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Mr J Eccles
Headteacher
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Dear Mr Eccles

Ofsted 2010–11 subject survey inspection programme: science

Thank you for your hospitality and cooperation, and that of the staff and pupils, during my visit on 9 November 2010 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; scrutiny of relevant documentation, including the school's own data relating to pupils' attainment and progress; analysis of pupils' work; and the observation of four lessons.

The overall effectiveness of science is good.

Achievement in science

Achievement in science is good.

- Children enter the school in Reception with the skills, knowledge and understanding expected of their age. Over the last three years, children have demonstrated that they are working securely within the 'knowledge and understanding of the world' area of learning. As a result, their progress is satisfactory during the Early Years Foundation Stage.
- Progress accelerates as pupils move up through Key Stages 1 and 2 and pupils' attainment is above average in science by the time they reach the end of the final key stage. This represents good progress from their starting points.

- The large majority of pupils clearly enjoy their learning in science, particularly the regular opportunities they have to gain first-hand experiences through investigative and practical activities.
- Pupils' attitudes to learning are impressive. By the time they reach Key Stage 2, they are confident learners who are keen to be involved in planning and carrying out investigations. They demonstrate the ability to interpret their observations and results, and can apply their scientific knowledge to explain ideas when responding to teacher's questions.
- Most importantly, as young scientists, they recognise that it does not matter if your idea or prediction is wrong because you will still have learnt something new.

Quality of teaching in science

The quality of teaching in science is good.

- Teachers' subject knowledge is secure and their confidence to tackle scientific investigations and use a wider range of resources has been boosted by your expertise and that of the former coordinator.
- Teachers' planning incorporates a good range of activities that is well matched to pupils' different learning needs in the mixed-age classes. This is achieved through thoughtfully devised differentiated tasks and the effective use of support staff to support both lower and higher attaining pupils.
- Teachers are beginning to use assessment more sharply to identify and target gaps in pupils' understanding and a new system to track pupils' progress in relation to curricular targets has been introduced.
- The use of assessment to support learning is satisfactory. Pupils are involved in assessing their own progress through a range of strategies including 'thumbs-up' and 'can-do' statements. Increasing opportunities are available for pupils to assess the work of other pupils and these approaches are beginning to help pupils understand the features of successful learning and how to improve.
- Marking is variable and feedback often focuses on what pupils have achieved without clearly identifying how they can make the next steps in their learning. Where questions are posed to extend pupils' thinking they have little opportunity to respond.
- The use of new technologies to support learning is developing. While there is some good practice, for example, the use of software to tabulate results and present data in a graphical form, overall, teachers' confidence in the use of new technologies to support learning is variable. Similarly pupils have limited opportunities to develop their information and communication technology (ICT) skills in a science context.

Quality of the curriculum in science

The quality of the curriculum in science is satisfactory.

- A suitable scheme of work is in place which incorporates regular opportunities for pupils to experience scientific enquiry. This contributes effectively to pupils' good progress and their enjoyment of science. However, in some topics opportunities are missed to contextualise pupils' development of enquiry skills.
- Topics are taught on a two-year cycle to accommodate mixed-age classes. However, in a minority of years, the curriculum is not well-balanced across the different areas of the National Curriculum programme of study for science.
- The school's vision for science is that the curriculum will be integrated in cross-curricular topics or themes. This was seen to work well during the visit when pupils in Years 5 and 6 spent the morning finding out about the moon through a circus of activities involving scientific investigation, art and literacy. However, the consistent delivery of science in this way across the school is at an early stage of development.
- Curriculum planning in the Early Years Foundation Stage relies too heavily on adult direction. Consequently, this limits opportunities for children to make purposeful choices about their activities to consolidate and extend their knowledge and understanding of the world.
- The curriculum is enriched through a variety of trips, visits, visitors and themed days. Pupils enjoy these additional learning experiences which make an effective contribution to their understanding of science in the world around them. Good use is made of the local environment to support learning. Pupils also take responsibility for looking after the school's chickens which helps to promote their understanding of life processes.

Effectiveness of leadership and management in science

The effectiveness of the leadership and management in science are good.

- Leaders have high aspirations of what pupils can achieve in science and targets set are challenging. The progress of individual pupils is carefully monitored through half-termly meetings. Where concerns are identified, additional support is provided to help them get back on track.
- The monitoring and evaluation of provision in science are thorough and leaders have a good understanding of current strengths and areas for development in the subject.
- As a result of action taken in response to evaluation, improvement has been achieved in a number of areas. These include the effectiveness with which support staff are involved in the assessment of pupils' progress; the increased use of hands-on science experiences to enhance learning and teachers' greater confidence to use a wide range of teaching strategies. These improvements have made a significant contribution to pupils' increased enjoyment, good levels of engagement and better progress in science.
- There is careful attention to ensuring pupils' safety in science and to help them develop a greater understanding of how to keep safe. For example,

pupils in Year 2 investigated with enthusiasm the best materials to wear when you are walking in the dark.

- The school has made good use of the local authority termly network meetings to support the science coordinator in their role. Other staff have relied largely on in-house support to develop their practice.

Areas for improvement, which we discussed, include:

- developing the effectiveness of feedback to pupils so that they are clear about how well they are doing and what they need to do to improve
- improving the quality of the curriculum by ensuring science is taught in relevant contexts and there are increased opportunities to make cross-curricular links
- increasing opportunities for pupils to develop their ICT skills in science
- helping children make better progress during the Early Years Foundation Stage by ensuring that the curriculum provides a good balance between adult-led and child-initiated activities in both the indoor and outdoor environment.

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

Katrina Gueli
Her Majesty's Inspector