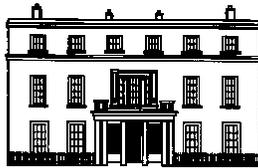


An Roinn Oideachais agus Scileanna
Department of Education and Skills

Subject Inspection of Mathematics
REPORT

Mount Anville Secondary School,
Mount Anville Road, Dublin 14
Roll number: 60140F

Date of inspection: 30 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	29 and 30 April 2013
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 eight class periods• Examination of students' work• Feedback to principal and teachers

MAIN FINDINGS

- The quality of teaching and learning ranged from very good to exemplary practice.
- Effective teaching strategies were used in all lessons to promote learning for understanding of Mathematics.
- Management is very supportive of Mathematics as evident in the timetabling provision and deployment of teachers to mathematics classes.
- Students' behaviour and participation in their lessons were uniformly excellent and allowed for meaningful learning to take place.
- Teachers are commended for their commitment to ensuring that students are given opportunities to participate in a wide range of co-curricular and extracurricular mathematical activities.
- The mathematics department presented as a collaborative and reflective team of teachers who have effectively planned for the implementation of Project Maths approaches and the long-term development of Mathematics within the school.

MAIN RECOMMENDATIONS

- As means of complementing the very good collaborative planning that is a key feature of the mathematics department, common strategies used for the teaching of mathematical concepts should be documented.
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INTRODUCTION

Mount Anville is an all girls fee-charging secondary school in south county Dublin. The school has an enrolment of 611 students and offers, the Junior Certificate, the established Leaving Certificate and a compulsory Transition Year (TY).

TEACHING AND LEARNING

- Eight single mathematics lessons were observed over a two-day period allowing all year groups, levels and programmes to be evaluated. The quality of teaching and learning ranged from very good to exemplary. Teachers were very positive about Mathematics and demonstrated their commitment to embracing areas for further improvement.
- Classroom management and student behaviour were uniformly excellent. Teachers have appropriately high expectations of students who responded accordingly allowing meaningful learning to take place.
- All lessons were very well planned and appropriately paced which ensured very good progress. Lesson objectives were shared with students and in the majority of cases were revisited at the end of the lesson.
- All lessons were student-centred and a wide range of effective approaches was used including group or paired work and practical activities. For example, an investigative approach was effectively used to determine the value of Pi in one lesson. In another lesson, students were encouraged to examine specific examples and develop a mathematical generalisation which they then applied to questions. The use of such methodologies successfully enabled students to become more active in their learning and these strategies fully promote Project Maths approaches.
- Assessment for learning strategies were frequently used in lessons. In almost all lessons, open questioning strategies and discussion were used to encourage students to explain their reasoning and use of mathematical concepts. This is very good practice. Students when questioned indicated understanding of the topic. In many lessons, students' questions were effectively used as a whole-class learning opportunity.
- Many teachers are classroom based and have an array of student developed and commercially sourced materials on displayed. Throughout the school, display boards are used to exhibit students' work and mathematical materials. Many teachers have arranged the classroom layout to support and facilitate students to work collaboratively. This is commendable practice.
- In all lessons, resources were carefully selected and successfully used to support learning. These included information and communication technology (ICT) show me boards and unifix blocks. Teachers' supplementary materials were suitably graded and differentiated to support the learning of all students in the class. In almost all lessons, teachers used Project Maths Teaching and Learning plans as their main reference with textbooks used for homework exercises. This is very good practice.
- In all lessons, literacy and numeracy development was appropriately promoted. Key words were recorded on the whiteboards and students were asked to provide a definition or spelling for key words. In one classroom, each letter of the alphabet was displayed with relevant mathematical terms or notation associated with each letter. This display was particularly creative. Mental arithmetic was effectively and seamlessly used during the

teaching of coordinate geometry allowing students to calculate the age of the mathematician Rene Descartes.

- Assessment of students' work is in line with the school's assessment policy with evidence of written formative feedback in their copybooks. In addition, oral feedback was provided to students during lessons and some students' recorded this feedback in their own copybooks. This is very good practice.
- Most students choose higher level at both junior and senior cycle and their performance at this level is very good. Practice and procedures to monitor and track students' performance are very good, with close collaboration between the guidance and learning support departments.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- Management is commended for its ongoing support for Mathematics, through appropriate timetabling arrangements and the generous deployment of teachers to the subject. Management also facilitate and encourage attendance at continuing professional development (CPD) courses. Further evidence of management's commitment to the subject includes plans to allocate an additional class period to both fifth and sixth-year Mathematics for the next school year.
- Members of the mathematics department demonstrated a strong commitment to the development of the subject. Teachers participate in Mathematics CPD, in addition teachers also attend cross-curricular CPD courses including those organised by the Computers in Education Society of Ireland. All members of the mathematics department are affiliated with the Irish Mathematics Teachers Association (IMTA).
- Students have been very successful in competitions arranged by the IMTA. Many links have been established between the mathematics department and local universities. In this way students access mathematical events that support the learning of Mathematics, including Bridge 21 and events organised during Maths Week. Teachers' continued efforts to explore ways in which students can engage with Mathematics outside the classroom is highly commended.
- Appropriate models of provision are in place to support students, for whom Mathematics is challenging, including team teaching and one-to-one support. There is very good collaboration between the support, guidance and mathematics departments in the sharing of best practices that support the specific learning needs of students.

PLANNING AND PREPARATION

- The mathematics department presented as a cohesive, well organised team of teachers who collaborate, share best practice and are reflective practitioners. The mathematics department is ably coordinated and duties associated with the position are clearly defined. In line with best practice the position of co-ordinator is rotated.
- There are very good structures and systems in place to allow for progress to be made with regards to mathematics planning and development. Collaborative practice has resulted in significant development of subject planning documentation including organisational details, integrated schemes of work, resources and assessment policy and practices. To further support planning common strategies used to teach various aspects of the curriculum should now be documented.

- TY is offered to students in a modular programme. Higher-level TY students participate in a two-week Financial Statistics programme organised in collaboration with University College Dublin. The TY plan should be reviewed to ensure that all aspects of the mathematics curriculum being studied during the year are fully reflected in the plan.
- Individual planning for lessons was excellent; all teachers used the mathematics department's schemes of work to plan their lessons. All supplementary materials are prepared and are available to hand.

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; a response was not received from the board.