

An Roinn Oideachais agus Scileanna

Department of Education and Skills

**Subject Inspection of Mathematics
REPORT**

**Scoil Mhuire
Ennistymon, County Clare
Roll number: 61950W**

Date of inspection: 15 October 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

INFORMATION ON THE INSPECTION

Dates of inspection	14 and 15 October 2013
Inspection activities undertaken <ul style="list-style-type: none">• Review of relevant documents• Discussion with principal and teachers• Interaction with students	<ul style="list-style-type: none">• Observation of teaching and learning during six class periods• Examination of students' work• Feedback to principal, deputy principal and teachers

MAIN FINDINGS

- Teaching and learning of a very high quality was observed in all lessons with some exemplary practices noted.
- Classroom methodologies espoused by *Project Maths* have been embraced by all teachers of Mathematics.
- Students demonstrated considerable diligence and accuracy in their work.
- The mathematics department is very well supported and resourced by school management.
- The school's parents' association has been very proactive in arranging support for parents in relation to the recent changes in the mathematics syllabus.
- Collaborative planning for Mathematics is at an advanced stage.

MAIN RECOMMENDATIONS

- The transition year (TY) plan should be further developed to include detailed learning outcomes, resources, methodologies and assessment modes.
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INTRODUCTION

Scoil Mhuire is a voluntary secondary school for girls under the trusteeship of Catholic Education an Irish Schools Trust (CEIST) with a current enrolment of 283 students. The school serves the town of Ennistymon and its environs and is one of three providers of second-level education in the town. The programmes offered are the Junior Certificate, an optional TY, the Leaving Certificate Vocational Programme (LCVP) and the established Leaving Certificate.

TEACHING AND LEARNING

- Teaching and learning of a very high quality was observed in all lessons with some examples of exemplary practices noted.
- Best practice was observed in lessons where students were required to complete a range of tasks and where a discovery based approach was predominant. Exercises were structured in a way that provided an incremental level of challenge allowing all students to achieve while providing sufficient challenge for the more able students. Collaborative tasks were used to encourage students to engage in higher-order discussion and such tasks were appropriately scaffolded by teachers where required without the over-simplification of the problem. Given the considerable expertise of the mathematics team, it is an opportune time for teachers to begin to engage in peer observation and review. The principal and deputy principal are very well positioned to lead such an initiative.
- Questioning was used to very good effect in all of the lessons observed, resulting in high-quality dialogue. In the instances when questioning showed significant strengths, teachers skilfully varied lower and higher-order questions, used follow-up questions and framed questions using a discovery approach.
- Students' active engagement in their learning was a feature of all lessons. Activities ranged from the completion of pre-prepared worksheets to the modelling of solids and the gathering of data. Such activities facilitated very high levels of student learning and are fully in keeping with the spirit of *Project Maths*.
- Students' contributions indicated very good levels of prior learning. Students participated and engaged well in all lessons. Teachers related new material to prior learning where appropriate and lessons proceeded purposefully.
- Students' literacy development was very well supported by the widespread focus on subject-specific terminology. This is in keeping with a whole-school approach to literacy that has been developed as part of the school self-evaluation process.
- An examination of students' journals indicates that homework is assigned regularly. Most of the lessons observed included the correction of homework and students' work was very well presented in the sample of copybooks reviewed. Some examples of very high quality feedback to students on the accuracy and presentation of their work were noted.
- In almost all classrooms, the visual environment was enhanced by displays of relevant resources including *Project Maths* posters and keywords.
- In all of the lessons observed, teachers had a very good rapport with students, mutual respect was evident and the learning environment was positive and supportive of student learning.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- Whole-school support for Mathematics is very good. There is very good timetable provision for the subject and lessons are appropriately spread throughout the week facilitating daily contact with the subject.
- Students are assigned to mixed-ability mathematics classes in first year. In other year groups, students are taught in level-specific classes where concurrent timetabling of classes allows students to choose a level appropriate to their ability. Students are encouraged to study at the highest level possible for as long as possible. This has resulted in consistently high numbers of students sitting the higher-level papers in the Certificate examinations.
- The staff of the mathematics department have a very good qualifications profile. All of the departments' members are appropriately qualified to teach Mathematics and all have attended the workshops provided as part of the national roll out of *Project Maths*. Some teachers have also voluntarily attended additional evening workshops. This demonstrates a commitment by teachers to ensuring that they are fully equipped to implement *Project Maths* in the classroom for the ultimate benefit of students.
- Teachers of Mathematics are well supported by the provision of ICT and other resources to support teaching and learning. Each classroom is equipped with a data projector and subject specific software is available for use in lessons. A range of additional resources has been purchased to facilitate the use of the active learning methodologies espoused by *Project Maths* and these resources are being added to incrementally.
- The schools' parents' association has taken an active interest in the implementation of *Project Maths* in the school. As a means of equipping parents to provide informed support to students, the parents' association has arranged a series of information evenings for parents in which some of the main strands of the syllabus will be covered. This initiative is highly commended and it should provide valuable additional support for students.

PLANNING AND PREPARATION

- Meeting time for the teachers of Mathematics is provided as part of the whole-school planning process. Formal meetings take place once per term with informal meetings held as the need arises. There is a very high level of co-operation and collaboration evident amongst the mathematics teachers.
- The mathematics subject department plan is a comprehensive document and provides evidence of a diligent team, committed to the achievement of high standards of attainment in Mathematics. Schemes of work for all years and all levels are laid out in tabular format. Lesson ideas for the various topics are appended to these schemes of work and suggested timeframes for each topic are also given. Some teachers have begun a process of collating resources for use in lessons in a folder stored on the school server and this is a very welcome development. Further development should include the cataloguing of these and future resources and the linking of these resources to specific syllabus topics through the schemes of work. Teaching and learning plans developed by the *Project Maths* development team should be included and their effectiveness should be evaluated.
- The current TY plan contains an outline list of topics to be covered as well as some suggested classroom activities and teaching methodologies. This plan should now be

developed into a more comprehensive document containing detailed learning outcomes, resources, methodologies and assessment modes while ensuring that an appropriate balance between syllabus and non-syllabus content is maintained.

- Teachers' individual preparation for lessons was of a very high standard in all of the lessons observed. Supplementary materials including props, animations and worksheets were prepared in advance and were integrated seamlessly into lessons.

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 of the school 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

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 Board of Management noted the very positive affirmation of Maths teachers in our school. The Board further noted one recommendation in the report and hereby confirm that following the full roll-out of Project Maths the Transition Year Plan will be further developed to include detailed learning outcomes, resources, methodologies and assessment modes.