

An Roinn Oideachais agus Scileanna

Department of Education and Skills

**Subject Inspection of Mathematics
REPORT**

**Magh Éne College
Bundoran, County Donegal
Roll number: 76083J**

Date of inspection: 19 November 2014



**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	18 and 19 November 2014
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 nine class periods• Examination of students' work• Feedback to principal, deputy principal and teachers

MAIN FINDINGS

- The standard of teaching and learning ranged from good to very good in the lessons observed with some exemplary practices noted.
- Practice in relation to student assessment is of a very high standard.
- School management provides very good support to the mathematics department.
- Students in need of additional support in the area of numeracy are catered for in an inclusive and well-organised manner.
- Management and teachers demonstrate a reflective approach to their work and have a strong focus on continuing professional development (CPD).
- Planning for the implementation of *Project Maths* is at an advanced stage with scope for the further development of short-term schemes of work for some year groups.

MAIN RECOMMENDATIONS

- The further implementation of teaching strategies that take full account of the prior knowledge and experience of students is recommended.
 - The good practice evident in relation to the development of comprehensive short-term schemes of work for some year groups should be extended to all year groups.
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INTRODUCTION

Magh Éne College is a co-educational school serving the town of Bundoran and its environs and operating under the auspices of the Co. Donegal Education and Training Board (ETB). The programmes offered are the Junior Certificate, an optional but well subscribed Transition Year (TY), the Leaving Certificate Vocational Programme (LCVP) and the established Leaving Certificate. Enrolment currently stands at 324 students.

TEACHING AND LEARNING

- The standard of teaching and learning ranged from good to very good in the lessons observed with some exemplary practices noted. Best practice was observed in lessons where teachers set high expectations for students' learning and where active and collaborative learning was used to engage and motivate students.
- In most lessons the learning intentions were shared with the students at the start of the lesson and their attainment was regularly monitored during the lesson. This good practice ensured that students had a clear focus for their learning and could assess their own levels of achievement effectively.
- Information and communication technology (ICT) was used to good effect in most of the lessons observed and there were many examples of carefully prepared ICT presentations that supported the lesson content without becoming the sole focus of the lesson.
- There were some good examples of students' contributions being used to inform the pace and direction of lessons. The use of traffic lights by students to indicate their level of understanding, combined with effective questioning strategies, was of considerable assistance in this regard. In some lessons there was a need to adapt the lesson plan to take account of students' prior knowledge and, in doing so, to further ensure that students remained actively engaged for the full duration of the lesson.
- Assessment practices are a key strength of the mathematics department and practice in this area is informed by a well-developed whole-school assessment policy. *Assessment for Learning* (AfL) strategies are used widely. The use of mini-whiteboards to facilitate short exercises and to allow for efficient assessment of the attainment of learning outcomes was a useful feature of some lessons. There were also some very good examples of high quality formative feedback to students on the quality and presentation of their work.
- Appropriate mathematical routines were used consistently and there was good use of topic-specific terminology in all lessons. This is in line with a whole-school approach to literacy that has been developed as part of the school self-evaluation process.
- In all of the lessons observed, teachers had a very good working relationship with students and mutual respect was evident in all interactions. In addition, most of the classrooms have a considerable amount of subject-specific content on the walls including a significant amount of students' own work. The inclusion of a number line in each classroom would be a further useful addition.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- Timetable provision for Mathematics is in line with syllabus requirements for all year groups. Daily contact with Mathematics is facilitated for all students and there is a good balance between morning and afternoon lessons.
- In line with best practice, students are taught in a mixed-ability setting in first year and TY. In other year groups, students are taught in level-specific classes where concurrent timetabling facilitates the movement of students between levels where necessary.
- The school has adopted an inclusive approach to provision for students who require additional support in the area of numeracy. Team teaching is used as the primary mode of provision in this regard. The approach used allows the second teacher to provide targeted support to students while also taking on tasks such as calling the roll and checking homework. This approach was observed to be working very effectively in lessons.
- The staff of the mathematics department have a very good qualifications profile and all teachers have attended the workshops provided as part of the national roll out of *Project Maths*. Some teachers have voluntarily participated in a variety of professional development workshops and one teacher is currently undertaking a post-graduate diploma for out-of-field mathematics teachers. Such widespread commitment to CPD is highly commended.
- The mathematics department is very well resourced. Each classroom is equipped with a data projector and a desktop computer. Additional resources to support teaching and learning have also been acquired and a variety of resources were used in the lessons observed.

PLANNING AND PREPARATION

- The mathematics department is co-ordinated on a rotating basis in line with good practice. Meetings are held once per term as part of the whole-school planning process and the minutes of these meetings are retained in the subject-planning folder.
- Individual planning for lessons was of a very high standard. Supplementary resources, including ICT, were sourced in advance and were integrated seamlessly into lessons.
- Planning for the implementation of *Project Maths* is at an advanced stage in the school. Teachers have been proactive in developing and collating a range of suitable teaching and learning resources and these are stored in syllabus-specific folders. Some teachers have also developed online tuition resources for viewing by students outside of class time. This is highly commendable.
- Outline content plans for each year group and for each level have been developed collaboratively and these plans contain suggested timeframes for the completion of each syllabus topic. For some year groups, these plans have been developed into more comprehensive schemes of work, stated in terms of learning outcomes and containing detail in relation to methodologies and assessment modes for each topic. Such an approach should be adopted for all year groups and schemes of work should also be used as a means of cataloguing the significant bank of resources that has been developed.
- A mathematical competency test is administered to first and second-year students in September of each year. The results of these tests are used to identify areas in which particular attention is required and teaching plans are adjusted accordingly. Results from

the certificate examinations are also analysed on an annual basis with a view to identifying particular strengths and areas for further focus. This all reflects very good practice.

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 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.