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Mrs C Fearria  
Headteacher  
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Dear Mrs Fearria

Ofsted 2009-10 subject survey inspection programme: mathematics

Thank you for your hospitality and co-operation, and that of your staff, during my visit on 1 and 2 July 2009 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. All feedback letters will be published on the Ofsted website at the end of each half-term.

The evidence used to inform the judgements made included interviews with senior staff, the director of mathematics and computing, the head of mathematics, an experienced teacher of mathematics, a special needs teacher, and students in Year 8 and 12. I scrutinised relevant documentation, analysed students' work, observed parts of eight lessons and visited an inter-house mathematics competition.

The overall effectiveness of the subject, mathematics, was judged to be satisfactory.

#### Achievement and standards

Achievement in mathematics is satisfactory. Standards are rising and are approaching national averages.

- Students' attainment on entry to the school is broadly average overall.
- At Key Stages 3 and 4, standards have been below national averages and students have made unsatisfactory progress given their starting points with girls doing less well than boys. The school's data for 2008 and 2009 show standards by the end of Year 9 have risen to broadly average, which represents satisfactory achievement. Standards at GCSE rose a little in 2008 but remained below average with around one in eight students not gaining a GCSE in mathematics. The picture for 2009 is much stronger with rises at A\*-C and A \*-G predicted.

- At both key stages, standards in using and applying mathematics are lower than in other areas of the mathematics curriculum.
- The first Year 13 cohort completed A level this summer, and Year 12 students have taken AS. Standards are broadly average and achievement is satisfactory. Students are enthusiastic about studying mathematics at A level.
- Behaviour was good in the lessons observed. Students are cooperative and most work well in pairs and independently. They are willing to explain their thinking but sometimes struggle to express their ideas mathematically. Students of all ages spoke of teachers' willingness to help them within and beyond lessons. They enjoy practical activities and mathematical games and would like to use information and communication technology (ICT) more often in lessons.

### Quality of teaching and learning of mathematics

The quality of teaching and learning of mathematics is satisfactory.

- Most of the teaching is satisfactory, often with effective features, and some is good. Relationships between students and with adults are a strength: routines are well established. Teachers give clear explanations that enable students to use techniques with increasing confidence. They circulate around the class as students work, providing appropriate support for individuals.
- Characteristics of the better teaching include opportunities for students to work together on activities that make them think hard, and discuss and justify their reasoning. Teachers use questioning skilfully to probe and deepen students' understanding and build on their responses to make teaching points.
- In the weaker lessons, progress is slower, particularly where there is a lack of clarity about precisely what students will learn and how the planned tasks will lead to that learning. Not enough use is made of strategies such as mini-whiteboards to ensure all are involved and making progress.
- Many teachers refer to the level or grade of the topic being taught. While most students are aware of their target grades or levels, younger students do not know what they need to do to attain their target. Key Stage 4 students are given lists of GCSE topics and associated grades: Year 8 students said they would like something similar, particularly as an aid to revision.
- Practical activities and meaningful contexts add to students' enjoyment but discussion with students and scrutiny of their exercise books show that they spend most of their time tackling exercises and worksheets of a repetitive nature. Not enough attention is given to solving problems in new or non-routine contexts and investigating mathematics. Although some teachers use interactive whiteboards effectively, opportunities for students to use ICT as a tool for learning mathematics are limited.

### Quality of the mathematics curriculum

The quality of the mathematics curriculum is satisfactory.

- Growing numbers of students are choosing to study mathematics in the sixth form, with more than 20 opting for it next year. Year 12 students are pleased to be given a choice of applications units in the second year of their course. A very able student is being supported in studying further mathematics.

- The Key Stage 4 scheme of work is based on the awarding body's specification and associated texts. The Key Stage 3 scheme provides plans and resources for teaching the mathematical content of the National Curriculum. Electronic links to some enrichment and investigative activities are provided, but these are regarded as optional. Monitoring does not ensure all students receive their entitlement to using and applying mathematics and ICT. The department has started to revise the Year 7 scheme in response to the new National Curriculum but this work has proceeded too slowly: it urgently needs completing and with a much greater emphasis on the key process skills.
- The schemes lack guidance for staff on approaches to adopt. While teachers emphasised the readiness of their colleagues to provide support, this lack of guidance is unsatisfactory, particularly given the many lessons taught this year by temporary teachers and teachers whose main specialism is not mathematics.
- Following the announcement that national Key Stage 3 tests would cease, the department decided to start GCSE in Year 9. Outline plans for early GCSE entry, AS in Year 11, and use of GCSE statistics should be reviewed carefully to ensure that all students are enabled to realise their mathematical potential and that firm foundations are laid for students' future study, employment and lives.
- Intervention strategies have focused on the Year 11 cohort with GCSE unit results showing they have had a positive impact on standards.
- A small nurture group of Year 7 students has made good progress this year.
- The mathematics department offers some enrichment activities, including an enjoyable inter-house mathematics competition.

### Leadership and management of mathematics

The leadership and management of mathematics are satisfactory.

- The school has faced significant staffing difficulties in mathematics this year and has been reliant on several non-specialist and temporary teachers. The priority in the short term has been on raising standards at GCSE. Your effective strategic leadership has secured capacity for the future through the recent appointment of a new director of learning community and three new mathematics teachers from September 2009. The new director of has quickly gained a good grasp of the strengths and weaknesses in the provision and priorities for improvement.
- There have been weaknesses in management. Monitoring has been insufficiently robust to ensure that all students have made at least satisfactory progress, with Year 8 students particularly adversely affected. A couple of Year 10 groups have not fared as well as might be expected in GCSE unit examinations. Senior leaders are well aware that this ground must be caught up next year. Line management by senior staff has not ensured that actions discussed in meetings are followed through properly so that not all of the school's clear expectations of middle managers have been met. Performance management of some mathematics teachers has not been completed and this requires immediate attention.
- Good guidance is provided to middle managers on self evaluation and on aspects such as what to look for when conducting scrutiny of students' work. The mathematics department's self-evaluation is accurate except in its assessment of the curriculum where too little weight is given to using and applying mathematics. There is scope to improve the quality of action planning by sharpening success criteria and specifying monitoring activities clearly. The curriculum and leadership and management are not included in the current mathematics action plan.

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

- This has not been an explicit focus for development this year, but more should have been done to secure good quality teaching across all classes, for instance through discussing approaches and planning collaboratively. Minutes of departmental meetings show awareness of the need to incorporate the key process skills in schemes of work, but this has not fed through to a drive to embed them in teaching and learning.
- Lessons jointly observed with senior and subject leaders were evaluated accurately by them. The school's records of observations place greater emphasis on the teaching than on its impact on the progress made by students.
- The teacher who is following an employment-based route to training has been well supported by an external consultant.

Areas for improvement, which we discussed, included:

- improve achievement, particularly of girls, and ensure students regain any ground lost this year
- increase the proportion of teaching that is good or outstanding, drawing on strategies such as collaborative planning and mentoring to share good practice
- ensure schemes of work place appropriate emphasis on the key process skills and provide guidance for teachers on approaches that secure progression and enhance students' conceptual understanding
- as a matter of urgency, complete teachers' performance management
- increase the rigour of monitoring to ensure all students benefit from a well-taught, rich mathematics curriculum and make better use of the outcomes to tackle weaknesses, drive improvement, and inform strategic planning.

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

As explained in our previous letter, a copy of this letter will be sent to your local authority and local Learning and Skills Council and will be published on the Ofsted website. It will also be available to the team for your next institutional inspection.

Yours sincerely

Jane Jones  
Her Majesty's Inspector