Aviation House
125 Kingsway
London
WC2B 6SE

T 0300 123 1231
enquiries@ofsted.gov.uk
www.ofsted.gov.uk

2 December 2014

Mrs S Longmire
Headteacher
Dines Green Primary School
Tudor Way
Worcester
Worcestershire
WR2 5QH

Dear Mrs Longmire

Ofsted 2014–15 subject survey inspection programme: mathematics

Thank you for your hospitality and cooperation, and that of your staff and pupils, during my visit on 2 December 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; scrutiny of relevant documentation; analysis of pupils' work; and a number of short visits to lessons with you.

The overall effectiveness of mathematics requires improvement.

Leadership and management of mathematics requires improvement.

- Since starting as headteacher in September 2014 you have quickly pin-pointed the strengths to build on and weaknesses to address in the quality of teaching and pupils' achievement in mathematics. Detailed plans are in place to bring about improvements through training and working with local partners.
- The subject leader has used his good knowledge of mathematics to gather a wide range of monitoring and evaluative information. Analyses of teachers' planning and pupils' work, focussing on the acquisition of core skills and techniques are recorded in detail. However, the findings from these activities are not used carefully enough to bring about improvements to teaching and ensure that pupils' achievement is consistently good.

- Training for staff has helped to develop their understanding of the new national curriculum, the use of information and communication technology (ICT) and the teaching of mental strategies. However, no training on activities and approaches teachers can use to deepen pupils' conceptual understanding or problem solving has been undertaken.

The curriculum in mathematics requires improvement.

- The subject leader has forged forward confidently with the implementation of the new national curriculum. Pupils are taught the appropriate content but teachers lack guidance on some suitable approaches to the teaching of concepts such as fractions or shape and area work. This results in pupils' weaker understanding of these areas of mathematics.
- Pupils like the organisation of teaching in sets. They respond well to the challenges provided for them but planned activities tend to focus on techniques rather than deeper 'mastery'. Work on place value in books demonstrates some unnecessary repetition and lacks the breadth and depth required for pupils to make more rapid progress. Planned opportunities to teach pupils how to develop systematic approaches to solving problems are missing.
- Some good opportunities exist for pupils to apply their mathematics in other subjects and solve more complex problems. Pupils in Year 6 confidently used their knowledge of scale, ICT, money and calculation to solve a real-life local housing issue. In these circumstances pupils develop deeper understanding of mathematics in the world beyond the classroom.

Teaching in mathematics requires improvement.

- The quality of teaching is inconsistent across the school. It is failing to develop pupils' deeper conceptual understanding well enough to ensure all groups of pupils make consistently good progress. For example Year 5 pupils understand the technique of how to find a fraction but lack a deeper conceptual understanding to recognise confidently a fraction of a shape or describe fractions that are bigger than one quarter.
- Teachers' questions often fail to develop learning sufficiently or identify pupils' underlying misconceptions. As a consequence pupils become passive in their learning rather than wrestling with mathematical ideas. Moreover, adults are not used quickly enough to intervene. By contrast, high quality intervention programmes help pupils with disabilities and special educational needs achieve well because they are planned carefully and tailored to pupils' individual needs.
- The quality of marking varies across the school. At times, teachers' feedback does not provide a clear next step or is not responded to by pupils. Where the marking is good, insightful comments challenge pupils. For example in Year 6, the challenge to 'create a compound shape where the perimeter is numerically twice the area' deepened pupils' conceptual understanding of shape.

Achievement in mathematics requires improvement.

- Children start school with skills lower than normally expected. They make good progress during Reception so that the proportion achieving a good level of development in number and shape is in line with the national average. This good start is not maintained throughout Key Stage 1. For the past three years, not enough pupils have made the expected rate of progress to attain the level normally achieved by the end of Key Stage 1.
- In recent years the proportion of pupils making the expected rate of progress during Key Stage 2 has declined, especially that of girls. Between 2012 and 2014, the gap in attainment between disadvantaged pupils and their peers has widened. Current pupils on roll are projected to make better progress this year but their performance remains inconsistent across the school.
- Pupils have positive attitudes to mathematics when activities interest and inspire them. They are often required to set their own level of challenge in lessons. This strategy helps them to understand what they are capable of and what they need to learn next. This approach has also been successful in developing pupils' mental and oral skills. For example one Year 3 pupil accurately described a variety of different methods to calculate 36+18 mentally.

Areas for improvement, which we discussed, include:

- providing training and written guidance for staff on approaches and activities to deepen pupils conceptual understanding and to support the teaching of problem solving
- using the findings from monitoring and evaluation activities more strategically to bring about improvements to teaching and pupils achievement
- mapping systematically the progression of key concepts such as fractions and how they will be taught, incorporating a problem solving in your newly designed curriculum.

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

Richard Light
Her Majesty's Inspector