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Mrs E Idris  
Acting Headteacher  
The Observatory School  
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CH43 7QT

Dear Mrs Idris

### **Ofsted 2011–12 subject survey inspection programme: science**

Thank you for your hospitality and cooperation and that of your staff and students, during my visit on 17 June 2011 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 you and the acting assistant headteacher responsible for science; scrutiny of relevant documentation; analysis of students' work; discussions with students in Years 9 and 11; and observation of a Year 8 lesson.

The overall effectiveness of science is good with outstanding features.

#### **Achievement in science**

Achievement in science is good.

- As recently as two years ago, students were not entered for science qualifications in Year 11. Very rapid progress has been made in introducing BTEC in Applied Science successfully. Attainment has risen sharply. Students attain more highly in science than in any other subject.
- Students' progress is good and sometimes better. Nearly all students are meeting challenging targets and some exceed them.
- Students' attitudes to science are positive. For many, it is their favourite subject. Students in Key Stage 3 enjoy science lessons and their experimental nature. In Key Stage 4, students are highly motivated to acquire the skills, knowledge and understanding required for them to do well in examinations.

- Although students are now doing well in science, their achievement is not outstanding overall. This is due to the relatively short time (two years) in which students have been making accelerated progress. Students have not yet realised their full potential in science.

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

The quality of teaching in science is good.

- Teaching in science has several outstanding features. Relationships between staff and students are excellent, as is the management of behaviour. Explanations by teachers about how science works are exceptionally clear. The effectiveness with which students are engaged by science is another strength. This is particularly noteworthy as the students often present very challenging behaviour.
- In the lesson observed, science was made interesting and enjoyable. Abstract ideas of the difference between liquids and gases at particle level and of forces acting on moving objects were made accessible to students through well-chosen investigations and excellent use of interactive diagrams. Students were so interested in learning that they suggested they continue during break time.
- Teaching assistants play a highly effective role in science. Not only do they provide critical pastoral support to students but their knowledge of science is developed. They therefore play an important role in supporting students with their learning.
- The marking of students' work is sound. Students know broadly how well they are doing. However, marking lacks rigour. For example, it does not refer to the success with which students have met the criteria set for them in lessons or suggest next steps that they need to take to meet their targets.

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

The quality of the curriculum in science is good.

- Science is being developed very effectively. In Key Stage 3, the emphasis is on engaging students in science through enjoyment and by making it as practical as possible. Students particularly enjoy chemistry. In Key Stage 4, the emphasis within the curriculum is on preparing students for examinations. BTEC Applied Science has been introduced very successfully and GCSE Applied Science is now being introduced for students showing aptitude in the subject.
- The enrichment of learning in science is good. The students go on many trips with a science focus. There is a science club where students pursue longer-term projects; for example, the construction of a radio-controlled model aeroplane. Projects such as this increase students' interest in science and link science neatly with design and technology and engineering.

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

The effectiveness of leadership and management in science is outstanding.

- The rapid development of science as a subject has led the changes now sweeping the school. The expectations of staff and aspirations of students about achievement have been raised significantly.
- The regular and accurate assessment of students' progress in science leads to the setting of challenging targets. Students' performance data are analysed and used well, along with other information, to establish if intervention is required. Assessing pupils' progress materials are being successfully introduced. However, the school's Learning Intentions for each student, which include, for example, details of their progress in English and mathematics, do not include the students' progress in acquiring science skills.
- Partnerships and networking with mainstream secondary schools and with universities providing training for teachers are good. For example, staff from mainstream science departments are involved in the moderation of students' work, ensuring accuracy of assessments. Also, university departments of education are using the science department at the school as an exemplar for the successful education of students with complex social, emotional and behavioural difficulties.

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

- improving marking to include comments on how well students meet the success criteria for lessons and to indicate the next steps in learning
- including students' progress in acquiring science skills within their Learning Intentions record.

I hope that 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

**Brian Padgett**  
**Her Majesty's Inspector**