

**An Roinn Oideachais agus Scileanna**

**Department of Education and Skills**

**Subject Inspection of Science and Chemistry  
REPORT**

**Mount Temple Comprehensive School  
Malahide Road, Dublin 3  
Roll number: 81002K**

**Date of inspection: 8 March 2016**



**A N R O I N N | D E P A R T M E N T O F  
O I D E A C H A I S | E D U C A T I O N  
A G U S S C I L E A N N A | A N D S K I L L S**

**REPORT  
ON  
THE QUALITY OF LEARNING AND TEACHING IN SCIENCE**

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**INFORMATION ON THE INSPECTION**

<b>Dates of inspection:</b>	<b>7 and 8 March 2016</b>
<b>Inspection activities undertaken</b> <ul style="list-style-type: none"><li>• Review of relevant documents</li><li>• Discussion with principal and teachers</li><li>• Interaction with students</li></ul>	<ul style="list-style-type: none"><li>• Observation of teaching and learning during eleven class periods</li><li>• Examination of students' work</li><li>• Feedback to principal and teachers</li></ul>

**MAIN FINDINGS**

- The overall quality of teaching and learning was very good.
- Practical activities featured in all lessons and it was clear that students enjoyed working in the laboratory and developing their skills of working scientifically.
- The good information and communication technology (ICT) facilities were used to engage students and support learning.
- A question-and-answer approach was used in all lessons to develop students' prior knowledge and to introduce new material.
- The very good whole-school support for science subjects is evident in the five well-equipped laboratories: however, the laboratories require low-level maintenance.
- While the overall quality of subject plans is good, subject planning would benefit from some further development.

**MAIN RECOMMENDATIONS**

- A common strategy for developing students' report-writing skills should be implemented and the assessment of such skills should be standardised across all year groups in Junior Cycle.
- The science department should develop a subject-specific approach to developing and supporting students' literacy and numeracy skills.
- An annual review and reflection on student attainment in the certificate examinations should be recorded in the subject plan.

## **INTRODUCTION**

Mount Temple Comprehensive School is a co-educational school with a current enrolment of 897 students. The programmes on offer are the Junior Certificate, a compulsory Transition Year (TY), the established Leaving Certificate, the Leaving Certificate Vocational Programme and the Leaving Certificate Applied.

## **TEACHING AND LEARNING**

- The overall quality of teaching and learning was very good. Examples of exemplary practice were observed across the range of lessons. However, there was scope for more consistent implementation of such good practice.
- The range of resources used, which included worksheets and electronic presentations, showed good preparation for lessons. Best practice was observed where lessons were planned in a way that supported active learning; for example, where students were required to work independently, on their own or in small groups, with support from the teacher as required.
- Practical activities featured in all lessons. These were very effective when an investigative approach was taken to such activities. It was clear that students enjoyed working in the laboratory and developing their skills of working scientifically.
- Lessons were well managed and students were encouraged to actively participate in the learning activities. This was reflected particularly in the high level of engagement and purposefulness seen in some lessons. Students cooperated very well with their teachers. They were confident in answering questions and demonstrated a very good level of knowledge and understanding.
- A question-and-answer approach was used in all lessons to develop students' prior knowledge and to introduce new material. Particular good use was made, in some cases, of higher-order questions, wait time, and supplementary questions. Best practice was observed where students' responses were validated and used in a constructive manner to progress their learning.
- Good use was made of ICT to engage students and support learning. For example, very clear print was used in some electronic presentations, while video was used in other cases to reinforce new learning. However, the potential for using ICT to support students' understanding of concepts could be explored further and documented in the subject plan by the science department.
- There was a strong focus on the assignment and checking of homework. Varying practice was observed with respect to the way in which the write-up of practical activities was handled. A common strategy for developing students' report-writing skills should be implemented and assessment of such skills should be standardised across all year groups in Junior Cycle.
- Development of students' literacy skills was evident in the emphasis on key words observed in most lessons. In some lessons, students were strongly encouraged to write in their own words. Greater attention could be given to explaining the alternative meaning of words in different contexts and the general terminology used in science discourse. The science department should develop a subject-specific approach to developing and supporting students' literacy and numeracy skills.

## **SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT**

- The quality of whole-school support for the provision of science subjects is very good. Science is a core subject in junior cycle. Chemistry is an optional subject in senior cycle and there is a good uptake of the subject. An optional module of Chemistry is also provided in TY.
- Overall timetabling of science subjects is appropriate. Most classes have two double periods per week for science subjects. All science lessons are held in the laboratories.
- The school has five laboratories; they are well equipped with science and ICT facilities; and relevant safety equipment is provided. However, the laboratories require low-level maintenance and cleaning.
- The school is very supportive of teachers' professional development. For example, whole-school in-service on '*Constructive Feedback*' was given by a member of the science department. Teachers have also been facilitated to attend a wide range of external events.
- The science department has created valuable links with third-level institutions such as Dublin City University.
- Participation in extra-curricular events such as SciFest and Google Science Fair are very valuable opportunities for students to enjoy science outside the classroom. For example, all first-year students visit the W5 Centre annually.

## **PLANNING AND PREPARATION**

- The overall quality of subject planning is good. The subject department is well established and is supported by a co-ordinator.
  - Each laboratory is assigned to an individual teacher who uses it as their base room and takes responsibility for ordering and maintaining equipment and resources. A laboratory technician is available to support the teaching staff.
  - Separate subject plans for Science and Chemistry were presented. The development of common schemes of work which are reviewed annually, and the use of common Christmas and summer tests for each year group is indicative of good practice.
  - The subject plan for Science provides information on issues such curriculum and assessment. However, as noted previously, a subject-specific approach to developing and supporting students' literacy and numeracy skills should be developed. An annual review and reflection on student attainment in the certificate examinations would also be good practice. To support future planning, the outcomes of such reflection should be recorded in the subject plan.
  - Regular formal planning meetings are supplemented by a high level of ongoing informal collaboration. Minutes of meetings show very good collaboration on organisational issues. Sharing of good practice regarding methodologies was particularly evident with respect to the Coursework B element of the Junior Certificate Science syllabus. It would be worthwhile expanding this practice by allowing some time at all department meetings to discuss and share teaching approaches.
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The draft findings and recommendations arising out of this evaluation were discussed with the principal and subject teachers at the conclusion of the evaluation. The board of management was given an opportunity to comment in writing on the findings and recommendations of the report; a response was not received from the board.

*Published May 2016*