

An Roinn Oideachais agus Scileanna
Department of Education and Skills

Subject Inspection of Mathematics
REPORT

Árdscoil Phádraig
Granard, Co. Longford
Roll number: 71710I

Date of inspection: 25 September 2012



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	24th and 25th September 2012
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 five class periods• Examination of students' work• Feedback to principal and teachers

MAIN FINDINGS

- Overall the quality of teaching and learning observed in the evaluation was very good.
- Very good assessment practices are used to monitor students' progress.
- The atmosphere in each of the classrooms visited was conducive to encouraging confidence with the subject.
- Whole-school support for Mathematics is very good.
- The members of the mathematics department engage in a process of action planning and an excellent action plan for the subject has been developed.

MAIN RECOMMENDATIONS

- A *Project Maths* approach that includes the use of activities and concrete materials should be considered for lessons and particularly for the teaching of LCA mathematical applications.
 - A suitable labelling system should be created and a reference should be provided on the programmes of work to match learning outcomes to the resources, which are to be stored on a shared folder on the school's computer system, and to the teaching and learning plans provided by the *Project Maths* development team.
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INTRODUCTION

Árdscoil Phádraig is under the patronage of County Longford Vocational Education Committee (VEC). It has a current enrolment of 90 boys and 69 girls. The school participates in Delivering Equality of Opportunity in Schools (DEIS), the Department of Education and Skills action plan for educational inclusion and offers the Junior Certificate programme, the Junior Certificate School Programme (JCSP), the established Leaving Certificate, the Leaving Certificate Vocational Programme (LCVP) and the Leaving Certificate Applied (LCA) programme. Transition Year (TY) is not available in the school.

TEACHING AND LEARNING

- Overall the quality of teaching and learning observed in the evaluation was very good. All lessons were well planned and began with a recap of prior learning. Teachers shared the learning objectives with the students at the start of lessons and checked their achievement at the end. This is very good practice. In all lessons a good balance was maintained between teacher input and student activity and lessons progressed at a good pace.
- The main methodology used was high quality teacher explanations followed by students completing similar questions either individually or in pairs. It is recommended that a *Project Maths* approach that includes the use of activities and concrete materials be considered for lessons. This is of particular importance in relation to the teaching of LCA mathematical applications.
- Best practice was observed in a lesson on representing data where several practical activities were used to assist students in exploring the learning objectives. The context chosen for the presentation of the material was familiar and of interest to the students which significantly enhanced the quality of the learning achieved. A strong feature of this lesson was the degree to which the underlying concept was explored. Further use of this conceptual approach is recommended for inclusion in lessons.
- Some teachers encouraged students to think for themselves by asking probing questions, by expecting them to explain their reasoning, by choosing activities that exposed the lesson's underlying mathematical concepts well and by asking students to come up with their own questions. These very good strategies facilitated students in tackling the difficult conceptual aspects of their class work and will prepare them well for *Project Maths* examination questions. In some lessons however, students were over supported by teachers doing the conceptual elements of the work for the students rather than allowing them to do this themselves. It is essential that students gain sufficient experience of thinking independently. Therefore, it is recommended that teachers take care to avoid providing too much support for students and allow them to engage in higher-order tasks such as problem solving and critical thinking.
- The atmosphere in each of the classrooms visited was conducive to encouraging confidence with the subject. The relationships between students and their teachers were warm and respectful. There was a very strong sense of care.
- Very good assessment practices are used to monitor students' progress. There are well structured routines around the checking, correcting and giving of homework. The review of students' copybooks indicated that their work is regularly monitored and that comments are included to provide encouragement and advice for students. Teachers assess student progress very well through oral questioning and observation. 'Traffic lights' are used in some lessons to establish the level of student learning.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- Mathematics is supported on the school's timetable with very good time allocation and arrangements for level choice. There is excellent provision of resources including information and communications technology (ICT) for the subject also.
- Students are assigned to mixed-ability mathematics classes for first year and for second year; levels are set in every other year. Concurrent timetabling of mathematics lessons is provided where necessary to allow students to choose a level appropriate to their ability. The school strongly encourages students to study the highest level possible for as long as possible. This is all very good practice.
- School management actively encourages teachers to engage in continuing professional development (CPD) and facilitates attendance at subject specific and whole-school CPD events. It is good that two mathematics teachers have begun the course provided by the Department of Education and Skills.
- Students with special educational needs are very well supported.
- Extracurricular mathematical activities are available in the school to encourage an interest in the subject, which is good.

PLANNING AND PREPARATION

- The mathematics department has engaged very well in planning for the subject. Meeting time for Mathematics is provided once per term. A mathematics co-ordinator has been appointed and it is good that this position is rotated. The members of the mathematics department engage in a process of action planning. An excellent action plan for the subject has been developed and this is included within the subject plan.
- The subject plan is very good and includes programmes of work for each year group and level. These comprise time-bound content lists together with detailed lists of learning outcomes to be achieved that are linked to appropriate methodologies. It is recommended that the content lists be reviewed in favour of expressing the lists in terms of syllabus learning outcomes rather than chapters of the book to be covered.
- The department's action plan for this year has prioritised the development of resources for lessons which will be stored on a shared folder on the school's computer system. A suitable labelling system should be created and a reference should be provided on the programmes of work to match syllabus learning outcomes to resources and to the teaching and learning plans provided by the *Project Maths* development team. This is recommended to make it easier for teachers to access the resources that have been developed.
- There is currently one mixed fifth and sixth-year higher-level mathematics group in the school. The mathematics lessons of fifth and sixth year are timetabled at the same time to make this possible. A very good plan for this class has been developed and additional assistance is provided for the higher-level sixth-year student in the group. This is evidence of the department's commitment to ensuring that the school's students achieve their potential in the subject.

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.

Published March 2013.

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 mathematics subject inspection report on behalf of the whole school community. The Board of Management acknowledges the contribution of the staff and students to the success of the subject inspection.

We acknowledge the professionalism of the inspectorate and the collaborative manner in which the inspection was carried out.

We accept the recommendations as valid and look forward to building on many strengths outlined in the report and incorporating the recommendations for development of the subject.