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Mr S Venross
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Dear Mr Venross

Ofsted 2008-09 subject survey inspection programme: science

Thank you for your hospitality and co-operation, and that of your staff, during my visit on 10-11 February 2009 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. 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: analysis of data, interviews with staff and learners, scrutiny of relevant documentation, students' work and observation of lessons.

The overall effectiveness of science was judged to be satisfactory.

Achievement and standards

Standards in science are below average and achievement is now satisfactory.

- Standards in science in 2008 were very low, and students' achievement was inadequate.
- School analysis of data shows that students from minority ethnic groups did better in science GCSEs in 2008 than white British students.
- Inspection evidence indicates that standards have improved though they remain below average, and achievement is now satisfactory.
- In most of the lessons observed the majority of students made satisfactory progress.
- The school's current assessment data indicate that the majority of Year 11 students taking the applied science first certificate course are on track to achieve at least a pass grade, equivalent to two GCSE C grades. Students' coursework is not yet completed and has yet to be verified by the awarding body.

- School assessment data for both GCSE and first certificate students indicate that there should be an increase in the proportion of students who achieve the equivalent of two GCSE A*-C grades in 2009.

Quality of teaching and learning

Teaching and learning in science are satisfactory.

- Teachers are knowledgeable, committed, and enthusiastic.
- Most of the lessons observed were satisfactory.
- A range of learning activities is included in lessons to engage interest, motivate students and develop understanding. Examples observed included well presented worksheets, paired reading and discussion activities, exercises to put diagrams or instructions in the correct sequence, and practical experiments.
- Information and communications technology is used well to enhance learning. In one lesson an animation was shown which helped students understand how white blood cells engulf bacteria. Students spoke positively about other similar examples which had helped deepen their understanding. In other lessons students used computers available in the laboratory to research energy sources, and produced illustrated presentations about the solar system.
- There are some opportunities for practical and experimental work which are particularly enjoyed.
- Students know their individual targets and the levels they are working at.
- Students interviewed were generally positive about science which they enjoy.
- Teachers' monitoring of the work of individual students during lessons is not always effective, and in some lessons low level inattention hinders the learning of a minority of students.
- Teachers do not always exercise their authority purposefully enough. For example, students who are not on task are not always challenged directly or quickly. Admonishments are too often directed at the whole class rather than the individuals concerned. Sanctions are not applied consistently.
- Lesson planning does not focus sufficiently on what all students are to learn and how they are to learn it. Learning objectives are sometimes phrased in very general terms and are not used to best effect.
- Although lesson plans sometime note individuals with particular needs there are rarely any references to how their needs will be met. Timings are not always accurate or adhered to.
- There is some evidence of differentiation in lessons to meet the needs of students of different abilities and so ensure that the less able are sufficiently supported and the more able sufficiently challenged. More able students or those who complete tasks quickly are often left waiting for others to finish rather than being given more challenging work. Teachers do not always target support at those who need it most.
- The majority of students behave sensibly in science lessons most of the time, and examples of exemplary behaviour were observed.

Quality of the curriculum

The quality of the curriculum in science is now good.

- The range of courses offered at Key Stage 4 is appropriate and includes the first certificate in applied science, and GCSEs in science, additional science, and three separate sciences (physics, chemistry and biology). This gives most students the opportunity to achieve the equivalent of two GCSE grades A*-C in science.
- The GCSE science course is now commencing in Year 9 with the aim of improving results.
- There are some good enrichment activities in science, including trips to local and national science museums, and participation in events such as a local science and mathematics 'Olympiad', and visitors to school. Students spoke very positively about these and clearly find them interesting and useful.

Leadership and management

Leadership and management are satisfactory.

- Leaders and managers recognise that standards and achievement in science were unsatisfactory in 2008. Staff turnover and recruitment difficulties contributed to this. Action has been taken with the aim of improving standards and achievement.
- Following the introduction of new science GCSE courses at Key Stage 4 in 2006, a decision was made to offer modular science GCSEs to all students. It was recognised during the academic year 2007-2008 that these were not meeting the needs of many students. In summer 2008 the decision was taken to move substantial numbers of the Year 10 cohort to a first certificate applied science course. This offers these students, now in Year 11, a better opportunity to achieve in science. In the light of the 2008 GCSE science results this action was appropriate.
- The science leader and science teachers have worked very hard to introduce the applied science course and to deliver it over one year, and so offer their Year 11 students the opportunity to achieve a level 2 qualification in science. Advice has been sought from the awarding body and from other local centres which offer this course.
- The number of sets in science at Key Stage 4 has been increased. This has reduced class sizes, especially for Year 11 applied science students, enabling science teachers to give more time to individual advice and guidance about coursework.
- Leaders and managers have introduced new whole school policies designed to improve behaviour, learning and teaching, and assessment. Although monitoring by leaders does take place, inspection evidence indicates that these policies are not yet applied consistently in science.
- Science teachers are committed to improving their practice. Opportunities for continuing professional development include awarding body courses and science subject courses. Science team meetings include opportunities for sharing good practice. One science

teacher has participated in a teacher effectiveness enhancement programme.

Areas for improvement, which we discussed, included:

Raising standards and achievement in science by:

- improving the quality of teaching and learning so that it is good, rather than satisfactory. This requires the weaknesses in teaching and learning identified above to be addressed
- further developing support strategies for less able students and those at risk of underachieving
- improving monitoring and evaluation by senior leaders to ensure the consistent application of school policies
- evaluating new initiatives carefully and planning action to address any issues identified.

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

Ruth James
Her Majesty's Inspector