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Better education and care

30 October 2006

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Dear Mr Quinn

Ofsted 2006-07 survey inspection programme: mathematics and Year 6/7 transition

Thank you for your hospitality and co-operation, and that of your staff, during my visit with my colleague Jane Austin HMI on 9 and 10 October 2006 to look at work in mathematics and pupils' transition from primary school into Year 7. As outlined in my initial letter, the mathematics element of the inspection had a particular focus on pupils' enjoyment and understanding of 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 made included: interviews with staff and pupils, scrutiny of relevant documentation, analysis of pupils' work and observation of eleven parts of lessons.

Mathematics

Overall effectiveness of the subject, mathematics, was judged to be inadequate.

Achievement and standards

- For the last few years, standards in mathematics have been significantly below average. Pupils joined the school having achieved broadly average standards at primary school but made too little progress in each key stage, and markedly less than in other schools nationally.
- Early analysis of the 2006 results shows a little improvement but too many pupils, about 10%, did not pass mathematics GCSE at all; a contributory factor was the staffing difficulties in mathematics last year.
- Few pupils continue with mathematics into the sixth form. In 2006, standards at AS were low and there were no entries at A level. Improving the quality of

teaching and learning, particularly at GCSE, is fundamental to equipping pupils with the knowledge and understanding required for further study.
- Although pupils are now making satisfactory progress in lessons, there is not enough good teaching to help them catch up earlier lost ground. The department organises booster and intervention sessions but their impact has not been evaluated.
- In lessons, pupils' behaviour is good. They generally cooperate and respond well to practical activities and opportunities to work in pairs, but can, at other times, be passive. Where teachers' expectations are high, for example in using of subject-specific language precisely, pupils strive to reach them, showing a preparedness to 'have a go' and taking care over the mathematical presentation of their work.

Quality of teaching and learning

- Senior managers' evaluation that teaching and learning in mathematics are satisfactory with some good practice is broadly accurate but relies in part on external views. The school's own monitoring tends to focus on what teachers do rather than how well pupils learn.
- The Secondary National Strategy is having a positive influence on teaching styles and lesson structure at Key Stage 3 but there are inconsistencies in teaching. During the inspection, most teachers provided interesting tasks and opportunities for pupils to work in pairs but this is not embedded in both key stages and across the department.
- Most teachers have good subject knowledge and explain things clearly, although they often emphasise 'how' rather than 'why'. Some use follow-up questions skilfully to prompt further responses and pursue pupils' understanding.
- Gaps in some teachers' subject knowledge mean potential errors and misconceptions are missed and lead to insecurity about planning work at the right level, limiting progression in learning. In some lessons, teachers did not check what pupils knew, gave all the same work, and allowed insufficient time at the end to review learning in a meaningful way.
- Marking varies in its usefulness. Although the department follows whole-school assessment procedures, the system is not reliable in identifying underachievement and does not provide useful information to aid teachers' planning.

Quality of the curriculum

- The key-stage coordinators have developed schemes of work very recently and intend to integrate opportunities to use and apply mathematics and for information and communication technology (ICT). Up-to-date textbooks aid curricular coverage but are no substitute for proper schemes of work.
- Currently, no guidance is provided on approaches to teaching and learning or on assessment, a particular need for less experienced teachers, although help is given readily when requested. Systems of monitoring are ineffective in ensuring that all pupils experience the whole mathematics curriculum.

Leadership and management

- Leadership and management of mathematics are inadequate. Vision and drive to remedy the underachievement evident in pupils' results has been lacking. The subject leader's evaluation of the department's work is over-generous.
- Line-management arrangements, while offering appropriate support during difficult times last year, have not secured rapid improvement, lacking, for instance, clear short-term targets. Outcomes of occasional monitoring are not adequately tracked and there is no link into a cycle of improvement planning.
- The use of assessment data is weak although recent analyses carried out by the Key Stage 4 coordinator provide a starting point for reflection on the department's work.
- While there is some collaboration between staff, several of whom spoke of the more harmonious working relationships, there is little sense of a whole team working together for the benefit of all pupils. Much is presently left to the skill of individual practitioners.
- The mathematics development plan requires refinement to help the key-stage coordinators establish their management roles and lead developments. Professional development is not adequately thought through: there are no well-established structures to support less experienced or non-specialist staff.
- There are green shoots of improvement: the recently appointed key-stage coordinators are working energetically to tackle important areas.

Subject issue: pupils' enjoyment and understanding of mathematics

Pupils are clear that they understand mathematics better when they learn through interactive discussion and questioning. They enjoy practical activities and working in pairs but there is inconsistency in their experiences. In general, younger pupils receive more variety in activities and styles of learning. Pupils lose concentration when teachers talk at length. They cite examples of being able to use a particular mathematical technique while not understanding why it works, despite teachers' demonstration of methods, plenty of practice and extra help on request. Pupils know they are more likely to retain knowledge if they learn through discussion and practical activities. Few showed awareness of the concept of proof but were ready to explore 'why'. Many lacked the investigative skills expected of their age.

Inclusion

Pupils feel well cared for by their teachers and praise their willingness to give extra help. Inconsistencies in the quality of teaching and in pupils' access to aspects of the mathematics curriculum mean that the subject is not as inclusive as it should be.

Areas for improvement, which we discussed, included:

- raise achievement, particularly at Key Stage 4 and in the sixth form
- make better use of assessment in teaching and learning
- develop effective schemes of work that include identified opportunities for using and applying mathematics and ICT

- improve the effectiveness of subject leadership and management, and develop the role of the key-stage coordinators.

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

Year 6/7 transition

- The quality of transition is satisfactory. Year 7 pupils say that they feel welcome, well cared for and safe. They find staff and fellow pupils consistently helpful and sympathetic to the anxieties and challenges faced by new pupils. The school has a number of effective strategies that make positive contributions to this smooth transfer. Prior to pupils' arrival these include visits by staff to primary schools during the summer term and an induction day.
- The allocation of a teaching assistant to each Year 7 form for several weeks at the beginning of the academic year has been successful in ironing out difficulties such as navigating round the school, getting to lessons on time and organising equipment.
- Dedicating the use of one quadrangle to Year 7 during breaks has increased pupils' sense of security and the opportunities they have to build friendships amongst their peer group. Pupils appreciate the assistance offered by sixth-form students and Year 8 buddies. In addition to its spiritual dimension, the Year 7 retreat makes a significant contribution to the social cohesion of form groups.
- By the time pupils join Year 7, the school has gathered an appropriate range of social and academic information about each pupil. However this is not taken into account sufficiently by teachers when planning lessons. Not all pupils make the progress of which they are capable because work does not build well on what they already know, understand and can do. However, the Year 7 pastoral team makes systematic use of the data to evaluate pupils' needs and highlight those likely to benefit from additional support of various types. In addition, it informs meetings between the learning coach and all pupils early in the autumn term to set targets relating to learning and personal development.
- Thorough systems are in place for the transfer of information regarding vulnerable pupils and effective use is made of this to ensure they receive suitable support. Results indicate that pupils with learning difficulties and disabilities make progress at least the same rate as other pupils. Pupils whose literacy and numeracy skills are below average follow specialised programmes that are matched to their level on entry. Staff are well briefed on the social and academic needs of pupils with learning difficulties and/or disabilities.
- The senior leadership team has taken helpful steps to reinvigorate relationships between the school and its partner primary schools. Regular meetings of headteachers have been re-established. In addition, the school has put together a programme of taster lessons or short courses in a range of curriculum areas from which primary schools can select. However, at present these do not form a coherent platform for developing continuity between the primary and secondary curriculum.

Areas for improvement, which we discussed, included:

- ensure that activities in lessons are well matched to the needs of all learners so that pupils' progress does not slow down on transfer to the school
- develop curriculum links with primary partners that enhance pupils' progress on transfer.

As I explained previously, a copy of this letter will be sent to your local authority and will be published on Ofsted's website. It will also be available to the team for your next institutional inspection.

Yours sincerely

Jane Jones
Her Majesty's Inspector