

An Roinn Oideachais agus Scileanna
Department of Education and Skills

Subject Inspection of Metalwork and Engineering
REPORT

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

Date of inspection: 20 November 2012



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 METALWORK AND
ENGINEERING**

INFORMATION ON THE INSPECTION

Date of inspection	20 November 2012
Inspection activities undertaken <ul style="list-style-type: none">• Review of relevant documents• Discussion with principal and teacher• Interaction with students	<ul style="list-style-type: none">• Observation of teaching and learning during five class periods• Examination of students' work• Feedback to principal, deputy principal and teacher

MAIN FINDINGS

- Overall the quality of teaching and learning in Metalwork and Engineering was high.
- Student attainment and uptake rates at higher level in both junior and senior cycle are very good.
- Metalwork is a very popular subject among both boys and girls in Mount Temple Comprehensive School.
- Planning for the delivery of Metalwork and Engineering is methodical, systematic and reflective.
- Optional subject bands are designed following students' participation in a subject sampling programme during first year.

MAIN RECOMMENDATIONS

- The subject department, in collaboration with all other technology subject teachers, should develop a Transition Year (TY) module that encompasses all three of the technology subjects offered in the school.
 - A full health and safety risk assessment of the Metalwork and Engineering room should be carried out and any identified risks should be minimised or eliminated.
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INTRODUCTION

Mount Temple Comprehensive School is a co-educational school with a current enrolment of 886. The school provides Metalwork as an optional subject in its junior cycle programme and Engineering as an optional subject in its Leaving Certificate programme. Currently Engineering does not form part of the school's Transition Year (TY) or Leaving Certificate Applied (LCA) programmes.

TEACHING AND LEARNING

- Overall teaching and learning in metalwork and engineering lessons was observed to be of a high standard.
- The primary methodology employed in the lessons observed was teacher demonstration. This was a suitable strategy and was employed effectively and efficiently in all instances. Demonstrations were short and focused and revisited during practical lessons in order to maximise student learning, engagement and participation.
- Information and communication technology (ICT) resources were incorporated into lessons effectively. These resources included audio-visual clips, graphical displays and electronic presentations. These varied stimuli helped to maintain students' focus and to display key lesson content in a visually appealing manner.
- Clear goals for lessons were set and shared with students throughout lessons observed. This practice helped students to assess their own progress while also helping the teacher to ascertain the levels of student learning. This good practice is commended.
- Useful strategies aimed at developing students' literacy and numeracy were integrated effectively into metalwork and engineering lessons. The ongoing development of such strategies will serve to further enhance the subject department's integration of literacy and numeracy strategies with the subject specific content.
- Process sheets have been developed for a number of prescribed projects. These sheets are displayed on the year-group's notice board in the classroom and provide students with sequential instructions. This method promotes autonomous learning and provides students with a certain level of independence in relation to their progression through the work of completion of designated artefacts and projects. It has contributed effectively to the development of the high levels of autonomous and design-based explorative learning observed in the sixth-year lesson.
- Students were actively engaged in their learning and participated fully in all of the lessons observed. A positive rapport was evident between teacher and students. Classroom management was very effective with good practices being displayed and good protocols being observed by the students at the beginning and end of practical lessons.
- Students displayed very good recall when questioned and this knowledge was clearly applied in lessons where modelling and prototyping were central to the learning process.
- Students' manufacturing skills were observed to be appropriate to their ability levels and the combination of practical skills and subject knowledge has resulted in consistently high levels of attainment. The subject department's promotion of the uptake of the subjects at higher level and the range of examination results achieved demonstrate that students are achieving at all ability levels.

- Very good records are maintained in relation to students' attendance, completion of homework tasks and attainment in written and practical assessments. Oral formative feedback was delivered in all lessons observed and it was reported that written tests are administered and corrected using the appropriate marking schemes. This good practice helps students to identify areas for development and also helps them to refine their examination technique.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- Metalwork and Engineering form part of the school's Junior Certificate and Leaving Certificate programmes respectively. Currently Engineering does not form part of the school's TY or LCA programmes. In order to further promote the subject at senior cycle, school management, in collaboration with the school's technology subject teachers, should develop the current graphics based TY module to include elements of all three technology subjects offered in the school.
- The time allocated to both Metalwork and Engineering is appropriate and is scheduled primarily using double class periods. This provides the subject department with the opportunity to maximise student contact time, having due regard to the time required for student project and coursework.
- First-year students take part in a subject-sampling programme. This programme supports them when making their optional subject choices by enabling them to make decisions based upon their experiences, knowledge and aptitudes. To supplement this system, additional interventions are also made by providing information evenings and assemblies for parents and students.
- Optional subject bands are devised based upon student preferences. This has resulted in option bands varying considerably from year-to-year. This good practice positions students centrally in the curricular and timetabling decision making processes.
- Metalwork is a very popular subject in the school and has a high proportion of girls choosing the subject. At senior cycle, Engineering is also popular; however fewer girls choose the subject at senior cycle. The proposed TY module may help to redress the current imbalance.
- All of the space in the Engineering classroom has been utilised effectively. Very good efforts have been made to maximise space through the incorporation of some innovative storage solutions. However, due to space limitations and the current organisation of the room, there are a number of health and safety issues that require attention. These should be progressed using the Department of Education and Skills (DES)/State Claims Agency (SCA) document *Review of Occupational Health and Safety in Technologies in Post-primary Schools*.

PLANNING AND PREPARATION

- The good practice of facilitating cross-curricular dialogue between relevant subject departments to address issues such as school improvement and developing teaching methodologies should continue where appropriate.
- The subject department has developed a methodical, systematic and reflective approach to subject planning which impacts positively on teaching on a day-to-day basis.

- The method of subject planning employed is highly personalised and very effective. It includes organisational plans, detailed curricular plans and evidence of self-evaluation and reflection.
- The teacher's individual planning documents promote continuity between lessons and inform the methodologies employed in lessons.
- Planning for lessons was very good and the preparation of a wide range of teaching aids and resources enhanced students' learning experiences overall.

The draft findings and recommendations arising out of this evaluation were discussed with the principal, deputy principal and subject teacher 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, and the response of the board will be found in the appendix of this report.

Appendix

SCHOOL RESPONSE TO THE REPORT

Submitted by the Board of Management

Area 1: Observations on the content of the inspection report

Mount Temple welcomes the content of the report. We are delighted that the inspection recognises and affirms the quality of teaching and learning in Metalwork and Engineering. The Board wishes to appreciate not only the content of the report, but also the style and process of the inspection, which meant that it was a professional conversation on improvement that affirmed good practice and enhanced learning.

Area 2: Follow-up actions planned or undertaken since the completion of the inspection activity to implement the findings and recommendations of the inspection

Regarding the main recommendations, the school has already:

- A) Examined the possibility of adapting existing TY modules, and/or introducing a new module, so as to take account of the recommendation contained in the inspection report.
- B) A full health and safety risk assessment has been carried out. All potential health and safety issues identified by inspectors, along with others identified by staff, have been addressed. Larger structural issues, which related to the inadequate nature and size of the space available, will be addressed in the context of the forthcoming planned rebuild.