

An Roinn Oideachais agus Scileanna

Department of Education and Skills

**Subject Inspection of Mathematics
REPORT**

**St Conleth's College
Clyde Road, Dublin 4
Roll number: 60590N**

Date of inspection: 24 September 2015



**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

Date of inspection	24 September 2015
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• Meeting with support teacher• Feedback to principal and teachers

MAIN FINDINGS

- The overall quality of teaching was very good with exemplary practice noted in many lessons.
- Learning in all lessons was very effective and students demonstrated very good subject knowledge and applied themselves to their work in a diligent manner.
- There is excellent support from management for Mathematics.
- Teachers demonstrated a very positive attitude to the promotion and development of Mathematics and students in turn exhibited a keen interest in the subject.
- The overall planning and organisation of the mathematics department is excellent and to date a significant program of work has been achieved.
- Students are given many opportunities to participate in Mathematics through a wide range of co-curricular and extra-curricular activities.

MAIN RECOMMENDATIONS

- The Transition Year (TY) mathematics plan should be updated to include the various elements studied by students while ensuring that there is a clear distinction between Leaving Certificate material and the TY mathematics programme.
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INTRODUCTION

St Conleth's College is a fee-paying lay Catholic school in south Dublin. The school currently has an enrolment of 252 students comprising 224 male students and 28 female students enrolled in fifth year and sixth year. The school offers the Junior Certificate, the established Leaving Certificate and a compulsory TY programme.

TEACHING AND LEARNING

- The overall quality of teaching was very good with exemplary practice noted in many lessons.
- Teachers demonstrated a very positive attitude to Mathematics and to the promotion and development of the subject. Students in turn presented as being positive and exhibited a keen interest in the subject.
- In almost all lessons, learning intentions were clearly established, providing a clear roadmap for the students as to what they would be doing during the lesson. Most lessons concluded with a review of these learning intentions, a practice that is worthy of being extended to a few lessons where appropriate.
- A range of effective methodologies was carefully chosen and this maximised the learning opportunity for students. These methodologies included: whole-class teaching, discovery learning, collaborative learning and some independent activities.
- Paired or individual work was observed in some lessons. The use of such student-centred activities proved very successful. It was clear that students were accustomed to working in pairs and applied themselves to their assigned tasks in a diligent manner. Where independent learning was used it was mostly of a very high standard.
- Very good differentiation was noted in many cases but particularly during an algebra lesson. In this lesson, while all students were given the same worksheet the teacher identified specific questions for students to complete but where appropriate provided an additional challenge for more able students. In this way, all students' abilities were catered for within the lesson.
- Overall, very good questioning strategies were used. In line with best practice a very good balance between lower and higher-order questioning was maintained. In the majority of lessons, teachers initially used recall type questions to link prior learning with current learning. Effective use was made in most lessons of global questions to initiate student thinking before individuals were asked to offer a suggested solution to the question.
- Effective use was made of an appropriate "waiting time" to allow students to formulate their response to questions. Students were encouraged to extend their answers and teachers regularly probed to check students' understanding. This is also very good practice.
- Learning in all lessons was very good. Students applied themselves to their work in a conscientious manner and demonstrated very good engagement with their learning and a very good knowledge of the Mathematics. Interactions with the teachers and their students were very positive and in many cases students questioned their teachers to check their understanding.

- A wide range of resources is shared among members of the department including individually developed supplementary materials, worksheets and school-based assessment materials. Such collaborative practices are very good and are commended.
- In addition to worksheets and supplementary materials, information and communication technology (ICT) was prudently used and greatly enhanced the learning among students. During a coordinate geometry of the circle lesson, Geogebra was used to present the circle during a question and answer session. It was also used to very good effect in the development of worksheets, thereby supporting the modelling of best practices in the display and presentation of work.
- In addition to regular in-class and school based assessments, there was evidence that students received written formative feedback in their copybooks. Of particular note was the use of a reflective section on a student worksheet where they were required to critically review their work and identify areas for future development. Such self-assessment practices are highly commended.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- Timetabling arrangements for Mathematics are very good. Daily contact with the subject is facilitated. Deployment of teachers to the subject is excellent, facilitating the creation of small class groupings.
- Very good practices and procedures are in place facilitating the rotation of levels within the mathematics department. Concurrent timetabling of Mathematics enables students to access a level appropriate to their abilities. The vast majority of students take higher-level Mathematics and attainment at this level is very good.
- The profile of the department is very good as all teachers are graduates in the subject. In addition, another member of the school staff is currently undertaking a post-graduate diploma for out-of-field mathematics teachers. This will increase capacity within the mathematics department and is commended.
- Senior management provides effective support to the mathematics department. A variety of resources, including ICT, has been made available for use in all classrooms. Involvement with the Irish Mathematics Teachers Association (IMTA) is supported and attendance at CPD events is facilitated for all teachers.
- Students participate in a wider range of events arranged through the IMTA, during Maths Week and competitions organised by the Irish Bebras Computing Contest. Participation by students in such co-curricular and extra-curricular activities and support by teachers is acknowledged.

PLANNING AND PREPARATION

- Exemplary practices were noted in the overall organisation of the mathematics department. The department is very progressive and there is evidence of reflective practices to continually improve and promote Mathematics. A highly competent convener takes overall responsibility for the organisation of the department.
- Regular meeting times are made available throughout the school year with informal meetings also arranged. Minutes of these meetings indicate that issues discussed include

general organisation of the department, pedagogy, student attainment and promotion of the subject. This is highly commendable practice.

- Subject department planning time has been very well used and a significant program of work has been achieved by the mathematics department. A comprehensive subject department plan is available for the subject. A school developed template for whole-school subject department planning is used. This template is effectively utilised to ensure consistency in department planning. There is much evidence of self-evaluation in the mathematics subject plan.
- Schemes of work have been developed in line with relevant syllabuses which is good practice. The use of a colour coding system within yearly schemes of work that highlights various stands of the syllabus is very effective as it provides a clear indicator of the syllabus sections completed within each year.
- The Transition Year (TY) mathematics plan should be updated to include the various elements studied by mathematics students while ensuring that there is a clear distinction between Leaving Certificate material and the TY mathematics programme.

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.