Aviation House
125 Kingsway
London
WC2B 6SE

T 08456 404040
F 020 7421 6855
enquiries@ofsted.gov.uk
www.ofsted.gov.uk

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Mr S Jex
Headteacher
Horsforth School
Lee Lane East
Leeds
West Yorkshire
LS18 5RF

Dear Mr Jex

Ofsted survey inspection programme – Science

Thank you for your hospitality and cooperation, and that of your staff, during my visit on 14 and 15 September 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 range of science courses offered in Key Stage 4 to meet the needs of all students; and the range of science courses offered post-16 to meet the needs of all students.

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 the school leadership team, staff and students; scrutiny of relevant documentation; analysis of students' work; and observation of 11 lessons.

The overall effectiveness of science was judged to be good with some outstanding features.

Achievement in science

Achievement in science is good.

- The last set of validated data on GCSE performance showed that the proportion of A* to C grades awarded in science subjects was slightly above the national average.
- The analysis of how well science subjects performed in 2008, compared with other subjects, shows that they were close to the school's average.

- Unvalidated data for 2009 held by the school show a strong rising trend in the outcomes for science at GCSE.
- The performance of students at Key Stage 3 has shown an upward trend in national testing and is above the national average. The current teacher assessment procedures for the end of Key Stage 3 show continuing improvements compared with the national average.
- The performance at A2 and AS level is more volatile. The school has identified stronger performance at A2 level and has taken a strategic approach to improving performance further at AS level. Geology has been particularly successful at A2 level and this has been recognised by a national award.
- Scrutiny of students' work shows the quality to be good, with work well presented and complete across the age and ability range.
- Students are aware of the standards they have attained and know what they need to do to perform better.
- Their attitudes to learning are good and hardly any off-task activity was seen. Students work with confidence and show good interest in, and application to, the work. Their behaviour is outstanding and they demonstrate good relationships with each other and with staff.

Quality of teaching of science

The quality of teaching in science is good.

- In all the lessons seen, the quality of teaching was good or better. Some of the lessons were outstanding, with very skilled and lively teaching engaging students very effectively.
- Teachers show very good subject knowledge and the ability to teach science, which is well contextualised for students, so that they can relate it to their lives.
- Students describe the quality of teaching as at least good and much as outstanding. They value the way teachers demonstrate enthusiasm for science, provide a good variety of activity and ensure lessons are enjoyable.
- Teachers use information and communication technology (ICT) effectively to engage students in a range of ways. The quality of ICT resources is good and students use ICT themselves for a range of purposes. The virtual learning environment is developing well and the chemistry section is particularly valued by students.
- It is evident that the department believes in students being active in their learning. Much effort has been expended in developing extensive and engaging activities that allow students to work as scientists. This is something the students very much enjoy.
- Assessment procedures are systematic and thorough. The department is developing methods for teacher assessment to provide ways of assessing students' progress and providing them with feedback on how to improve.
- Students are involved in evaluating their own work and the work of others, giving them a good insight into the standards they are attaining.

Quality of the curriculum in science

The curriculum for science is outstanding.

- The scheme of work for science courses is thorough, detailed and supports teachers in being innovative and creative in the way they teach topics.
- The scheme of work is generated and held electronically, making it available to all staff. Staff are encouraged to be reflective practitioners and to evaluate the scheme as they teach it, suggesting modifications and improvements.
- The curriculum is coherent and provides all students with appropriate programmes for learning. There are clear pathways from Year 7 to the time when they leave school.
- There is a good suite of courses in science at GCSE and A level that provides a broad range of options, both academic and vocational, appropriate to the needs of all students.
- Significant work with partner primary schools has secured good transition for pupils from Key Stage 2 to 3. Pupils from the primary schools are engaged with the secondary school in Years 5 and 6. They visit the school, attend some extra-curricular activities and work with secondary school teachers in their own primary schools.
- The school has moved to a two-year Key Stage 3 and plans to introduce enriched courses over three years in Key Stage 4. This has reduced unhelpful repetition of experiences and learning and produced a clearly focused and engaging Key Stage 3 which prepares students well for Key Stage 4 courses.
- Good strategies for transition within school are planned well for all students. For example, the Year 7 transition group of lower-attaining students benefits from the skills of the same teacher for English, mathematics and science. This provides a strong coherent basis for preparing them to be integrated into the main school's provision in Year 8.
- Provision for enrichment of the curriculum is outstanding across the age range. Students are involved in local, regional, national and international events. Students speak very highly of such enrichment opportunities, as they do of the extra-curricular activities.

Effectiveness of leadership and management in science

Leadership and management of science are outstanding.

- The culture of the school is clearly one of raising standards. The senior leadership of the school has provided a positive environment for innovation and improvement in science.
- The director of science was appointed just over a year ago and has been very effective in bringing about changes that are leading to improvement.
- Data are analysed thoroughly and used very effectively to set challenging targets and improve standards.
- Management systems have been put into place that are rigorous, unambiguous and used very effectively for monitoring performance.

There are clear links between these improvements and raising standards. For example, changes to the way that coursework is set and monitored have raised performance in GCSE courses.

- Members of the science team have a very high regard for the director of science. They feel very well supported and led. They believe they are enabled to contribute to the success of the department.
- The documentation describing the requirements and systems of the science department is both clear and comprehensive. It extends to all areas of activity and includes, for example, providing a template for letters to parents, to alert them to coursework requirements and to how their children are performing.

Areas for improvement

- There are no areas for improvement that the school has not recognised and planned to tackle strategically.

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/local Learning and Skills Council 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