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Mrs J King
Headteacher
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Dear Mrs King

Ofsted 2009-10 subject survey inspection programme: mathematics

Thank you for your hospitality and cooperation, and that of your staff and pupils, during my visit on 12 February 2010 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.

The evidence used to inform the judgements included interviews with you, the subject leader and two groups of pupils; scrutiny of relevant documentation; analysis of pupils' work; observation of four lessons and a small support group; and a visit to the 'Blackboys Café'.

The overall effectiveness of mathematics is outstanding.

Achievement in mathematics

Achievement in mathematics is outstanding.

- Pupils make exceptionally good progress throughout the school and reach high standards by the time they leave. They demonstrate excellent understanding of mathematical concepts and appreciate the relevance of mathematics in everyday life.
- In lessons, there is an excited buzz as pupils discuss their ideas with each other and respond to the high-quality teaching that inspires them to think like mathematicians.

- Children in Reception and Year 1 took part in bean bag races, estimated how many teddies would fit into a 'magic bag' and learned how to subtract by digging objects out of jelly.
- Pupils say they thoroughly enjoy learning and 'absolutely love' tackling challenges. They use a wide range of strategies confidently to solve problems and adopt a methodical approach to investigations.
- All groups of pupils achieve very well because teachers check their progress from lesson to lesson and take immediate action if any are found to be struggling. Those who find learning more difficult receive excellent support, including individual tuition, which helps them to acquire tricky concepts and skills.
- Reception children acquire new concepts at a rapid rate because they have many exciting opportunities throughout each day to explore numbers and shapes, to measure things in different ways and to learn that mathematics is all around them.

Quality of teaching of mathematics

The quality of teaching of mathematics is outstanding.

- Teachers' excellent subject knowledge lends a confidence to their teaching style and enables them to be adventurous in their approaches. They use interactive whiteboards very successfully to engage pupils' interest and reinforce concepts through visual images. Photographs of famous buildings, such as the Taj Mahal and a 'Google' map of Paris, led to high-quality discussion among pupils in Years 5 and 6 about reflectional and rotational symmetry. This led to a spirited debate about whether the London Eye has 32 lines of symmetry.
- Lessons are fast-paced and challenging, but also meet the needs of all groups of pupils. They engage pupils fully in active, practical learning, supported by a wide variety of interesting resources. Skilled teaching assistants work alongside pupils who need extra support to ensure they understand and can manage the tasks set for them.
- Teachers pitch carefully phrased questions at individual pupils, ensuring that all are involved in whole-class sessions. They modify planning for groups and individuals from day to day, based on how well pupils have understood new learning.
- Pupils are challenged to explain their reasoning and strategies using correct mathematical language. Able Year 3 pupils were able to explain clearly the steps they had taken to solve simple algebraic equations.
- Frequent rigorous assessments feed into individual and group targets that pupils know and use to help them improve. Teachers' marking often shows pupils the next steps in learning.

Quality of the mathematics curriculum

The quality of the mathematics curriculum is good.

- Planning is detailed and tailored to the needs of lower, middle and higher attaining pupils through carefully differentiated tasks.
- Excellent cross-curricular links greatly enhance pupils' enjoyment. For example, Year 4 and 5 pupils were inspired by investigating the connections between mathematics and art when they examined the works of Escher and Kepler as part of their work on tessellations.
- Mathematics in real-life contexts is central to the school's philosophy and is evident in pupils' work. Pupils of all ages take turns to run the 'Blackboys Café' on Friday afternoons, using their mathematics skills in cooking, pricing and collecting and counting money.
- Pupils have good opportunities to solve problems and work on mathematical investigations, as when Year 5 and 6 pupils tried to find the 12 different pentominoes, identifying the order of rotational symmetry for each one.
- The school's main focus now is to build up a repertoire of investigative activities to fit in with each block of work. In the words of the subject leader; 'We need to get smarter about tying themes, topics and units of work together – we need to take a few more risks'.

Effectiveness of leadership and management of mathematics

The effectiveness of the leadership and management of mathematics is outstanding.

- The school's greatest strength lies in the excellent teamwork between all staff, who share your high aspirations for the pupils.
- The subject leader provides outstanding support and guidance for all staff and is an inspirational teacher. You work together very effectively to raise pupils' achievement.
- Rigorous monitoring of pupils' progress and analysis of the performance of groups and individuals clearly identify the subject's strengths and areas for improvement. These inform whole-school planning and feed into highly challenging targets, which are almost always met.
- Your termly meetings with teachers to review the progress of every pupil lead to prompt action to tackle early signs of underachievement. The interventions that you put in place are carefully tailored to need and their impact is evaluated after six weeks. In this way you are all constantly seeking to 'plug the gaps' in pupils' understanding.
- Effective partnerships with local schools enrich the school's provision, for example, through Year 6 masterclasses and participation in an annual mathematics quiz.
- There are excellent initiatives to involve parents more fruitfully in their children's learning. These include a very helpful 'Four Rules' booklet and an informative 'Taking the numb out of number' session. Teachers use the school's website to set homework challenges for pupils and for parents.

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

- A personal approach is at the heart of the school's success in improving teaching and learning. The subject leader keeps up to date with the latest developments and provides regular training and much informal support for all colleagues.
- Individual needs of staff are tackled through coaching and opportunities to undertake further training. The specialist teaching assistant for mathematics has attended a number of courses which have equipped her exceptionally well to support pupils who find learning difficult.

Areas for improvement, which we discussed, include:

- seeking increasingly creative ways to incorporate opportunities for pupils to use and apply their knowledge and skills in each unit of work through investigations and links with wider topics and themes across the curriculum.

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

As explained previously, 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