: Science**

Thank you for your hospitality and cooperation, and that of your staff, during my visit with David Brown on 7 and 8 December 2010 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.

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

The overall effectiveness of science is good.

### **Achievement**

Achievement in science is good.

- A\* to C pass rates for GCSE physics, chemistry and biology are generally high.
- The proportion of students gaining two or more GCSE A\* to C grades in science dipped to below average in 2010. This decline is directly attributable to several long term unavoidable staff absences in the science department during 2009-10. School assessment data and external module examination results indicate that there will be a significant improvement in 2011.

- School analyses show that students with special educational needs and also those eligible for free school meals achieved well in 2010. The proportions of these groups gaining two or more A\* to C grades at GCSE were higher than for the cohort as a whole.
- Attainment in the sixth form is about average, and students make satisfactory progress. There are good examples of progression to science based courses at university.
- Lesson observations and school assessment data for current students show that students are making good progress and achievement is good at both Key Stage 3 and Key Stage 4.
- Students' behaviour is very good and they display very good attitudes to learning. In lessons they were often observed working diligently and productively for extended periods on the tasks set.

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

The quality of teaching of science is good.

- Teachers have good subject knowledge. They are keen and enthusiastic and they successfully communicate this to students. Explanations and exposition are clear and positive relationships create an environment conducive to learning.
- In three quarters of the lessons observed the quality of teaching was good, and no teaching was less than satisfactory. Lessons are well planned with a good variety of activities.
- Some good use of self and peer assessment activities were observed, which help students to learn.
- Plenty of experimental and investigative work is included in lessons, and this contributes to students' enjoyment and motivation.
- Teachers prepare students well for independent work so that they are able to work productively and make good use of time.
- Effective use is made of information and communications technology. Electronic whiteboards are used well, and the developing virtual learning environment is valued by students.
- Assessment is carried out systematically. Most students know the targets levels and grades they are aiming for, and how well they are progressing towards these.
- Books and work are marked regularly and teachers often include helpful comments that should enable students to improve their work.

### **Quality of the curriculum**

The quality of the science curriculum is good.

- A wide range of courses is offered at Key Stage 4 including GCSEs in science, additional science, physics, chemistry, biology and environmental science, and a vocational science course. An entry level course is offered when it is appropriate to students needs. A land based diploma course is also offered in conjunction with a local college.
- Sixth form provision includes AS and A levels in physics, chemistry biology and environmental science. There is no vocational course at present, but there are plans to introduce one.
- The school has strong and valuable local links with industry and universities.
- Good use is made of STEM ambassadors. For example, during the inspection three were involved in judging a student competition.
- A very good range of enrichment activities is offered, and this contributes very well to students' experiences of science.
- The Key Stage 3 curriculum promotes engagement and enjoyment of science, and this is a factor in the increasing numbers choosing to study separate sciences at GCSE.

### **Leadership and management of science**

The effectiveness of the leadership and management of science is good.

- Specialist science status has a positive impact through the wide range of enrichment activities, very good links with local companies, the use of STEM ambassadors and the good teaching in the department.
- The senior leadership team has created a positive environment for development and improvement in science.
- The subject leader is a highly capable leader who works very well with the science team of teachers and technicians.
- Appropriate strategies are in place to ensure that attainment at Key Stage 4 is raised significantly in 2011.
- Students' progress is tracked very effectively and the data are used to identify underachievers and provide support to help them improve.
- Many of the science laboratories do not provide a modern scientific learning environment.
- The school's self evaluation of science was largely accurate.
- Good use is made of attainment data, and very thorough analyses are carried out and used to plan improvements.

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

- seeking opportunities to refurbish and improve the condition of the laboratories to provide a modern scientific learning environment
- ensuring that strategies to support underachieving students in Key Stage 4 are followed through meticulously, so that attainment rises
- pursuing the introduction of a vocational course in the sixth form which will provide a progression route for students for whom A level sciences are inappropriate.

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

As I 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. Except in the case of academies, a copy of this letter is also being sent to your local authority.

Yours sincerely

**Ruth James**  
**Her Majesty's Inspector**