St Kevin’s Community College
Dunlavin, County Wicklow
Roll number: 70800E

Date of inspection: 23 November 2009
REPORT
ON
THE QUALITY OF LEARNING AND TEACHING IN METALWORK AND ENGINEERING

SUBJECT INSPECTION REPORT

This report has been written following a subject inspection in St Kevin’s Community College, Dunlavin, Co. Wicklow. It presents the findings of an evaluation of the quality of teaching and learning in Metalwork and Engineering and makes recommendations for the further development of the teaching of these subjects in the school. The evaluation was conducted over one day, during which the inspector visited classrooms and observed teaching and learning. The inspector interacted with students and the teacher, examined students’ work, and had discussions with the teacher. The inspector reviewed school planning documentation and the teacher’s written preparation. Following the evaluation visit, the inspector provided oral feedback on the outcomes of the evaluation to the principal and the subject teacher. 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.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

St Kevin’s Community College offers Metalwork to junior cycle students and Engineering to senior cycle students enrolled in the school’s Transition Year (TY) and established Leaving Certificate programme. The time allocated to the subjects, consisting of four class periods to junior cycle groups, two class periods to TY and five class periods to senior cycle groups, is appropriate and allows sufficient time to complete all aspects of the various syllabuses. In forming the timetable, satisfactory consideration is given to the distribution and allocation of class periods, resulting in lessons being dispersed appropriately throughout the week. This is commended.

The Metalwork and Engineering room is very well resourced and maintained to a very high standard. Tools and equipment are stored safely and in sight of the teacher at all times. The methods employed to maintain machine tools are exemplary, thus providing students with a model of best practice in tool organisation and maintenance. The room is also equipped with information and communication technology (ICT) resources, allowing ICT to be integrated easily into lessons. Space is maximised and safety is a prime concern; this is apparent from the safety zones that are clearly visible around machines and the layout of tools and equipment that provide students with easy access to the necessary tools to complete their work.

All students in first year are given the opportunity to study Metalwork. A system of subject sampling takes place until the October mid-term break, after which students must make their final subject choices. This method of providing students with access to optional subjects prior to making their subject choices is commended, as it helps students to make more informed decisions based on their experiences and aptitudes.
Senior cycle students also receive a good level of support prior to making their optional subject choices. During the optional TY programme, students are given the opportunity to access an Engineering module. This helps students who may not have studied the subject for their junior cycle programme to gain a further insight into the subject at senior cycle.

Subject option bands at both junior and senior cycle are developed based on students’ preferences, as is best practice. This system has enabled school management to offer up to two Metalwork class groups in some year groups. This method of providing optional subject bands that are based on students’ preferences is commended.

The uptake of Metalwork and Engineering among boys in the school is good. The proportion of girls choosing the subjects is a cause for concern. The subject department should consider all possibilities and opportunities to increase the number of girls who choose the subjects. One possibility could include the further development of student project work in order to maximise students’ engagement in the manufacturing processes required. This could include, for example, increasing the number of projects that include an element of decorative metalwork and projects that include electronic applications.

In addition to the considerable further study undertaken by the subject department, continuing professional development (CPD) courses provided by the Technology Subjects Support Service (t4) have also been attended to further professional development within the subject area. This commitment to CPD is highly commended.

PLANNING AND PREPARATION

Members of the school’s technology subject departments meet regularly. This is good practice as it helps to develop a common and collaborative approach to planning. This approach also facilitates teachers by providing a forum to share ideas and approaches for the benefit of their students. This good practice should be continued and developed further where possible.

The subject department has developed a comprehensive curricular plan. This very clear plan identifies suitable resources and timeframes for each of the various elements of the syllabus. Accurate records of completed work are maintained, including very detailed profiles of students following the Junior Certificate School Programme (JCSP). Excellent records of homework and test results are also maintained for each year group. These records are an invaluable resource as they can be used to identify trends in students’ attainment and their level of completion of prescribed work.

To further develop subject planning, the subject department, in collaboration with senior management, should identify long-term goals for the further development of the subject in the school. These goals could include increasing the uptake of Metalwork and Engineering among girls and the further promotion of higher level uptake among senior cycle students. In order to achieve these goals, realistic targets should be set and strategies should be identified to achieve them.

The level of planning for lessons was very good. Lesson plans were prepared for each individual lesson and these complemented the overall planning system used on a daily basis. Resources were prepared in advance of lessons and these resources were introduced at appropriate times.
TEACHING AND LEARNING

The quality of teaching observed in Metalwork and Engineering was very good. Lessons were introduced effectively and structured to ensure maximum student participation. Students were assisted in a variety of ways to design, create and test their projects. In some practical lessons, model making was promoted to help students visualise their designs, thereby helping them to develop their design skills. This strategy is most worthwhile and should be extended to all relevant projects and year groups. Informal experimentation was also used to help students solve any problems that they encountered. The incorporation of this type of experiential learning is commended. Project portfolio templates are also used to help scaffold students’ design ideas, thus helping them to achieve their potential. These strategies are commended.

Demonstrations were used to very good effect during lessons. These demonstrations were carried out on an individual and group basis. All techniques that were demonstrated to students were structured and built on prior learning. These demonstrations were short and allowed students to develop their skills before additional techniques were explored. This system worked very well.

Theoretical lessons were also very well delivered. ICT was used effectively and provided students with a good variation of visual stimuli. However, less emphasis should be placed on having students take dictated notes from the teacher. In order to build on the learning that took place in class, students should be encouraged to research and make their own notes for homework. In doing so, every opportunity to incorporate active learning could be taken during lessons.

Questioning was utilised to assess student understanding throughout lessons. In some cases, students would have benefited from additional time to form their opinions and to reflect on their answers. As part of a lesson summation, additional questioning should be incorporated to highlight key learning outcomes and to identify areas for recapitulation in future lessons.

Classroom management was excellent in all lessons observed. Practices and procedures have been developed over time and students co-operate fully, resulting in the creation of a highly organised learning environment. There was a very good work ethic apparent in each lesson observed. Students were purposeful in their work and made regular and meaningful contributions during discussions and demonstrations. To build on this good atmosphere, the subject department should make a conscious effort to provide more positive affirmation to students deserving of praise.

Students demonstrated very good skill levels and understanding of the key topics throughout all lessons observed. The subject department’s detailed analysis of examination results helps to closely monitor student attainment and uptake levels on a yearly basis. This analysis shows that students achieve a good level of success at junior cycle and senior cycle students achieve at a level commensurate with their abilities.

ASSESSMENT

Homework exercises are given to students on a regular basis. Assignments are monitored regularly and the results are recorded. Theoretical assignments are also examined regularly with primarily summative feedback provided to students. A future area for development should be the
increased use of formative feedback, especially on written work. This feedback should be incorporated into learning situations in a meaningful manner to help students develop their understanding and to improve their skill levels.

Students are formally assessed in end-of-term examinations. These examinations consist of a combination of both practical and theoretical assessments, as is best practice. This allows students to gain appropriate recognition for their practical skills and for their theoretical understanding. This good practice is commended.

All project work is corrected upon completion and feedback is given to students orally. This feedback enables students to reflect on their learning and to improve their skills by implementing the advice and guidance given to them.

SUMMARY OF MAIN FINDINGS AND RECOMMENDATIONS

The following are the main strengths identified in the evaluation:

- There is a very good level of support for Metalwork and Engineering in St Kevin’s Community College
- Students receive very good information prior to choosing their optional subjects
- The subject department has undertaken and completed a considerable CPD programme
- A very good level of planning supports the teaching and learning of Metalwork and Engineering
- The quality of teaching and learning in Metalwork and Engineering is very good
- Very good records of student attainment and progress are maintained

As a means of building on these strengths and to address areas for development, the following key recommendations are made:

- The subject department should prioritise its long-term goals and identify strategies aimed at achieving them
- The subject department should make a conscious effort to provide more positive affirmation to students deserving of praise
- The use of formative feedback should be extended to students’ written work to help them identify areas for development and the strategies that could be implemented to achieve improvement

Post-evaluation meetings were held with the teacher of Metalwork and Engineering and with the principal at the conclusion of the evaluation when the draft findings and recommendations of the evaluation were presented and discussed.

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Appendix

School response to the report

Submitted by the Board of Management

Area 1: Observations on the content of the inspection report

The Board of Management is very pleased with the report from the DES inspector. It is particularly pleased that the inspection recognised the very good quality of teaching and learning observed, with effective and structured lessons evident.

It is also pleased that the well resourced and maintained facilities available to students including good ICT provision was noted.

The Board is pleased that the good levels of success at state examinations was acknowledged and the positive endorsement of the collaborative work that staff are engaged with in the area of subject and curricular planning supports its welcomed.

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

The Management and staff appreciate the helpful recommendations outlined in the report and are fully committed to reviewing them. Some of these recommendations have already been implemented. We share the same desire to ensure that more girls participate in Metalwork and Engineering and we will further explore ideas to promote this in the college, however the wide range of subjects available at junior and senior level make this trend difficult to change.