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Mrs S Wilson Executive Headteacher Northern Parade Junior School Doyle Avenue Portsmouth Hampshire PO2 9NF

Dear Mrs Wilson

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 22 September 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: discussions with you, the associate headteacher and leader of mathematics; discussions with pupils; scrutiny of relevant documentation including lesson observation reports; analysis of achievement data and pupils' work; and observation with the associate headteacher and leader of mathematics of parts of nine lessons.

The overall effectiveness of mathematics requires improvement.

Leadership and management of mathematics is good

- Leaders have seized the opportunity provided by the new national curriculum to reenergise how the school is teaching mathematics. The leadership's determination is evident through the significant investment in extra staff and resources. Looking at practice in other schools and ensuring all staff can avail themselves of specialist training provide a strong platform for improvement. This forms part of a comprehensive staff training and development programme to increase expertise in the school.
- Partnerships with the local authority, the university and local schools provide an incentive to share ideas and review effectiveness. The school's action plan rightly prioritises the achievement of different groups of pupils and maintaining the improvement in the proportion gaining higher levels. The governing body has directed substantial funding to the plan. It is not clear how and when the impact of actions will be evaluated.

■ During discussions, it was evident that you have an accurate view of the effectiveness of teaching. However, written evaluations exemplify process at the expense of how well pupils are developing as mathematicians.

The curriculum in mathematics requires improvement.

- The curriculum until this term has lacked breadth due to an over emphasis on computations. This has resulted in pupils going over skills they have already mastered without being challenged to deepen their reasoning.
- A more balanced curriculum is now taught, with lots of practical work. Pupils are responding well to this, although it is too early to appraise its impact on their achievement.
- You have put the aims of the mathematics curriculum at the heart of the school's work in mathematics. Emphasis is given when planning topics to their mathematical potential. Ensuring that pupils use and develop their skills in different situations. Problem solving is helping pupils to think more deeply and reason out why one strategy may be better than another.
- This work is being well supported by the recent spending on resources. These aids are allowing pupils plenty of scope to explore their ideas at a practical level. It is helping surmount the 'can't do maths attitude' that has held back the progress of some pupils.
- You have made good use of recent research into the best use of teaching assistants. The investment in releasing senior teachers to teach the less able pupils is securing their positive attitudes towards mathematics.

Teaching in mathematics requires improvement.

- Lessons observed and the scrutiny of pupils' work show signs that teachers are now 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 develop and record generalisations. Not all teachers check and encourage pupils to reason why patterns arise.
- Pupils are generally reluctant to think more deeply and teachers' questions are not always encouraging them to delve deeper. Those pupils who have more limited awareness and mathematical knowledge are not given the language to discuss their mathematical thinking. They complete diligently their own assessment of progress but have insufficient understanding of the new skills they have learnt.
- Practical activities and exciting problems are well managed. Teachers and their assistants target accurately those pupils who show signs that they are struggling and help them keep up.
- On occasions, teachers are not expecting enough of the more able pupils and not challenging them to extend their skills.

Achievement in mathematics requires improvement.

- Pupils start Year 3 with average mathematical skills and understanding. They are generally secure at calculating but their mathematical understanding is shallow. By the end of Year 6, pupils' attainment is broadly average. Pupils' knowledge and use of multiplication table facts are weak and impedes their progress.
- The gap between those pupils receiving pupil premium funding and other pupils widens as the pupils move through the school. These pupils, and those who enter the school with prior attainment at the lower end of average, do not make expected progress. They are too reliant on their teachers indicating which strategies they should use to solve problems or in tackling new work.
- More able pupils make the progress expected of them. Around 25% gained the higher level in the Year 6 national tests, this year. This was a consequence of intensive mathematics coaching in Year 6.
- Lower-attaining pupils in all years 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 connect, for example, when multiplying, dividing or manipulating fractions. 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. In general, they have limited flexibility in applying strategies to solve problems, or in recognising when other strategies might work better.

Areas for improvement, which we discussed, include:

- improving pupils' mental arithmetic skills so they can move away from overlong paper-based methods for simple computations
- ensuring that tasks fully extend the skills of more able pupils
- providing more guidance for teachers on how pupils should be helped to acquire the mathematical language needed to reason and discuss learning
- checking more closely the impact recent actions are having on pupils' progress, particularly those pupils who receive pupil premium funding
- clarifying when the action plan is to be reviewed for its impact, so that governors can evaluate the success of the new approaches to teaching mathematics.

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