

**An Roinn Oideachais agus Scileanna**

**Department of Education and Skills**

**Subject Inspection of Mathematics  
REPORT**

**Ennistymon Vocational School  
Ennistymon, County Clare  
Roll number: 70840Q**

**Date of inspection: 20 March 2013**



**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 MATHEMATICS**

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**INFORMATION ON THE INSPECTION**

<b>Dates of inspection</b>	19 and 20 March 2013
<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 six class periods</li><li>• Examination of students' work</li><li>• Feedback to principal, deputy principal and teachers</li></ul>

**MAIN FINDINGS**

- The quality of teaching observed ranged from good to very good.
- A variety of resources to support teaching and learning were incorporated very effectively into lessons.
- A very good working relationship exists between teachers and students.
- There is very good whole-school support for Mathematics.
- Students in need of additional numeracy support are well catered for in the school.
- The mathematics department has made significant progress in the process of subject planning.

**MAIN RECOMMENDATIONS**

- Care should be taken in all lessons to ensure that the amount of time dedicated to teacher presentation allows for an appropriate level of involvement by students in relevant activities.
  - The use of estimation should be used more extensively as a first step in the process of problem solving.
  - A common approach to formative assessment should be developed and implemented by the members of the mathematics department.
  - Schemes of work should be further developed to include reference to a range of teaching resources which teachers have proved to be effective.
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## **INTRODUCTION**

Ennistymon Vocational School is a co-educational school under the auspices of County Clare Vocational Education Committee (VEC) with a current enrolment of 132 students. The programmes offered are the Junior Certificate, the Junior Certificate School Programme (JCSP), a compulsory Transition Year (TY), the Leaving Certificate Vocational Programme (LCVP) and the established Leaving Certificate. The school participates in DEIS (Delivering Equality of Opportunity in Schools), the action plan of the Department of Education and Skills for educational inclusion.

## **TEACHING AND LEARNING**

- The quality of teaching observed ranged from good to very good. Best practice included the setting of clear learning objectives and the facilitation of very good student engagement by varying the activities in the lesson.
- In a minority of lessons, the learning could have been enhanced by creating more opportunities for students to engage actively with the content of the lesson and by decreasing the amount of time allocated to teacher presentation.
- All lessons included the use of resources to support teaching and learning. These resources were of a consistently high quality and helped to facilitate smooth transitions between classroom activities. The use of information and communications technology (ICT) was a feature of most lessons and provided good support to teachers in their presentations.
- A variety of questioning strategies was used in all of the lessons observed. Teachers used a combination of higher and lower order questions and there were some very good examples of probing questions that required students to think critically and to explain their thinking.
- Learning was differentiated effectively in most lessons, mainly through the integration of activities that contained an incremental level of challenge. In addition, students encountering difficulties were well supported through individual assistance or through group activities that provided a good level of peer support.
- Classroom management was very good in all of the lessons observed. Teachers have developed a very good rapport with their students and were affirming, encouraging and supportive of students' efforts.
- There was scope in some lessons to encourage the use of estimation as a first step in the problem solving process. The use of estimation enables students to gain a greater conceptual understanding of mathematics problems. Estimation skills are also useful in encounters with mathematical concepts outside of school and are therefore, an important life skill to encourage among students.
- Homework was assigned in all of the lessons observed and an examination of students' journals indicates that homework is assigned regularly. Students' work was well presented in general. Copybooks were annotated with formative comments from teachers in some cases. In order to ensure consistency of practice, it is recommended that mathematics teachers formulate a common approach to formative assessment and agree common strategies for the annotation of student work.

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

- Management is very supportive of the mathematics department. Attendance at continuing professional development events for Project Maths is facilitated for all teachers of Mathematics. It is of note that special educational needs teachers and the principal also regularly attend these workshops with a view to providing comprehensive and well informed support.
- There is good time allocation to the subject and lessons are appropriately scheduled throughout the week. The subject is well supported in terms of provision of ICT and other resources for teaching and learning. Due to timetabling constraints, the first year mathematics class is currently shared between two teachers. This arrangement is not ideal and should be avoided if possible in future.
- Students are assigned to mixed-ability mathematics classes for first year and for TY. Students are taught in level-specific classes in every other year where concurrent timetabling of mathematics lessons is provided to allow students to choose a level appropriate to their ability. The school strongly encourages students to study at the highest level possible for as long as possible. Such arrangements reflect best practice.
- Students in need of numeracy support are identified on entry and during ongoing teacher observations. The learning support team and the mathematics teachers collaborate to identify the most appropriate model of provision that will best support the learning needs of individual students. This may include in-class support, further differentiation of lesson content or individual support on a withdrawal basis.
- The importance of students experiencing Mathematics outside of the classroom is recognised and strongly supported in the school. Students engage in a range of co-curricular and extracurricular activities including *Engineers Week* and *Maths Week*. Students also participate in mathematics-related field trips on an annual basis.

## **PLANNING AND PREPARATION**

- The staff members of the mathematics department have put a significant amount of work into compiling a comprehensive subject plan. Schemes of work for each year and for each level are laid out in tabular format. References are made throughout the schemes to syllabus documents containing comprehensive learning outcomes for each topic. As a means of extending this valuable work, mathematics teachers should begin a process of collating a list of resources, including ICT resources, that have been trialled and have proven effective in lessons. These resources should be referenced alongside the corresponding topics and their usefulness should be reviewed periodically.
- The mathematics department has agreed that the position of subject department co-ordinator will rotate periodically. Department meetings are held once per term as part of the whole-school planning process. Informal meetings are held as the need arises. Minutes from these meetings are retained in the department's planning folder and contain clear action points as well as timeframes for action.
- Certificate examination results have been tabulated over a four year period and considerable discussion has taken place in relation to these records. Key areas for development have been identified for this year and a focussed action plan has been drawn up. This demonstrates the commitment of staff to ongoing improvement and is fully in keeping with the initiation of a sound school self-evaluation process.

- Ongoing development within the school of a virtual learning environment should support the work of the mathematics department, particularly as a means of sharing and storing common resource materials.
- Individual lesson plans were made available for all of the lessons observed. The quality of these plans was of a very high standard in general with well thought out learning objectives as well as strategies for effective differentiation of the lesson content.

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The draft findings and recommendations arising out of this evaluation were discussed with the principal and deputy principal 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.