

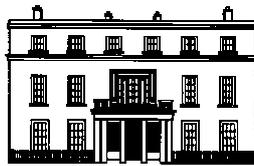
An Roinn Oideachais agus Scileanna

Department of Education and Skills

**Subject Inspection of Mathematics
REPORT**

**Killina Presentation Secondary School
Rahan, County Offaly
Roll number: 65630B**

Date of inspection: 29 November 2011



**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	28th and 29th November 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 eight class periods• Examination of students' work• Feedback to principal and teachers

MAIN FINDINGS

- Overall, the quality of teaching and learning was very good with scope for improvement in few areas.
- All teachers used very good questioning strategies.
- The lessons observed were well planned.
- Whole-school support for Mathematics is very good.
- There is a very high level of co-operation and collaboration amongst the mathematics teachers.

MAIN RECOMMENDATIONS

- Students should be encouraged to think for themselves by engaging in all aspects of problem solving.
- Teachers should collaborate on extending the use of ICT.
- The good balance between teacher input and student activity that was evident in most lessons should be extended to all lessons.
- Higher-level uptake in Leaving Certificate Mathematics should be monitored to ensure that the measures introduced this year in the school are effective in keeping students at the highest level possible for as long as possible.

INTRODUCTION

Killina Presentation Secondary School is a voluntary Catholic secondary school with a current enrolment of 254 boys and 231 girls. Transition Year (TY) is provided as an optional programme.

TEACHING AND LEARNING

- The quality of teaching and learning observed was very good overall with few areas for improvement. Lessons were well planned with a variety of prepared resources to support learning. Teacher explanations were clear and conceptual. Teachers provided a statement of each lesson's learning intentions at the start of lessons and checked their achievement as lessons closed which is good practice.
- The main methodology used was high quality teacher instruction. Students engaged in a measuring activity in one lesson. There was evidence in the copybooks reviewed to indicate that active learning is a regular feature of lessons for some class groups and while this is good there was scope for an extension of the use of active methodologies in the lessons observed.
- Very good use of ICT was a feature of three lessons. Best practice in the use of ICT occurred where the students themselves used ICT as a natural part of the lesson's activities. Teachers should collaborate on extending the use of ICT.
- All teachers made very good use of open questions to help students to explore the concepts taught, to make links between current learning and other areas of the syllabuses, and to identify mathematical connections. In one lesson the students worked in pairs to create questions for each other and this worked very well.
- Teachers differentiated learning by choosing activities that allowed students to work at their own pace and through the provision of individual assistance to any students experiencing difficulty. In some cases additional work was provided for more able students. These strategies should be used in all lessons to ensure that all students can participate at a level that suits their ability in Mathematics.
- The quality of learning was highest where activities were planned to facilitate student engagement and participation. Where this was the case the students were independent and were encouraged to take responsibility for their own learning. Teacher instruction took up the majority of class time in some lessons and while the quality of the teaching was very good the opportunity for students to work independently was more limited. Therefore, the good balance between student activity and teacher input observed in most lessons should be extended to all lessons.
- In a minority of lessons learning was over supported by teachers providing too much assistance. This involved teachers interpreting questions and doing the more difficult parts for the students. Opportunities for students to practise thinking for themselves through working on appropriately challenging activities without direct teacher assistance should be included in all lessons. This will allow students to practise persistence, logical thinking and problem solving and to rely on their own resources rather than becoming too dependent on teacher input.
- The practice in relation to assessment is good. Laminate boards were used to assess students; this was very effective in providing quick accurate information on student progress. The copybooks reviewed indicated that the students' work is well monitored and that in some cases teachers include comments to encourage and advise students. It is recommended that this practice be extended to the monitoring of all students' work.
- The relationship between students and their teachers is very good. Students behaved very well in all of the classrooms visited. Most lessons progressed with a sense of teamwork.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- There is very good whole-school support for Mathematics in terms of time allocation and timetable arrangements for level choice. The provision of resources and ICT equipment to support teaching and learning is also very good.
- Students are placed in mixed-ability classes for Mathematics in first year and are assigned to higher and ordinary level groups from second year onwards which is good practice. Lessons are concurrently timetabled allowing students to change level where necessary.
- Higher-level Mathematics in the junior cycle is rotated amongst all mathematics teachers which is good. In the senior cycle higher-level Mathematics is currently taught by two experienced teachers. In order to ensure that there are enough teachers in the school to teach higher-level Leaving Certificate Mathematics the number of teachers teaching this level should be increased. Attendance at continuing professional development (CPD) courses is good and is strongly supported by school management.
- An analysis of the school's achievements in the certificate examinations compared to national norms indicates that higher-level uptake of Mathematics in the Junior Certificate is very good. However, the proportion of students taking higher-level Mathematics in the Leaving Certificate compared to national norms for that examination is relatively lower. The school has identified this as an area for improvement and has introduced a number of measures to tackle the issue. Higher-level uptake in Leaving Certificate Mathematics should, however, be monitored to ensure that these measures are effective in encouraging students to study the subject at the highest level possible for as long as possible.
- Support for students with special educational needs is good.
- Valuable opportunities are provided for students to participate in mathematics-related extracurricular activities some of which are accessible through the school's website.

PLANNING AND PREPARATION

- A co-ordinator for the subject department has been appointed and it is good practice that this position is rotated every two years. Formal meetings of the department are organised once per term and informal meetings take place throughout the year. There is a very high level of co-operation and collaboration amongst the mathematics teachers.
 - The mathematics plan contains the relevant policy documents and programmes of work for each year group and level. The latter comprise a detailed list of topics to be covered within set timeframes. The mathematics teachers have created a shared folder on the school's computer system for the sharing of resources which is very good. It is evident that considerable effort has been invested in implementing the material from the new syllabuses. It is recommended that this work now focus on matching the learning outcomes listed in the syllabus documents with the teaching and learning plans and the resources provided by the *Project Maths* development team.
 - The TY plan comprises a good combination of syllabus and non-syllabus material. A range of alternative methodologies is outlined to deliver the programme which is good.
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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 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.

The Board of Management welcomes the findings of the recent Mathematics inspection. The Board is pleased with the report and wishes to acknowledge the on-going dedication and commitment of the Mathematics Department in the school.

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 recommendations contained in the inspection report either have been or are being addressed by the Mathematics Department and the Management of the school.