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Mrs C Woodward
Headteacher
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Dear Mrs Woodward

Ofsted 2013–14 subject survey inspection programme: mathematics

Thank you for your hospitality and cooperation, and that of your staff and pupils, during my visit on 10 February 2014 to look at work 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 without their consent.

The evidence used to inform the judgements included: interviews with staff and pupils; discussion with the numeracy link-governor; scrutiny of relevant documentation; analysis of pupils' work; and observation of four part lessons.

The overall effectiveness of mathematics requires improvement.

Achievement in mathematics requires improvement.

- Children achieve above the local authority and national expectations in mathematics at the end of Early Years Foundation Stage. Pupils leave Year 2 and move into Key Stage 2 with a good grounding in basic mathematical computation. The proportions of pupils who exceed Levels 2 are higher than the national averages.
- These skills have not been built on effectively during Key Stage 2. Pupils, including the more able, find particular difficulty in applying their knowledge and understanding to problems or calculations involving long multiplication and division, fractions and ratio. In the past, most groups of pupils have not made the progress expected of them, and more able have not always reached their potential.
- The situation is improving. The progress of pupils in Years 3 and 4 is more even between ability groups, including those in receipt of the pupil

premium funding. In general, work is better matched to the needs of individuals and groups of pupils, because their skills are understood by staff. Additional lessons aimed at preparing pupils for new learning help those who leave Key Stage 1 lacking in confidence or insecure in calculating. The increased emphasis on daily mental arithmetic has proved effective. Pupils are getting quicker at doing simple mental calculations accurately and this streamlines their longer calculations.

- Pupils in Years 5 and 6 are still 'playing catch up'. For a small but significant minority, uncertainty about how the number system works holds them back. Too many pupils fail to see how mathematical concepts are connected, for example, when manipulating fractions or calculating area. This limits their ability to tackle problems, and significantly reduces their ability to talk about mathematical ideas and concepts confidently.
- When a method is provided for pupils, particularly the average and lower attaining, then they persevere and succeed but, in general, they have limited flexibility in applying strategies to solve problems, or in recognising their errors.

Teaching in mathematics requires improvement.

- Lessons observed and the scrutiny of pupils' work showed signs that teachers are using more investigations as a way to get pupils to think more deeply. Some teachers are much better than others at exploring the mathematical thinking behind pupils' work, and using this to record generalisations. Not all teachers check and encourage pupils to reason why patterns arise.
- You are steadily building up a culture in Key Stage 2 lessons in which mathematics and mathematical thinking are discussed. However, this discourse is of variable quality and, consequently, some pupils' mathematical language is not developed securely. Moreover, conceptual understanding is less secure where pupils, particularly those entitled to the pupil premium, do not articulate their thinking and reasoning.
- The scrutiny of mathematics books shows that work is not always well matched to pupils' abilities. Seldom does it appear are pupils asked to show alternative methods for calculation to improve their fluency in selecting the most efficient methods.
- Lesson planning follows a consistent format and details the tasks for each group of pupils. Time given to 'pre teaching' benefits those pupils who have significant gaps in understanding mathematical concepts such as division and fractions. In this respect, teachers are making sound use of assessment information.

The curriculum in mathematics requires improvement.

- The curriculum has been strengthened with the introduction of more practical work, particularly in comparing and calculating with numbers. A useful mathematics 'interest table' in Year 1 classrooms provides the chance for pupils to solve practical problems, such as tessellating shapes.

Display boards are sometimes used by teachers and pupils to pose problems for each other to work out, and role-play areas for pupils in Years 3 and 4 have a mathematical theme relevant to the class's work. However, very little guidance is provided for teachers on how to exploit the mathematics potential of these initiatives.

- The scheme of work makes appropriate use of published guidance but has not adapted it to show clearly how problem solving and investigations can support the development of pupils' conceptual understanding.
- The introduction of a special award of a 'times-table champion' has captured pupils' interest. These incentives are serving to boost the focus on young mathematics.

Leadership and management of mathematics are good.

- Creating a team of senior leaders to spearhead the improvements in mathematics teaching and deploying these staff to strengthen learning in the Key Stage 2, exemplify the high priority you are giving to improving mathematics outcomes. The experienced mathematics consultant and knowledgeable numeracy governor provide effective challenge.
- Your accurate evaluation of the school's mathematics provision has led to significantly strengthened assessment and tracking systems and school-wide action plans. The mathematics leadership team is very clear where the weaker teaching and aspects of the curriculum have left a legacy of underachievement. Appropriate training for staff has been initiated.
- You have responded speedily to the problems caused by pupils' weak understanding of place value as pupils move through Key Stage 2. Extra lessons are provided during assembly and at the start and end of the day. Good quality resources have been purchased, such as mathematical dictionaries and practical equipment to help pupils manipulate numbers.

Areas for improvement, which we discussed, include:

- ensuring that lessons provide greater focus on developing pupils' conceptual understanding
- providing more guidance for teachers on how to incorporate problem solving, investigational activities and discussions into their lessons so that pupils are challenged to use and develop their mathematical thinking.

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

As explained previously, 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

Jonathan Palk
Her Majesty's Inspector