

An Roinn Oideachais agus Scileanna
Department of Education and Skills

Subject Inspection of Mathematics
REPORT

Castlecomer Community School
Castlecomer, County Kilkenny
Roll number: 91360T

Date of inspection: 27 November 2014



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	26 and 27 November 2014
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 ten class periods• Examination of students' work• Feedback to principal and teachers

MAIN FINDINGS

- In the majority of lessons, the quality of teaching and learning observed was good or very good with some examples of exemplary practice also noted and scope for improvement noted in a minority of lessons.
- Effective teaching strategies that encourage student involvement in their learning were observed in the majority of lessons.
- There was evidence that teachers are embracing and engaging with a wide range of school initiatives that support effective teaching strategies.
- Management is very supportive of the mathematics department which actively engages in continuing professional development (CPD).
- There are many very good opportunities for students to access co-curricular and extra-curricular mathematics activities.

MAIN RECOMMENDATIONS

- Learning strategies promoted during school-based workshops and other initiatives should be used more often in lessons.
 - Questioning strategies that develop higher-order thinking among students require greater development in some lessons.
 - Greater differentiation of students' tasks and worksheets is recommended to ensure that all students' abilities are challenged.
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INTRODUCTION

Castlecomer Community School is a coeducational post-primary school, with a current enrolment of 581 students. The school provides the Junior Certificate, a Transition Year (TY) programme, the Leaving Certificate Applied (LCA), the established Leaving Certificate and the Leaving Certificate Vocational Programme (LCVP). The school also provides a Post Leaving Certificate Course (PLC) for seven students.

TEACHING AND LEARNING

- In the majority of lessons, the quality of teaching and learning observed was good or very good with some examples of exemplary practice also noted. In a minority of lessons, there was scope for improvement particularly in the choice of teaching strategies.
- Most lessons began with a review of homework and continued with the identification of learning intentions. In line with best practice, many teachers undertook a review of the learning intentions; this practice should be extended where appropriate.
- Lesson planning was mostly very good. Subject specific terminology was used effectively by teachers and their students. Links between various syllabus strands and with prior learning featured in many lessons by teachers and on occasion by students; this is very good practice.
- Teachers prepared a very good range of materials and resources including hand-outs, measuring equipment and effective use of information and communication technology (ICT). Resources were used effectively in many lessons, including quizlets and classroom mounted whiteboards. Best practice was noted where teachers used the resources to progress and scaffold learning.
- A range of mostly effective methodologies was observed in lessons including, group and pair work, problem solving and practical activities. In the most effective lessons, students engaged fully in their learning due to interesting methodologies being employed. For example, in one lesson, students worked together to find the total surface area using cereal boxes. Students used a problem-solving strategy which was referred to by its acronym “cube” to complete the activity.
- Features of exemplary practices included emphasis on students taking ownership of their learning, where problem-solving and decision-making skills were promoted. There were very well-planned and student-centred activities in many lessons. For example, during a trigonometry lesson, students worked collaboratively to complete questions and time was allocated for the completion of the task. The spokesperson for the group presented the work and provided a rationale for answers and chosen strategies; this was exemplary practice.
- In the lessons where the methodology was less effective, there were occasions where the teacher provided too much information and insufficient challenges were offered to some students. In a few lessons, the teacher was overambitious in what was planned. This resulted in a lack of understanding among some students and, consequently, some had difficulty completing the task. Teachers should ensure that the lesson is sufficiently scaffolded so that all students can make greater progress.
- Interactions with students were mostly very positive and many demonstrated the capacity to explain and justify their understanding to the questions posed to them. In many lessons, tasks were differentiated suitably ensuring that all students made very good

progress. However, greater differentiation in tasks and in the work in worksheets would have been more beneficial to support learning.

- In teacher-based classrooms, the layout has been altered to support collaborative practices and students' work or subject specific materials were displayed. The majority of students were very attentive and cooperative.
- A review of students' copybooks and tests shows evidence of good practice in relation to assessment. In addition, teachers use the school devised "green book" which includes a record of students' attainment and comments for further development.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- Timetabling arrangements for Mathematics are mostly very good. However, a review of the arrangements for timetabling should allow for daily contact with the subject in line with the Literacy and Numeracy strategy and Circular Letter 0025/2012.
- Banding of Mathematics takes place from second year onwards enabling students to access an appropriate level. Additional teachers are deployed to support the ability range within each year group.
- Due to retirements, the mathematics department has experienced much change over the past three years. Seven teachers are deployed to teach Mathematics, the majority of whom are graduates in the subject. Some teachers are participating in upskilling programmes provided by the Department of Education and Skills; this should ensure that capacity to provide Mathematics to the highest level within the department is maintained.
- Management is very supportive of whole-staff CPD. Newly qualified and newly appointed teachers are very well supported through the school's induction programme which includes a focus on team teaching and mentoring.
- Practices to support students who find Mathematics challenging or who show ability in the subject are well established. A wide range of co-curricular and extra-curricular mathematics opportunities is in place for students to access the subject outside the classroom context.

PLANNING AND PREPARATION

- The position of convenor of mathematics has remained with one person to support the recent changes to personnel within the department. It is expected that all teachers will share in the rotation of this position in the future.
- Minutes of meetings are retained and indicate that, in addition to discussing organisational arrangements, teaching and learning strategies are also shared and discussed; this is very good practice. Common strategies for the teaching of topics should be agreed and shared with all teachers who offer support in Mathematics.
- Commendably, the mathematics department participated in school-based lesson workshops. This practice provides opportunities for colleagues to work collaboratively and to promote best practice in the teaching of Mathematics.
- The overall plan for Mathematics is progressing very well. Good work has taken place in the development of schemes of work. However, a review of these schemes should be undertaken to ensure greater alignment with the syllabus strands.

- The TY programme is being updated and the school is collaborating in the development of a mathematics module with a local amenity centre titled *Maths and Numeracy Trail Second Level*. This exciting initiative should offer students an opportunity to engage with Mathematics in a real life context and has been designed to complement the Project Maths course.

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.