

An Roinn Oideachais agus Scileanna

Department of Education and Skills

**Subject Inspection of Mathematics
REPORT**

**Saint Joseph's College
Ballinasloe, County Galway
Roll number: 62880J**

Date of inspection: 25 April 2013



**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	24 and 25 April 2013
Inspection activities undertaken <ul style="list-style-type: none">• Review of relevant documents• Discussion with principal, deputy 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

- Overall, the standard of teaching and learning observed ranged from good to very good.
- The majority of lessons featured a significant amount of individual student activity.
- Teachers and students have developed a very positive and respectful working relationship.
- Timetable provision and whole-school support for Mathematics is very good.
- Management and teachers demonstrated a strong commitment to the implementation of *Project Maths*.
- Teachers of Mathematics have engaged in a significant amount of subject planning.

MAIN RECOMMENDATIONS

- Collaborative learning methodologies should be used more widely in mathematics lessons.
 - Schemes of work should be further developed to include reference to a range of teaching resources and assessment modes which teachers have proved to be effective.
 - The Transition Year (TY) plan should be revised and further developed to include more context-based material and a more appropriate mix of syllabus and non-syllabus content.
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INTRODUCTION

St Joseph's College is a voluntary secondary school for boys with a current enrolment of 484 students. The programmes offered are the Junior Certificate, an optional Transition Year (TY), the Leaving Certificate Vocational Programme (LCVP), the Leaving Certificate Applied Programme (LCA) and the established Leaving Certificate.

TEACHING AND LEARNING

- Overall, the standard of teaching and learning observed ranged from good to very good. Best practice included the setting of clear objectives for the lesson and the continual monitoring of their attainment during the lesson. *Project Maths* teaching and learning plans were used to very good effect in a number of lessons, facilitating experiential learning as well as providing a clear focus on key terminology.
- Students demonstrated positive dispositions towards Mathematics and many responded knowledgeably and articulately when questioned. Learning could have been enhanced in a minority of lessons by reducing the amount of time allocated to teacher presentation and by requiring students to engage more actively with the content of the lesson.
- The majority of lessons featured a significant amount of student activity. In most cases, this involved students working on their own while the teacher circulated among the class to provide assistance where necessary. In order to further facilitate the active involvement of students in lessons, it is recommended that teachers develop strategies to incorporate more collaborative tasks into lessons. Such activities promote the discussion of mathematical concepts and provide students with opportunities to engage in more higher-order learning.
- Information and communication technology (ICT) was used effectively in most lessons both to aid teaching and to provide a focus for teacher presentations. It was particularly effective in facilitating smooth transitions between lesson activities, thus leading to good progress through the lesson content.
- All teachers demonstrated considerable knowledge of their subject and provided very clear explanations of key concepts in all of the lessons observed. In order to further enhance links across the different strands of the syllabus, it is recommended that when covering a particular topic, teachers should aim to incorporate references to other strands of the syllabus at every possible opportunity.
- An examination of students' journals indicates that homework is assigned regularly. All lessons observed included the correction of homework and students' work was well presented in the sample of copybooks reviewed.
- Students attending the school's autism unit are very well facilitated through the setting of engaging tasks and the provision of one-to-one and small group instruction by a dedicated team.
- All classrooms feature good displays of relevant resources including *Project Maths* posters, theorems, constructions and keywords.
- In all of the lessons observed, teachers had a very good rapport with students, mutual respect was evident and the learning environment was positive and supportive of student learning.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- Whole-school support for Mathematics is very good. There is very good time allocated to the subject, particularly in fifth and sixth year where class groups have six periods of mathematics instruction per week. Lessons are appropriately spread throughout the week facilitating daily contact with the subject for all students. School management, with the co-operation of teachers, have facilitated the provision of additional weekend and evening lessons for exam classes. This high level of provision is commended.
- Students are assigned to mixed-ability mathematics classes in first year. In other year groups, students are banded based on their level of study. Within these bands, students are taught in mixed-ability settings. It is suggested that consideration be given to facilitating a mixed-ability setting in TY. Such a setting would provide TY students with the opportunity to learn from each other in an environment that is driven more by enjoyment of the subject rather than by syllabus-specific requirements.
- The qualifications profile of the staff of the mathematics department is very good. Most of the mathematics teachers have specialist qualifications in Mathematics and all of the department's members have attended the workshops provided as part of the national roll-out of *Project Maths*. Some teachers have voluntarily attended additional evening workshops. This demonstrates a commitment by teachers to ensuring that they are fully equipped to implement *Project Maths* in the classroom for the ultimate benefit of students.
- Teachers of Mathematics have a significant range of resources to support teaching and learning at their disposal. Each classroom is equipped with a data projector and a desktop computer with subject-specific software installed. Internet access is also available throughout the school. A range of resources have been purchased to facilitate the use of active learning methodologies espoused by *Project Maths* and these are being added to incrementally.

PLANNING AND PREPARATION

- Meeting time for teachers of Mathematics is provided as part of the whole-school planning process. Formal meetings take place once per term with informal meetings held as the need arises. The department is co-ordinated on a rotating basis in line with best practice. There is a very high level of co-operation and collaboration evident amongst the mathematics teachers.
- Teachers have engaged in a significant amount of subject planning. Schemes of work for all years and all levels are laid out in tabular format. References to intended learning outcomes, suggested methodologies as well as a focus on literacy requirements are included in these schemes. As a means of building on this, it is recommended that the plan be augmented with links to teaching resources that have been trialled and have proven effective in lessons. Assessment strategies, both summative and formative, should also be agreed and included in order to ensure consistency of practice in relation to assessment.
- The current TY plan contains mainly topics drawn from the syllabuses for the Certificate examinations. It is recommended that this plan be revised and further developed with the aim of incorporating more context-based material and a more appropriate mix of syllabus and non-syllabus content.

- Teachers' individual planning for lessons was of a very high standard. ICT and other resources were prepared in advance and were integrated seamlessly into lessons.
- The importance of students having opportunities to experience Mathematics outside of the classroom setting is prioritised by teachers. Students have been given opportunities to engage in a range of extracurricular and co-curricular activities including International Pi Day, Scifest and The Young Scientist and Technology Exhibition. Exceptionally able students are also encouraged to participate in The Irish Mathematical Olympiad.

The draft findings and recommendations arising out of this evaluation were discussed with the principal and the 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.

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