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Mrs C Archer  
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Dear Mrs Archer

Ofsted 2009-10 subject survey inspection programme: mathematics

Thank you for your hospitality and co-operation, and that of your staff, during my visit on 25 June 2009 to look at work in mathematics.

As outlined in our initial letter, as well as looking at key areas of the subject, the visit had a particular focus on the effectiveness of the school's approaches to improving the quality of teaching and learning in mathematics.

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 staff and pupils, scrutiny of relevant documentation, analysis of pupils' work and observation of parts of six lessons.

The overall effectiveness of the subject, mathematics, was judged to be good.

Achievement and standards

Achievement in mathematics is good and standards are above average.

- Children get off to an excellent start in the Early Years Foundation Stage due to high quality teaching which develops exceptionally good understanding of the concepts of number, shape, space and measurement. Children make rapid progress in acquiring and using mathematical language and this in turns leads to very good progress in learning to calculate.
- Standards are rising in Key Stage 1 because this outstanding practice is now being continued into Year 1. As a result, pupils' progress is accelerating as they develop a better grasp of key concepts.

- Good progress continues through Key Stage 2. Standards in Year 6 were well above average in 2008 and the unvalidated results of the 2009 national tests indicate similarly high standards. More than half of the cohort achieved the higher Level 5 in both years.
- Pupils' good, and for some outstanding, achievement reflects high levels of enjoyment and very positive attitudes to learning. Pupils relish a challenge, as was seen in a Year 6 lesson where pupils were asked to be an entrepreneur for the day. They worked very well collaboratively on designs for a mathematics game which they then presented to the staff who were acting as 'dragons' in the style of a popular television programme.

### Quality of teaching and learning of mathematics

The quality of teaching and learning of mathematics is good.

- Pupils understand what they are expected to learn because teachers explain the objectives for each lesson clearly and show pupils the steps they need to take to meet them. They then review them at the end of the lesson and pupils have opportunities to assess their own and others' work.
- Teachers use correct mathematical vocabulary when explaining key concepts and expect pupils to do the same.
- Pupils make good progress because learning is fun and engages them in a wide variety of 'hands-on' practical tasks that relate to real life.
- Teachers use a very wide variety of strategies and resources that match pupils' different ways of learning. This is why pupils with learning difficulties and those with particular gifts do equally well.
- In the best lessons, teachers extend pupils' thinking and reasoning skills through questioning that probes and challenges them. Occasionally in other lessons, teachers miss opportunities to extend pupils' knowledge and understanding in this way.
- Informative day-to-day assessments and evaluations of lessons feed into the next day's planning as teachers adapt and respond to certain pupils' lack of understanding or readiness to proceed at a faster pace.
- Well-briefed teaching assistants provide good quality support for pupils in lessons and in providing specific intervention programmes for small groups who may be experiencing difficulties.

### Quality of the mathematics curriculum

The quality of the mathematics curriculum is good.

- Outstanding provision in Reception generates huge enjoyment and lays a solid foundation for future learning, particularly in Year 1 where the same principles underpin pupils' experiences.
- Throughout the school, there are good opportunities for pupils to use, practise and apply their knowledge and skills in a wide variety of problem-solving and investigative activities. For example, Year 1 pupils solved a range of practical problems by sharing bees between flowers, frogs between lily pads and, in the outdoor area, by sharing flags equally between sand castles and model people between the boats in the water tray. They thoroughly enjoyed this 'round-robin' of exciting activities.

- The school has begun to develop creative approaches to planning the curriculum at Key Stage 2, but it is proving more problematical to find ways to incorporate mathematical learning into wider cross-curricular themes. One successful 'trial run' was seen in Year 5 as pupils took part in a multi-media project based on the television programme 'The Apprentice'. This involved carrying out research, collating and analysing the results of surveys and using the information to design, cost and market a new brand of biscuit. Not only did this topic encompass a number of challenging mathematical concepts in a simulated real-life context, it also embraced literacy, information and communication technology (ICT), design and food technology skills. Pupils were engrossed in the project and greatly enthused by this way of learning.
- The current weekly planning format for mathematics lessons constrains the use of more fluid and imaginative approaches. Nevertheless, the curriculum is greatly enhanced by special events, such as the recent '100 Day', when pupils tackled a range of problems and investigations all related to the number 100. Gifted and talented pupils are well provided for through special challenges, such as designing a virtual racing car, where they have to take into account factors such as length of track, angles of bends, speed and petrol capacity.

### Leadership and management of mathematics

The leadership and management of mathematics are good.

- Focussed action plans arise from rigorous evaluation of the performance of different groups of pupils. Detailed analysis of pupils' progress enables teachers to pinpoint areas of relative weakness and to provide additional help for those who may be falling behind. The school has successfully raised girls' attainment after identifying where improvement was needed.
- The subject leader's considerable expertise is used effectively to drive improvement throughout the school. She works closely with senior leaders to implement new initiatives and evaluate their impact on teaching, learning and pupils' progress. This has revealed that the increased use of ICT and mathematics games has had a good influence on pupils' achievement and enjoyment.
- Regular lesson observations by senior leaders and the subject leader pinpoint precise areas for development and are used well to provide appropriate support and training for all staff. On occasion, these do not focus closely enough on evaluating pupils' learning and progress.
- Pupils' views are canvassed and acted upon. For example, the subject leader held conferences with six pupils from each Key Stage 2 class and fed back the outcomes to the whole staff. This revealed that pupils found most difficulty with using and applying mathematics and led to greater emphasis on that area.
- The school also works closely with parents to give them a greater understanding of how mathematics is taught, especially calculations, so that they can better support their children's learning at home.

Subject issue: the effectiveness of the school's approaches to improving the quality of teaching and learning in mathematics

- The subject leader provides most of the training for staff, such as the introduction of the renewed national framework for mathematics. She attends relevant training courses and shares useful and essential information to all staff.

- Staff training needs are carefully identified through performance management, regular lesson observations, scrutiny of pupils' work and teachers' planning, and by seeking pupils' views about their lessons. Staff receive constructive feedback from this monitoring which helps to improve the quality of provision.
- Teaching assistants are included in planning, review and parent consultation meetings. This in itself provides good professional development and helps to ensure that they are well-briefed about new teaching methods and initiatives as well as having a good understanding of individual pupils' needs.
- Teachers have found it difficult to move away from discrete weekly mathematics plans towards planning blocks of work that draw upon a more creative, cross-curricular approach to learning. The school is seeking specialist support to help teachers in making the transition while ensuring that key mathematics concepts and skills continue to be taught well.

Areas for improvement, which we discussed, included:

- build upon existing good practice to develop more creative ways to deliver the mathematics curriculum.

I hope these observations are useful as you continue to develop mathematics in the school.

As explained in our 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

Carole Skinner  
Additional Inspector