

An Roinn Oideachais agus Scileanna
Department of Education and Skills

Subject Inspection of Mathematics
REPORT

The Abbey School
Tipperary, County Tipperary
Roll number: 65490L

Date of inspection: 15 April 2016



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

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

INFORMATION ON THE INSPECTION

Date of inspection	15 April 2016
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 four class periods• Examination of students' work• Feedback to principal and teachers

MAIN FINDINGS

- Teaching ranged from very good to good, with all lessons well planned and structured.
- Student contributions were valued and incorporated into lessons in a way that builds students' confidence in their mathematical and verbal reasoning skills.
- There is excellent provision for students with additional needs in Mathematics that is flexible and responsive to students' needs.
- The Transition Year (TY) programme has a balance of Leaving Certificate syllabus and non-syllabus material and incorporates a range of assessment practices, which is very good practice.

MAIN RECOMMENDATIONS

- Schemes of work should be further developed to incorporate collaborative learning strategies and higher order questions specific to each topic.
 - Further development of teaching practices that cater for the full range of students' abilities should be discussed, agreed and implemented.
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INTRODUCTION

The Abbey School is a voluntary secondary school for boys under the trusteeship of the Edmund Rice Schools' Trust. It is located in Tipperary town. The school has a current enrolment of 436 students who are offered Junior Certificate, an optional Transition Year (TY) programme, the Leaving Certificate Applied (LCA) programme and the established Leaving Certificate.

TEACHING AND LEARNING

- Teaching ranged from very good to good, with all lessons well planned and structured. Students were provided with opportunities for pair work in all lessons observed.
- Where best practice was observed, there was very good incremental development of students' understanding of concepts. This was achieved through the planning of suitably challenging lessons coupled with a high degree of skill when questioning students.
- Students made the most progress where learning intentions were shared at the outset of lessons, were carefully worded as skills and set high expectations of new learning for students. Opportunities for students to assess their own progress in relation to these intentions was also provided. This is very good practice.
- Students were well behaved and purposeful in their work. Where the rate of learning was highest, continued interest was sustained through judicious use of well-chosen resources. These resources gave the students scope to choose from questions that would consolidate their learning or challenge them as necessary. This approach ensures that students of all abilities are able to make progress at a rate suitable to them and should be shared across the department.
- In some lessons, students were challenged to interpret and solve problems after initially discussing the concept. This opportunity to apply new concepts, before a demonstration of the procedure or expected solution, was observed to be very effective in raising the level of mathematical discussion amongst students.
- In some instances, having assessed students' current level of understanding as a group, feedback was given on common errors to aid students in assessing their own approach and modify it as necessary. This very effective approach facilitates the development of students' understanding of the theory underlying a learned procedure.
- In all lessons, student contributions were valued and incorporated in a manner that built students' confidence in their mathematical and verbal reasoning skills. This was observed through the high quality teacher-student and student-student interactions that took place.
- At all times, teachers were enthusiastic in their interactions and facilitated discussion through language that indicated their high level of expectations for the students. They used subject specific language where appropriate and were very encouraging of students' attempts to do the same.
- Information and communications technology (ICT) was used effectively in some classes to support students' learning and give visual interest. In some instances, more thought was needed to effectively support the visual learner and ICT could have been utilised in these situations.
- Some lessons took place in a tiered room. Teachers were very aware of the restrictions this puts on the activities that can take place and how it impacts their ability to circulate the room to informally assess students. It was evident that teachers using this room have

developed the strategies necessary to overcome this restriction so that learning is still maximised.

- Formative feedback was seen in copies examined. The department should discuss how students could be encouraged to actively respond to this formative feedback in a way that gives them more responsibility as learners.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- In line with best practice, Mathematics is concurrently timetabled in all year groups, except first year and TY, where the classes are of mixed ability. This allows for the flexible movement of students between levels.
- Management should consider ways to address the increasing number of students taking higher level at Leaving Certificate. Alternative arrangements, such as the creation of a second higher level class, may need to be put in place and closely monitored.
- Provision for students with additional educational needs in Mathematics is excellent. The programmes in place are well organised and there is a keen awareness of the needs of individual students that extends beyond their needs in Mathematics.
- In the current second, third and sixth year, an additional smaller class has been created for students who would benefit from ongoing support in Mathematics. Students are identified through the use of various evidence bases. The outcomes of this strategy have proved effective. It is recommended that the formation of these small classes continue to be reviewed regularly to ensure it meets the ongoing needs of students.
- There is a clear commitment by the management and the staff to ongoing continuing professional development (CPD), with members of the department having participated in a range of CPD initiatives.

PLANNING AND PREPARATION

- There are two teachers taking active responsibility for co-ordinating all aspects of the department. It is a positive feature that the role of co-ordinator rotates between department members.
- The department have termly meetings, with the department plan formally reviewed at the start and end of each year. The current plan outlines a vision for the department, which includes aims and objectives, assessment and reporting procedures and teaching strategies.
- It is clearly evident that there is strong informal collaboration between all members of the department on an ongoing basis. It is timely that this informal collaboration is documented by further developing the schemes of work to incorporate collaborative learning strategies and higher order questions specific to each topic. The use of ICT and subject specific software should also be discussed and incorporated into the subject plan.
- Further development of teaching practices that cater for the full range of students' abilities should be discussed, agreed and implemented. The effective use of mini-whiteboards, the use of grouped tables where feasible, as well as the sharing of observed good practice, were discussed, on occasion, during the evaluation in this regard.

- The Transition Year (TY) programme incorporates material that is not on the Leaving Certificate syllabus coupled with a range of assessment practices, which is very good practice. It is very positive that the TY students are responsible for the organising of Maths Week and the many activities associated with it.

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 was given an opportunity to comment in writing on the findings and recommendations of the report; a response was not received from the board.