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04 February 2009

Dr P Holding Headteacher Sir William Borlase's Grammar School West Street Marlow Buckinghamshire SI 7 2BR

Dear Dr Holding

Ofsted survey inspection programme – Science

Thank you for your hospitality and co-operation, and that of your staff, during my visit on 29-30 January 2009 to look at work in science.

As outlined in my initial letter, as well as looking at key areas of science, the visit had a particular focus on transition within and between phases, the range of learning experiences provided; the status and use of scientific enquiry and how science works.

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 interviews with you and the science subject leader, scrutiny of relevant documentation, analysis of students' work and observation of six lessons.

The overall effectiveness of science was judged to be good.

Achievement and standards

Standards overall are well above the national average. Achievement is good.

- Outcomes at GCSE show the school has been significantly above the national average for the three years 2006 to 2008. Performance data show that attainment at GCSE for science is above the school's average overall.
- When contextual factors are taken into account GCSE data show that students make progress in science at above the national rate.

- Students attain good standards at AS and A level. Compared with national data over the last three years students are making above average progress.
- The school analyses available data thoroughly and reports performance accurately in their self-evaluation. They take the trouble not only to compare themselves with national data but also with other grammar schools in the local authority.
- There is a good inclusive culture in the school and no differences due to gender or other grouping were seen in performance data or in practice in lessons.
- Standards seen in lessons and in a scrutiny of work are well above those expected of students for their age.
- The work students do in science and the ways in which they work are promoting personal development well. They work well with others, demonstrate good communication skills and behave responsibly. They contribute confidently to lessons, show reflective and mature thinking and their behaviour is excellent.

Quality of teaching and learning of science

Teaching and learning are good.

- The large majority of lessons seen were good and the teaching in some was outstanding.
- Students have very positive views of how they are taught and believe all teaching to be at least good and much to be outstanding.
- They value the enthusiasm of teachers, their willingness to explain, even outside lesson time, and the effective way they keep students on their toes by skilled questioning. HMI agrees with their evaluation.
- The department is successfully developing assessment criteria that can be used by students to evaluate their own work and that of their peers.
- Assessment is systematically carried out and the assessment data stored centrally and made accessible to all the science teachers. The frequent assessment allows a close monitoring of students and informs good quality reporting systems.
- Assessment for learning is not as well developed as the testing arrangements. The quantity and quality of marking is varied and teachers are not providing students consistently with written feedback and advice on how to improve.
- The virtual learning environment is making a significant contribution to the range of ways students can learn and to the richness of their learning.
- Teachers use the electronic white boards effectively to stimulate students' interest and promote engagement. They present ideas and data clearly but they were less often used interactively in the lessons observed.
- Students' use of information and communication technology (ICT) is developing well. Opportunities for this development are being identified in the new schemes of work being written.

Quality of the curriculum

The curriculum provided is good.

- The inspection took place at a time of significant change. The science department, guided and supported by the senior leadership, is improving the curriculum offered to students.
- The school is moving to a two-tear Key Stage 3 to allow quicker progression onto a wider range of GCSE courses. Students are being offered a greater choice of combinations of courses in science.
- The school has already provided students with the opportunity to study three separate science at GCSE and they a rightly retaining the option for students to take two science GCSEs to meet their needs and wishes to follow other GCSEs.
- There is a good range of enrichment activities which are being added to. The new schemes of work are being used well to ensure science is taught in appropriate and relevant contexts.
- Science staff recognise they need to go beyond the bounds of course specifications to enrich the experiences for students and to challenge them in a way that matches their abilities.
- Staff are collaborating with other subjects to provide stimulating activities such as collaborating with drama and dance to explore physics and the elements.
- Sixth form students play a significant role on running clubs and courses such as biology club and the astronomy course.

Leadership and management of science

Leadership and management of science are outstanding.

- You have provided a positive culture for development into which the head of science has been appointed.
- There is a very clear focus on raising standards and developing a close analysis of performance data to track effectively the progress of individual students.
- The self-evaluation in the department is both thorough and accurate leading to an understanding of strengths and areas for development.
- There is a clear vision of what factors contribute to success in science education and the strategies developed are well matched to the identified needs.
- Providing and environment for effective learning is rightly a priority of the head of science and his subject leaders.
- Running throughout all the developments is the notion of monitoring their impact and evaluating to bring about further improvements.
- Science is seen to be not only concerned with high standards but also to work collaboratively with other subjects to enhance students' experiences, learning and skills.

Areas for improvement, which we discussed, included:

- bringing about increased quality and consistency of feedback to students on how they can improve
- improving the use of information of students' individual needs in planning teaching and learning
- promoting self and peer assessment to improve students' awareness of their own learning.

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

Ian Richardson Her Majesty's Inspector