

An Roinn Oideachais agus Scileanna
Department of Education and Skills

Subject Inspection of Mathematics
REPORT

Killinarden Community School
Killinarden, Tallaght, Dublin 24
Roll number: 91337B

Date of inspection: March 23 2015



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

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

INFORMATION ON THE INSPECTION

Dates of inspection	23 and 24 March 2015
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 nine class periods• Examination of students' work• Feedback to principal and teachers• Discussion with members of the learning-support team

MAIN FINDINGS

- The quality of teaching varied from good to very good with one lesson featuring excellent teaching.
- In the best lessons, due regard was placed on the mathematical principles underpinning the lesson content and on the links between the different curricular strands.
- All of the lessons were delivered with enthusiasm and appropriate focus on the students' literacy needs and on developing their key skills.
- Timetabling provision for Mathematics is very good and ensures equity of access to the different levels and efficient provision of learning support in Mathematics. The mathematics department is well resourced and its members are committed to their continuing professional development.
- Subject department planning in Mathematics is well advanced and individual teacher lesson planning was either good or very good.

MAIN RECOMMENDATIONS

- In designing future first-year mathematics programmes, the subject department should establish closer links with the teachers of the senior classes in the two local primary schools to discuss issues relating to the transfer of students into first year with a view to aligning more closely student experience of Mathematics in the two sectors.
 - The arrangements currently pertaining in first year where different teachers teach the different elements of the first-year mathematics programme in rotation should be discontinued.
 - Future subject department planning in Mathematics should seek to ensure that the mathematics underpinning the lesson content and the connections between the different curricular strands are fully explored during lesson delivery.
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INTRODUCTION

Killinarden Community School is a co-educational, multi-denominational post-primary school serving students from a broad range of socio-economic and cultural backgrounds. It participates in the Delivering Equality of Opportunity in Schools (DEIS) initiative and offers a range of programmes appropriate to the needs of its students including the Junior Certificate, the Junior Certificate School Programme (JCSP), the established Leaving Certificate and the Leaving Certificate Applied (LCA) programme. At the time of the evaluation there were 509 students enrolled in the school.

TEACHING AND LEARNING

- The quality of teaching was either good or very good with one lesson featuring teaching of the very highest quality. Many of the lessons featured the teaching approaches promoted by the revised syllabuses while in a minority of cases the teaching was very traditional. The more traditional lessons featured high-quality teaching but would have benefited from exposing the students to more open-ended, context-rich, tasks.
- The enhanced demands made by Project Maths on students' literacy skills were catered for in all of the lessons. In the best cases, structured question and answer sessions required that the students used the correct terminology in the correct context. Incisive teacher questioning ensured that students were expected to hypothesise and explain their reasoning.
- In the very best lessons the Mathematics underpinning the lesson content was treated with appropriate rigour. In one lesson exploring the types of graphs associated with various functions, for example, the link between direct proportion and the equation of the line from co-ordinate geometry was exploited to very good effect. Where there was scope for development, the reasons why particular approaches were being adopted or how they linked to fundamental principles were not explored.
- All of the lessons were delivered with enthusiasm and with due regard to the needs of the students. In the main, the student response was very positive and their behaviour and participation was of a very high quality. There were, however, two lessons in which less than ideal student behaviour impacted negatively on the quality of learning. This should be addressed through a more structured approach to organising group work with clearly defined roles and responsibilities being assigned to the members of each group. Otherwise the quality of student learning was very good.
- There was, in all lessons, an appropriate focus on developing the students' mathematical skills set. In light of the significant challenge this presents, the mathematics department supported by school management should explore the possibility of using on-line resources designed to develop the students' mathematical skills while allowing the teachers to track their progress. This would provide an engaging platform for students while providing more time in lessons for exploration, discussion and problem solving.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- The time allocated to Mathematics on the school timetable is very good, with the provision of six periods of Mathematics per week in senior cycle being especially welcome. The manner in which mathematics lessons are scheduled ensures that students have access to the level most appropriate to their needs and abilities and learning support

in Mathematics can be dovetailed with the provision for the mainstream cohort in each year.

- The arrangements currently pertaining in first year where different teachers teach the different elements of the first-year mathematics programme in rotation should be discontinued. While acknowledging the degree of reflection and co-operation that went into making the decision to implement this model, it would be preferable if agreement were reached on a common approach to teaching agreed topics and the key skills that students should master by the end of the year. This should then be supported by a schedule of common assessments throughout the year.
- In designing the first-year programme mentioned directly above, the mathematics department should consider establishing closer links with the teachers of the senior classes in the two local primary schools to discuss issues relating to the transfer of students into first year with a view to aligning more closely student experience of Mathematics in the two sectors.
- Procedures for identifying and supporting students requiring learning support in Mathematics are very good. These procedures feature comprehensive interactions with the local primary schools as well as the use of a variety of testing strategies and a range of interventions including small group withdrawal and team teaching.
- The mathematics department is very well resourced and arrangements for storing and sharing resources have recently been upgraded. The mathematics teachers have access to the school's information and technology infrastructure that includes a bank of portable computing devices. These resources, particularly the portable devices, were seen to be used to very good effect in the lessons visited during the inspection.
- The members of the mathematics department are committed to their on-going professional development and have participated fully in the workshops provided as part of the rollout of *Project Maths*. A number have also availed of post-graduate programmes relevant to their work as teachers of Mathematics.

PLANNING AND PREPARATION

- Subject planning in Mathematics is well established. The department holds regular meetings and a very good subject department plan for Mathematics is in place. Great credit is due to the co-ordinator of the department for the leadership and commitment displayed during the introduction of *Project Maths* and the collaborative manner in which the department operates.
 - In light of the earlier finding, relating to the rigour with which lesson content was treated in some lessons, future subject department planning in Mathematics should focus on ensuring that the Mathematics underpinning the lesson content and the connections between the different curricular strands are fully explored and exploited during lesson delivery.
 - Individual teacher planning for lessons was either good or very good. The best lesson planning was characterised by the clarity surrounding the lesson intention, the subsequent depth of treatment of the lesson content and the effective integration of resources.
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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 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.