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Mr Mitchell Headteacher Thomas Alleyne's High School Dove Bank Uttoxeter Staffordshire ST14 8DU

Dear Mr Mitchell

Ofsted survey inspection programme – Science and Design & Technology

Thank you for your hospitality and cooperation, and that of your staff, during the joint visit by myself and Peter Toft HMI on 16-17 October 2006 to look at work in science and design and technology.

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 staff and pupils, scrutiny of relevant documentation, analysis of pupils' work and observation of lessons.

Science

The overall effectiveness of Science was judged to be good.

Achievement and standards

Achievement and standards in science are good.

- Standards are significantly above other schools nationally, with pupils having point scores above the national average for each year since 2001.
- The pupils show good achievement in Key Stage 3. When compared with similar schools, pupils are significantly above the average. They are making better progress in science than in mathematics and much better progress than in English in the school.

- In Key Stage 4 performance at GCSE is not as good as in Key Stage 3.
 While the proportion of GCSEs awarded at grades A* C are above the national average, they are not as far ahead of similar schools as they are in Key Stage 3.
- Measures of success show Key Stage 4 performance in science above that for English and mathematics.
- At A level students are again showing performance that is above the national average.

Quality of teaching and learning

The quality of teaching and learning in science is variable from satisfactory to outstanding with the majority of lessons being at least good.

- The quality of teaching is inconsistent and more should be done to lift the quality of the weaker teaching.
- In the poorer lessons teaching makes less demand on pupils, and there
 is less variety of activity to engage pupils. Questioning style is limited
 and does not challenge pupils sufficiently or require them to participate
 effectively.
- In the best lessons there are high levels of engagement, pupils are challenged by questions that are targeted at individuals to check understanding and raise levels of application. Also in the best lessons pupil's views and ideas are canvassed, and teachers respond positively to pupils' ideas prompting them to behave responsibly.
- In a minority of lessons behaviour is poor, and in interviews pupils describe how lessons have been disrupted by poor behaviour. The need to improve behaviour management has been recognised by the head of department.
- The facilities of some science rooms are poor and the limited access to information and communication technology (ICT) constrains what can be done.

Quality of the curriculum

The quality of the curriculum is good.

- The content of Key Stage 3 scheme of work meets the requirements of the National Curriculum.
- Pupils describe how they find difficulties with having three teachers for science in Key Stage 3.
- In Key Stage 4 and post-16 there is a good range of courses to meet the needs of pupils.
- The school has taken a rational approach to provision of courses in Key Stage 4, and shows flexibility concerning future provision and a willingness to innovate for the benefit of pupils.

Leadership and management

Leadership and management in Science are good.

- The head of science has only been in post a few weeks, but has already made an accurate appraisal of the development needs for the department.
- Communication in the department is well organised and effective.
 Minutes of meetings and memoranda are systematic and clear, and reflect a strong priority for collaborative working and team building.
- The priorities for development identified by the head of department are well judged and include the development of: improved schemes of work; the more systematic inclusion of science investigation in schemes of work; improvement of ICT resources; better data collection and analysis to identify effective teaching and learning and to set targets and track success with pupils; improvement of behaviour management; implementing assessment for learning more fully.

Inclusion

Provision for inclusion is good.

 Pupils are making progress equally well across all groups. In class teachers, on the whole, ensure all pupils have the opportunity to learn in line with their attainment.

Areas for improvement, which we discussed, included:

- ensuring that the skills of science investigation are planned into the work programme for pupils, both to develop skills of scientists but to support more effective learning
- using the opportunity of revision of Key Stage 3 scheme of work to identify opportunities to develop more systematically skills of literacy, numeracy, and to promote social, moral, spiritual and cultural development
- encourage consistently high standards of teaching through thorough monitoring and the sharing of good practice.

Design and Technology

The overall effectiveness of design and technology (D&T) was judged to be good. D&T has some very good features and the potential to become excellent

Achievement and standards

Standards are high and rising.

- Standards are well above national averages, especially so in GCSE and Year 12 coursework. Students enter the school with varied experiences of D&T and make good progress to reach these high standards.
- Good and sometimes excellent levels of design capability are achieved throughout the school. Students evaluate objectively and carefully.
 Making skills are generally good within a wide range of the subject's focus areas.
- Standards are rising and the department has recently been effective in helping abler students achieve the highest grades in the GCSE examinations.
- Students' behaviour and motivation are generally good and often excellent in D&T lessons.

Quality of teaching and learning

The quality of teaching and learning is good, with some excellent aspects.

- Students are effectively taught by well qualified specialist teachers.
- The school is effective in helping teachers to improve their teaching methods.
- Staff use excellent methods to teach designing and this underpins the students' high levels of design capability.
- Work is marked routinely and accurately and good common systems for recording results and conveying them to students are used by staff.

Quality of the curriculum

The quality of the curriculum is good.

- The early specialisation in D&T focus areas works very well in enabling students to make sustained progress and to learn in depth.
- The courses are based on a good range of interesting and modern design and make projects and are well supported by good teaching materials for the more theoretical aspects of D&T.

- Sixth form courses are well established and the decision to choose a course for Year 12 which is focused more on designing than on written case studies has led to an improvement in students' D&T capabilities.
- Extensive extra-curricular activities enrich students' experiences very well.

Leadership and management

This subject is very well led and managed.

- The school senior management support D&T very well and have a clear view of its strengths and weaknesses.
- Support from local industry is very strong.
- Improvement planning is sharply focused and steps to bring about carefully managed improvements.
- The department is very well run and there is a good collaborative atmosphere among staff.

Inclusion

The subjects' contribution to the inclusion of students is good.

- Pupils with learning difficulties are well supported in lessons.
- Effective steps are being taken to challenge abler pupils, especially so in the Year 10 acceleration group.

Areas for improvement, which we discussed, included:

- raise the effectiveness of all teaching to the level of the best by, for example, sharpening the focus on individual students in discussions, allowing them to answer questions at length and ensuring that they use tools and machinery safely and efficiently
- raise standards, including for abler students, by strengthening their concentration whilst designing, reviewing teaching for the written examinations and evaluating the impact of early entry for GCSE on the grades achieved
- routinely measure your curriculum and resourcing against best practice elsewhere, especially by systematically reviewing the support materials developed by external agencies.

I hope these observations are useful as you continue to develop science and D&T in the school.

As I explained in my previous letter, 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

Ian Richardson Her Majesty's Inspector