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Mr J Killeen  
Acting Headteacher  
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Dear Mr Killeen

### **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 23 and 24 January 2013 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, information about students' progress and observation of 12 part lessons taught by nine different teachers.

The overall effectiveness of science is good.

#### **Achievement in science**

Achievement in science is good.

- Students start Year 7 with attainment which is below average. However they make good progress as they move through Key Stage 3 and achieve challenging targets by the end of Year 9.
- In 2012 achievement at GCSE in science improved compared to the previous year and is now in line with national averages. This represents good progress for most students given their starting points. However a small number of more able boys did not make as much progress as their peers.

- Students' attitudes to learning are good and they work with interest during lessons, particularly when carrying out practical activities. Relationships between teachers and their students are consistently good.

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

The quality of teaching in science is good.

- Teaching in most lessons is usually good with some examples of outstanding practice.
- Lessons are well planned and lesson objectives are shared with the students so they know what is expected of them.
- Students make the most rapid progress in those lessons where students are given time to think and find things out for themselves. Teachers use skilful questioning to challenge students and check their understanding. Students also make good progress when the sequence of learning activities they are given to do have been adapted to meet their needs.
- In those few lessons where students' make slower progress, teachers have a tendency to talk too much with students having to listen for long periods. This limits the time students have available to work independently. In addition activities are sometimes not well matched to students' needs, for example more able boys.
- Students have some opportunities to undertake scientific investigations giving them the chance to design and carry out their own experiments. For example in one outstanding Year 11 chemistry lesson students, working in small groups, successfully designed their own method for finding the rate of a chemical reaction. However, students have limited opportunities to work in this way, particularly at Key Stage 3.
- Students' know their end of year targets and how well they are doing. Their books are marked regularly and the best examples of teachers' comments are those that give students clear advice about how their work can be improved.

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

The quality of the curriculum in science is good.

- The science curriculum is broad and balanced.
- At Key Stage 3 practical skills are developed alongside the acquisition of subject knowledge. However there are not enough opportunities for students to apply these practical skills by designing and carrying out their own investigations.
- The school offers a good range of subject choices at Key Stage 4 including the separate sciences, dual award science, single award science and a vocational option. This is an appropriate balance of academic and vocational courses designed to meet the needs of all students.
- The school starts the Key Stage 4 programme of study in science part way through Year 9. This gives students more time to follow their examination

courses. The impact of this decision is seen in the improving trend in examination results at the end of Year 11.

- The curriculum is enriched by a range of science related visits and clubs.

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

The effectiveness of leadership in and management of, science is good.

- The head of science has high expectations of everyone. He has a clear vision for the department rooted in the firm belief that all students are capable of achieving their potential. His analysis of how well the department is doing is accurate. He uses this analysis to write the department's development plan which focuses on raising students' attainment and progress. As a consequence achievement in science is good.
- Students are set challenging targets and the systems used to track their progress against these targets is rigorous.
- The head of science monitors the quality of teaching effectively. He is aware of the best practice that exists and also that which requires further development. Sharing of this best practice and the range of training opportunities that are open to teachers is having a positive impact on the quality of teaching.

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

- reducing excessive teacher talk so that more time is given for students to work independently and find things out for themselves
- making sure that teachers plan activities that meet the needs of all students, for example more able boys
- providing more opportunities for students to design and carry out scientific investigations, particularly at Key Stage 3.

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

**Charles Lowry**  
**Her Majesty's Inspector**