

**An Roinn Oideachais agus Scileanna**  
**Department of Education and Skills**

**Subject Inspection of Mathematics**  
**REPORT**

**Elphin Community College**  
**Elphin, County Roscommon**  
**Roll number: 722800**

**Date of inspection: 25 February 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**

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| <b>Date of inspection</b>   | <b>25 February 2013</b>   |
| <b>Inspection activities undertaken</b> <ul style="list-style-type: none"><li>• Review of relevant documents</li><li>• Discussion with principal, deputy principal and teachers</li><li>• Interaction with students</li></ul> | <ul style="list-style-type: none"><li>• Observation of teaching and learning during five 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 and learning observed ranged from good to very good.
- Student activity on individual and collaborative exercises featured strongly in lessons with a need to further differentiate these activities in some instances.
- Mathematics teachers have access to significant information and communications technology (ICT) resources and these resources were used effectively in all of the lessons observed.
- Timetable provision and whole school support for Mathematics is very good.
- There is very good provision for students who require additional support in Mathematics.
- Teachers' individual lesson planning was of a very high standard.

**MAIN RECOMMENDATIONS**

- Strategies for differentiation should be further developed and implemented in all lessons.
  - Schemes of work should incorporate links to relevant Project Maths and other teaching resources.
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## **INTRODUCTION**

Elphin Community College is a co-educational school under the auspices of Co. Roscommon Vocational Education Committee (VEC) with a current enrolment of 129 students. Programmes offered are the Junior Certificate, a compulsory Transition Year (TY), the Leaving Certificate Vocational Programme (LCVP) and the established Leaving Certificate.

## **TEACHING AND LEARNING.**

- During the one-day evaluation, lessons covering a range of levels and programmes were observed. The quality of teaching and learning observed in these lessons ranged from good to very good. In the majority of lessons, the learning intentions were clear and their attainment was monitored throughout the lesson.
- All lessons featured a significant amount of student activity including a mixture of individual and collaborative exercises. In some cases, there was a need to further differentiate these activities to ensure that all students remained adequately challenged for the duration of the activity.
- The majority of lessons featured good use of higher order questioning strategies which required students to think critically and to explain their reasoning. Particularly effective use was made of wait-time in one lesson, allowing students time to formulate their thoughts and to answer comprehensively.
- All lessons featured the effective use of ICT both to aid teaching and to provide a focus for teacher presentations. Teachers used a combination of ICT resources including interactive whiteboards, visualisers, presentation software, e-books and online content from the Project Maths website.
- Students' literacy development was well supported through the widespread focus on topic-specific terminology. All classrooms had very good displays of relevant keywords, posters and constructions. Very good examples of students' own work were on display in the majority of classrooms.
- Team teaching is used in first year and in sixth year. A common approach to this was adopted in the lessons observed. This approach involved one teacher taking a lead role in the presentation of the lesson while a second teacher circulated among the students to provide assistance where necessary and to monitor the quality of students' work as well as their levels of engagement. This approach worked very well and provided considerable support to students who find the subject particularly challenging.
- An examination of students' journals indicates that homework is assigned regularly. Students' work is well presented and its completion is monitored by teachers.
- All of the lessons observed were conducted in a supportive and affirming environment. Mutual respect between all was evident in all classroom interactions.

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

- Timetable provision and whole school support for Mathematics is very good. There is very good time allocated to the subject, particularly in fifth and sixth year where class groups have six periods of mathematics instruction per week. Lessons are appropriately spread throughout the week facilitating daily contact with the subject for all students.

- Students are taught in a mixed ability setting in both first year and TY. This good practice allows first year students time to gain an understanding of their aptitude before deciding on what level to pursue from second year onwards. It allows TY students the flexibility to engage in large scale collaborative projects in a setting that is driven more by enjoyment of the subject rather than by syllabus-specific requirements. In second, third, fifth and sixth year there is provision for higher and ordinary level students to be taught separately. This allows teachers opportunities to tailor their instruction more effectively to the specific needs of the group. Classes are concurrently timetabled in all year groups facilitating students' access to the subject at different levels.
- Teachers of Mathematics have significant resources at their disposal. Each classroom is equipped with either an interactive whiteboard or a data projector. All staff members have been provided with a personal laptop and iPad. Subject specific software is available to all teachers on the school server. All first year students use iPads in the classroom and methods of optimising their usage are being actively developed by management and by teachers. A range of resources have also been purchased to facilitate the use of active learning methodologies espoused by Project Maths and these resources are being added to incrementally.
- There is very good support for students who find the subject particularly challenging. The facilitation of team teaching in first year and in sixth year is highly commendable and provides very good additional support for students of all ability levels. A strategy is currently being developed by the school's special educational needs co-ordinator to cater more effectively for exceptionally able students.
- The qualifications profile of the staff of the mathematics department is very good. Almost all of the teachers have specialist qualifications in Mathematics. It is commendable that one teacher is currently undertaking a post-graduate diploma in Mathematics. All of the department's members have attended the workshops provided as part of the national roll out of Project Maths.

#### **PLANNING AND PREPARATION**

- Meeting time for the teachers of Mathematics is provided as part of the whole-school planning process. Formal meetings take place regularly throughout the year and the minutes of these meetings are recorded. The department is coordinated by a senior member of the mathematics team and there is a very high level of co-operation and collaboration evident amongst the mathematics teachers.
- Teachers of Mathematics have engaged in comprehensive planning. Schemes of work have been developed for each year group with desired learning outcomes clearly identified. As a means of building on this, it is recommended that a labelling system be developed to link the schemes of work to relevant Project Maths and other resources. This would allow for further streamlining of classroom practices and would assist in ensuring continuity and consistency of instruction in the event of a change in teaching personnel.
- The mathematics department engages well in a range of self-evaluation processes. This includes the completion of an annual analysis of student performance in the certificate examinations. Strengths and areas for improvement have been identified and action plans have been put in place where necessary.

- Individual planning for lessons was very good. Resources were prepared in advance and were integrated seamlessly into all of the lessons observed. Where individual planning documentation was made available, the quality was of a very high standard with well thought-out content, methodologies and assessment strategies noted. The widespread annotation of individual schemes of work indicates that ongoing evaluation of practice is takes place.

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