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Mrs H Delf
Headteacher
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Dear Mrs Delf

Ofsted 2012–13 subject survey inspection programme: science

Thank you for your hospitality and co-operation, and that of your staff and pupils, during my visit on 15 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 pupils; discussion with governors; scrutiny of relevant documentation; analysis of pupils' work; and observation of three lessons.

The overall effectiveness of science is outstanding.

Achievement in science

Achievement in science is outstanding

- Pupils make excellent progress in science during their time in school, to gain well above average standards in science by the end of Year 6. Typically, pupils attain one whole national curriculum level higher than expected. Disabled pupils and those who have special educational needs achieve equally well and above the expected level for all pupils nationally.
- Pupils are exceptionally good at raising their own questions about science, and are expected to find out as much as they can for themselves through scientific enquiries. They enjoy these activities very much, and can recount in great detail their findings.
- Pupils recognise the links between science, literacy and numeracy and enjoy deploying these basic skills in solving science problems. They relish

challenge, and look forward to difficult problems to solve. Their thirst for learning is a powerful testimony to the quality of teaching, and the learning ethos that the school has established.

Quality of teaching in science

The quality of teaching in science is outstanding.

- Teachers are reflective and thoughtful practitioners who are very well skilled in evaluating the impact of their teaching on pupils' learning, then adjusting activities to accommodate each pupil's individual needs.
- The investigations are designed for pupils of all ages to find out the underpinning science concepts for themselves, which is the best way to cement their understanding. Sometimes the activities are too open ended, making it more difficult for pupils to recognise the key ideas, but teachers spot this quickly and intervene with suggestions to control the complexity of the pupil's original plans.
- Teachers allow sufficient time for pupils to complete their work, and then to reflect upon what they have learned. This allows pupils to evaluate their results properly and draw scientifically correct conclusions.
- Science work is thoroughly marked, with praise and developmental feedback, often quite lengthy, that pupils recognise as 'targets' for improvement. Very occasionally, teachers miss technical inaccuracies in pupils' subject knowledge.

Quality of the curriculum in science

The quality of the curriculum in science is outstanding.

- Science lessons are firmly centred on practical investigations that are purposeful and lead to pupils developing their understanding of the big ideas in science.
- Plenty of teaching time is assigned to practical science work each week, with additional time allowed to ensure pupils finish their work. There is scope to extend and enhance literacy opportunities through science, using research to find out more about a particular scientist, or key idea.
- Pupils with particular gifts or talents in science enjoy an excellent extension provision that includes working with science teachers in the local secondary school.
- The school's outdoor environment is used extensively to promote cross-curricular links and enhance the teaching and learning of science. There are many trips, visits and visitors to the school based on science themes and exploring the local Norfolk Broads natural environment. These effectively enrich pupils' understanding of science in the world around them, and give insight into the major discoveries of science over time.
- Many staff and governors have personal connections to professional science, so that science has a very high profile in the school, as evidenced

by rich, high quality and varied displays of pupil work in classrooms and corridors.

Effectiveness of leadership in, and management of, science

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

- School leaders carefully monitor their progress in science, including in the subject knowledge strands, every term, and check curriculum coverage equally frequently. This drives rapid intervention should a shortfall be identified and is a major factor in the high achievement of pupils.
- School leaders are sceptical about the generosity of external science tests, preferring a more robust approach to assigning levels. They only award 'whole levels', rightly believing this ensures a secure grasp of the full content, skills and understanding required.
- Pupils are involved in evaluating science through a systematic survey that allowed them to express their own thoughts; these included 'can you make science even harder?'.
- The governing body plays an exceptionally strong part in monitoring the quality of education overall, through a regular series of classroom visits that result in a written observation of what they say. For example, a governor captured the real strength of the learning ethos in science when she noted that 'pupil ideas just came tumbling out!' These 'lay person' observations are linked to professional leadership and management evaluations. Together this provides a clear, positive framework with which to acknowledge success and identify further areas for improvement.
- There are outstandingly effective links with local authority advisory staff, local school clusters, access to regional science learning centres, and with the national STEM ambassador programme. These ensure excellent science continuing professional development.

There are no substantial areas for improvement, and we discussed:

- exploring further opportunities to enhance reading and writing skills through science-based topics.

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

Brian Cartwright
Her Majesty's Inspector