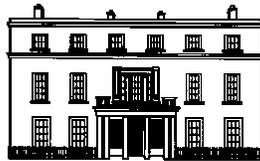


An Roinn Oideachais agus Scileanna
Department of Education and Skills

Subject Inspection of Metalwork and Engineering
REPORT

Meán Scoil an Chlochair
Kilbeggan, County Westmeath
Roll number: 63221U

Date of inspection: 22 April 2013



AN ROINN | DEPARTMENT OF
OIDEACHAIS | EDUCATION
AGUS SCILEANNA | AND SKILLS

**REPORT
ON
THE QUALITY OF LEARNING AND TEACHING IN METALWORK AND
ENGINEERING**

INFORMATION ON THE INSPECTION

Date of inspection	22 April 2013
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

- The quality of teaching and learning in Metalwork and Engineering was either good or very good.
- All lessons observed were clearly structured and had a definite learning intention.
- Student attainment and uptake rates at higher level are very good.
- Differentiation was used effectively to optimise student engagement and progression of learning.
- There is very good whole-school support for the study of Metalwork and Engineering.
- Subject planning included some reflective practice, a literacy and numeracy plan for the subject and a basic timetable for delivery of subject content and project work.

MAIN RECOMMENDATIONS

- Formative written feedback on students' work needs to be undertaken in order to further support their learning.
 - The subject department should review the curricular plans for all year groups with a focus on identifying the skills and knowledge required for students, and on including all the syllabus requirements
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INTRODUCTION

Meán Scoil an Chlochair, Kilbeggan is a co-educational voluntary Catholic secondary school with a current enrolment of 437 students. The school provides Metalwork and Engineering as optional subjects in its junior and senior cycle programmes respectively. Currently Engineering does not form part of the school's Transition Year (TY) programme.

TEACHING AND LEARNING

- Three double-period lessons were observed and all lessons had a mix of theoretical and practical activity. The quality of teaching and learning in all cases was good or very good. Best practice was evident where students were encouraged and supported to engage in critical thinking and reflective practice. This very good practice also included appropriate pair and group work to foster differentiated independent learning.
- All lessons had a clear structure and purpose and were well prepared. In one lesson the aim of the lesson was effectively shared using graphical display and in the other lessons the students were verbally informed of the structure of the lesson. It is suggested that the specific learning outcomes for all lessons be explicitly shared in written form to assist in focusing the students' learning and to provide a reference for review and effective closure of the lesson.
- High expectations have been set for students. Despite a significant proportion of students taking Engineering in senior cycle without having studied junior cycle Metalwork, all are encouraged to aspire to taking higher level in the certificate examination. The range of results achieved demonstrates that the students are achieving at all ability levels.
- Differentiated learning was evident in all lessons, with effective pair and group work utilised in addition to the preparation of worksheets for individual completion and individual teacher input during the lessons.
- The students demonstrated enthusiasm for the subject and were very well behaved in all the lessons observed. Students exhibited a very good understanding and familiarity with classroom procedures and rules. Some safety-related posters were displayed in the room. It is recommended that instructional signage be devised and placed adjacent to all machines in the workshop to inform students of their appropriate and acceptable use.
- Questioning of students indicated good learning. In one lesson there was a predominance of lower-order questioning which pertained to naming and identifying an application for each mechanism displayed. It is recommended that all opportunities be taken to use higher-order questioning, such as detailing the justification for mechanism selection in this case, so as to extend and deepen the learning for the student.
- Challenging activities were designed for the students in most lessons, and this was best evidenced in the lesson which focused on the design of a gantry crane. This activity was very well managed, with one student's work being used effectively to model expectations and success criteria.
- Students' competence in respect of project manufacture and practical skill development was observed to be appropriate for their ability levels. Review of the students' written work showed good quality note taking and neat and well ordered folders. However, there was no evidence of formative written assessment. It is therefore recommended that formative written feedback be given systematically to enhance and reinforce the students' theoretical learning.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- Metalwork and Engineering form part of the school's junior cycle and senior cycle programmes respectively. Currently, Engineering does not form part of the school's TY programme. The time allocated to both Metalwork and Engineering is appropriate and the timetable is suitably balanced. The subjects are scheduled primarily using double class periods. This provides the subject department with the opportunity to maximise student contact time particularly in relation to the time required for student project work and coursework.
- In junior cycle, students make their subject choices prior to entering the school. Optional subjects are offered in pre-defined bands. At senior cycle, students' preferences are sought and subject bands are devised to suit their needs and preferences. This selection procedure is also assisted by a DATS assessment administered in 3rd year and a weekly Career Guidance module in TY. This intervention to assist senior cycle option choice is very good practice.
- Metalwork is a very popular subject in the school, both with boys and girls. The school and subject department are encouraged to continue to be proactive in promoting the take-up of the subject by both genders.
- The Metalwork and Engineering room is well resourced and maintained. There is ample wall space, which could be exploited to include the display of exemplars of student work to aid the promotion of the subject and to model student expectation. The inclusion of keyword lists in support of the subject plan should also be included.
- School management has demonstrated strong and active support for teachers' continuing professional development (CPD). In addition to availing of the whole-school CPD the subject teacher has actively pursued personal professional development.

PLANNING AND PREPARATION

- The subject department has developed a plan that outlines the delivery of the subjects in both junior and senior cycle. The comparison with national norms of attainment in certificate examinations by the subject department is a positive exercise and should be extended to incorporate reflection on the implication for future strategies in the subject department. It is suggested that this form part of an annual report to be shared with school management and that it include an action plan for the subject.
- The teacher's individual planning document primarily details the content to be delivered and an associated timeframe. It is strongly recommended that the plan be augmented and constructed to reflect specific learning objectives, appropriate methodologies and associated assessment modes in support of the theoretical content and the practical skills to be acquired. The plan for Engineering should be augmented to include the elements of the syllabus not presently included, so as to increase the educational experience of the students.
- The subject plan also features identification of students with special educational needs and those for whom English is not their first language. Additionally, the plan incorporates a very impressive literacy and numeracy strategy. It is suggested that an emphasis be placed on the implementation of these strategies.

- Preparation for the lessons was good with the inclusion of ICT resources and materials and equipment for demonstration and designed tasks.

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; a response was not received from the board.