

An Roinn Oideachais agus Scileanna

Department of Education and Skills

**Subject Inspection of Mathematics
REPORT**

**Convent of Mercy Secondary School
Roscommon
Roll number: 65090S**

Date of inspection: 12 April 2011



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

REPORT
ON
THE QUALITY OF LEARNING AND TEACHING IN MATHEMATICS

INFORMATION ON THE INSPECTION

Date(s) of inspection	11 and 12 April 2011
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 eleven class periods• Examination of students' work• Feedback to principal and teachers

MAIN FINDINGS

- The ongoing assessment of student progress in Mathematics was very well integrated into lesson delivery and served to develop the students' understanding and to enhance the quality of their learning.
- The scheduling of mathematics classes and the arrangements for determining the composition of the mathematics classes are very good.
- In almost all instances, the quality of teaching was very good. There were, however, a small number of instances where the teaching was not of a high standard
- The mathematics department is very well resourced and its members are committed to their ongoing continuing professional development.
- The mathematics department operates in a reflective manner and engages in effective collaborative planning.

MAIN RECOMMENDATIONS

- The good practice in relation to lesson preparation and delivery which created a clear context for the material being covered and minimised the use of the textbook in lesson delivery should be universally adopted across the department.
 - The number of class periods allocated to Mathematics in first year should be increased at the earliest opportunity.
 - The department's ongoing continuing professional development should continue to focus on resource integration and the use ICT in teaching and learning and should also include modules on assessment for learning.
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INTRODUCTION

The Convent of Mercy Secondary School, Roscommon is an all-girls voluntary secondary school operating under the trusteeship of CEIST-*Catholic Education an Irish Schools Trust*. It was established in 1929, has a current enrolment of 548 students and draws its students from the town of Roscommon and its hinterland.

TEACHING AND LEARNING

- Very good teaching was in evidence in almost all of the lessons visited during the inspection. These lessons featured very little reliance on the text book and the context for and the relevance of the material being covered was obvious.
- In a small minority of lessons, the quality of the teaching was not of a high standard. In such cases, the lessons were focussed entirely on routine mathematical operations and how these feature in the certificate examinations. There was very little emphasis on developing the students' understanding of the underlying principles.
- Teacher exposition at the board followed by the students working individually on assigned tasks was the primary teaching strategy adopted. Some lessons featured active teaching and learning and effective resource integration. However, there is still considerable work to be done in this area.
- The atmosphere in the classrooms was universally warm. Very good classroom management was in evidence and student engagement and behaviour were of a very high standard.
- The ongoing assessment of student progress in Mathematics was seamlessly incorporated into the lessons. This was primarily achieved through the use of insightful questioning which developed the students' understanding of the lesson material and encouraged them to explain their solutions and to explore alternative approaches to problem solving.
- The quality of student learning was, in the vast majority of cases, very good. They displayed very good levels of understanding in their responses to teacher questions and expressed themselves using the appropriate mathematical language. The students' written work, which featured teacher comments, corrections and amendments, was also very good.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- Timetabling provision for Mathematics in all but first year is very good. From first year on, the time allocated to Mathematics is generous and the scheduling of mathematics classes provides students with access to the most appropriate level. In first year, each class group is provided with four periods of Mathematics per week. Best practice suggests that they should have at least one mathematics lesson each day. Therefore, it is recommended that the allocation in first year be increased at the earliest opportunity.
- Arrangements for deciding the composition of mathematics classes are thorough and student centred. Following the entrance assessments, students are placed in mixed-ability classes in first year and follow a common mathematics programme. Higher and ordinary-level mathematics classes, which are mixed ability within the levels, are formed at the end of the year. This mixed-ability model is maintained for the remainder of the junior cycle and in fifth and sixth year.

- Upon completion of the junior cycle, students can choose to enter transition year (TY). Mathematics classes are set in TY. This situation is under review. One outcome of the review should be that in future years, TY mathematics classes are mixed ability and that the diverse needs of the students are accommodated through differentiated programme content and lesson delivery.
- Arrangements for assessing student progress in Mathematics are very good. Comprehensive homework and assessment policies are in place and are largely being implemented. References to assessment for learning in the existing assessment policy should be strengthened and initiatives to ensure that it is universally adopted across the mathematics department should be established. Common assessments, within levels, should be provided in all formal assessments.
- The mathematics department is very well resourced and all Mathematics classes have access to the school's extensive information and communication technology (ICT) infrastructure. The arrangements for storing and sharing resources are also very good.
- The mathematics department is positively disposed towards Project Maths. The members of the department have engaged enthusiastically with the in-service provided as part of Project Maths and the school's ICT co-ordinator is providing a programme designed to develop the ICT skills of the members of the department.
- Students with special educational needs or in need of learning support in Mathematics receive very good support. Very good links are maintained with the mathematics department and the procedures for establishing the mathematical capabilities of incoming students and for monitoring their progress are comprehensive. However, greater use could be made of the analysis of the entrance assessments to shape the common programme in first year.

PLANNING AND PREPARATION

- Subject department planning in Mathematics is well advanced. A planning co-ordinator has been appointed, regular meetings are held and it is evident that informal planning is a core activity within the department. The existing co-ordinator who has been in place for a number of years should continue to co-ordinate the department's activities until Project Maths is fully embedded in the school.
- A very good subject department plan, detailing the departments various activities and providing a robust structure to support the work of the department is in place. The plan contains schemes of work for each year and level. The schemes are very well structured, are written in terms of learning outcomes and detail the approach to be adopted in carrying out key mathematical operations. The degree to which the learning outcomes contained in the schemes of work are integrated into lesson delivery is mixed and it is recommended that lesson outcomes be agreed at the outset of each mathematics lesson.
- Individual lesson planning was, in almost all cases, very good. Where the planning was of a high standard, the resulting lessons were well paced, had a good structure and the lesson content was appropriate to the needs and abilities of the students.
- An analysis of students' performance in the certificate examinations is conducted annually by the department and the outcomes of the analysis are made available to the school's senior management team and the board of management. The outcomes are also discussed at meetings of the department and serve to inform ongoing planning.

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.