

**An Roinn Oideachais agus Scileanna**

**Department of Education and Skills**

**Subject Inspection of Mathematics  
REPORT**

**Coláiste na Carraige  
Carrick, County Donegal  
Roll number: 71150T**

**Date of inspection: 4 November 2014**



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

**REPORT  
ON  
THE QUALITY OF LEARNING AND TEACHING IN MATHEMATICS**

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**INFORMATION ON THE INSPECTION**

<b>Date of inspection</b>	4 November 2014
<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 and teachers</li></ul>

**MAIN FINDINGS**

- The standard of teaching and learning ranged from good to very good in the lessons observed.
- The differentiation of lesson content to cater for the range of student abilities was achieved very successfully in lessons.
- The deployment of teachers to Mathematics classes is well managed in the school.
- Students in need of additional numeracy support are well catered for.
- Teachers of Mathematics have access to a range of resources to support teaching and learning.
- Subject department planning is ongoing, with scope for the further development of short-term schemes of work.

**MAIN RECOMMENDATIONS**

- The good practice observed in eliciting and building on students' prior knowledge should be extended to all lessons.
  - Short-term schemes of work should be further developed to include resources, methodologies and assessment modes.
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## INTRODUCTION

Coláiste na Carraige is a co-educational post-primary school operating under the auspices of the Donegal Education and Training Board (ETB). The school serves a largely rural catchment area with enrolment currently standing at 247 students. The programmes offered are the Junior Certificate, an optional Transition Year (TY), the Leaving Certificate Vocational Programme (LCVP) and the established Leaving Certificate.

## TEACHING AND LEARNING

- The standard of teaching and learning ranged from good to very good in the lessons observed. Teachers demonstrated high levels of confidence and competence in their lesson delivery and students were well supported in their learning.
- Collaborative learning was used to good effect in the majority of lessons and students engaged well when required to do so. Teaching and learning plans developed by the *Project Maths* development team were used as an effective means of structuring these tasks in a number of cases.
- Learning outcomes were used in the majority of lessons to frame the lesson content and to facilitate students in taking ownership of their learning. This was backed up by effective monitoring of the attainment of these learning outcomes through teacher observation of activities and through questioning.
- There were good links to students' prior learning in the majority of lessons and in some cases, good cross-curricular links were made as a means of eliciting and building on relevant knowledge from other subject areas. In some lessons there was scope to spend more time on the elicitation of prior learning through some form of initial activity. This could then be used as a basis for further learning.
- Teachers of Mathematics are skilled in creating learning experiences that accommodate the range of abilities in the class. This differentiation of lesson content was achieved through a variety of approaches including the provision of additional tasks for some students, the creation and sourcing of worksheets that contain an incremental level of challenge, the use of questions that are pitched at an appropriate level and the integration of collaborative tasks into lessons.
- Information and communication technology (ICT) was used as a teaching resource in the majority of lessons. It was particularly effective in facilitating good progress through lessons by scaffolding the lesson content in a coherent and efficient way.
- In most lessons there was a strong focus on subject-specific literacy requirements. Key terminology was well explained and students were encouraged to explain their thinking using appropriate mathematical language.
- The correction of homework was a feature of most lessons and an examination of students' copybooks and journals indicates that homework is assigned regularly in all classes. Students work was well presented in the sample of copybooks reviewed and there was considerable evidence of written feedback being given to students on the quality of their work.
- The learning environment was positive and supportive in all lessons and teachers have developed a relaxed working relationship with students.

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

- Timetable provision for Mathematics is in line with syllabus requirements in all year groups. Lessons are spread throughout the week and there is a good balance between morning and afternoon lessons.
- There are three teachers currently teaching Mathematics in the school. This represents very good deployment as all three teachers are teaching a number of class groups across a variety of years and levels of study. It is management policy that teachers rotate the teaching of different levels on a regular basis. This is good practice.
- First-year and TY students are taught in a mixed-ability setting in line with best practice. In other year groups, students are taught in level-specific classes where concurrent timetabling facilitates the movement of students between levels where necessary. A recent increase in the number of students wishing to pursue the higher-level syllabus has put pressure on available teaching resources, leading to some higher-level students in third year being taught in a mixed-ability setting. This is being well managed through the planning of differentiated lesson outcomes and good collaboration between the teachers assigned to the year group.
- Students in need of additional numeracy support are well catered for through the provision of individual and small-group classes where feasible. Numeracy support is provided by numeracy specialists and this facilitates close interaction between the support and mainstream settings.
- The mathematics department is well resourced. Teachers have access to a range of resources, including ICT, to support teaching and learning. Each classroom is equipped with a data projector and a desktop computer. Subject-specific software is available on the school server for use in lessons.

## **PLANNING AND PREPARATION**

- The mathematics department is co-ordinated on a rotating basis in line with good practice. Planning meetings are held three times per year as part of the whole-school planning process. The minutes of these meetings are retained in the subject-planning folder. As *Project Maths* continues to become embedded in practice, discussions should place more of an emphasis on teaching and learning strategies and the dissemination of best practice. The mathematics department's planned engagement with *Lesson Study* workshops, to be delivered by *Project Maths* facilitators, will be of benefit in this regard.
- Teachers' individual planning for lessons was of a very high standard in the lessons observed. Supplementary resources were sourced and prepared in advance and were integrated seamlessly into lessons.
- Schemes of work for each year group and for each level have been developed and are stated in terms of learning outcomes. Further development should include the incorporation of methodologies and assessment modes as well as the further tailoring and cataloguing of the significant bank of resources that has been developed. Further tailoring of the first-year plan could be informed by the development of a mathematical competency test to be administered once students have settled into first year, perhaps in October.
- Teachers of Mathematics conduct an annual analysis of students' performance in the certificate examinations. Details of resulting discussions should be documented and a

concise action plan should be developed to build on identified strengths and to address any weaknesses that may be identified.

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The draft findings and recommendations arising out of this evaluation were discussed with the principal and subject teachers at the conclusion of the evaluation. The board of management of the school was given an opportunity to comment on the findings and recommendations of the report; the board chose to accept the report without response.