

**An Roinn Oideachais agus Scileanna**

**Department of Education and Skills**

**Subject Inspection of Mathematics  
REPORT**

**Tullow Community School,  
Tullow, Co Carlow  
Roll number: 91356F**

**Date of inspection: 7 October 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**

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**INFORMATION ON THE INSPECTION**

<b>Dates of inspection</b>	6 and 7 October 2014
<b>Inspection activities undertaken</b> <ul style="list-style-type: none"><li>• Review of relevant documents</li><li>• Discussion with principal and teachers</li><li>• Interaction with students</li></ul>	<ul style="list-style-type: none"><li>• Observation of teaching and learning during ten class periods</li><li>• Examination of students' work</li><li>• Feedback to principal, deputy principal and teachers</li></ul>

**MAIN FINDINGS**

- The quality of teaching was good in the majority of lessons and very good in one lesson.
- The standard of learning ranged from fair to good.
- Management is very supportive of Mathematics and the development of the subject and timetabling arrangements for the subject are mostly very good.
- A range of resources were utilised effectively in the majority of lessons.
- Classroom management was good and students were attentive and cooperative.
- Opportunities for students to access co-curricular and extra-curricular activities are very good.

**MAIN RECOMMENDATIONS**

- Questioning and teaching strategies that provide students with opportunities to deepen their understanding of Mathematics should be included in lessons.
  - Schemes of work should be aligned more closely with Project Maths syllabuses and should include teaching methodologies and assessment modes with a greater alignment of topics between levels.
  - A detailed analysis of student participation and attainment should be undertaken and a strategic plan of action developed to ensure that student attainment reflects students' full potential, particularly at junior cycle.
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## **INTRODUCTION**

Tullow Community School is a co-educational post-primary school comprising 612 post-primary and 50 Post-Leaving Certificate students. The school offers the Junior Certificate, the Junior Certificate School Programme, the Leaving Certificate Vocational Programme the established Leaving Certificate and an optional Transition Year (TY). The focus of this report is on the post-primary sector of the school.

## **TEACHING AND LEARNING**

- The quality of teaching was good in the majority of lessons and very good in one lesson. The standard of learning ranged from fair to good.
- Classroom management was good and students were attentive and cooperative.
- Teachers shared the learning intentions with students and these goals were successfully achieved in all lessons. Teachers are reminded, however, to review the intentions and use their observations in future planning.
- Teacher planning and preparation for most lessons was good with all necessary materials available. In some lessons insufficient material was planned and resulted in students completing their assigned work with additional time to spare at the end of the lesson. This is not good practice and it is recommended that the available time be fully utilised to maximise learning opportunities for all students.
- Methodologies observed were mostly satisfactory and included whole-class teaching and paired activities. In a few lessons, effective use was made of an investigative approach where students were given opportunities to engage with material and develop a rationale for their answers while taking ownership of their learning. This is very good practice and should be used more often in all lessons.
- In some lessons teachers gave students too much information and not enough direction about what to do and how to undertake an activity. Therefore, it is recommended that alternative approaches be integrated more into lessons, with the expectation that students when given guidance can complete assigned work. This should ensure that a balance between teacher-led approaches and students taking ownership of their learning is maintained.
- In a few lessons, higher-order questioning strategies that challenged students to think about their answers and deepen their understanding of Mathematics were observed. However, an overemphasis on recall or procedural type questions, in many lessons did not develop students' learning sufficiently. It is recommended that teachers ensure that questioning strategies are appropriately differentiated and provide a challenge for students.
- In the majority of lessons global questions were used to initiate discussion. However, frequently this led to chorus answering. It is recommended that teachers follow a global question with a directed question.
- An appropriate range of resources was used in lessons including some use of show me boards, information and communication technology (ICT) and teacher developed hand-outs and worksheets. In one lesson the prepared worksheet included an extension exercise for students. This practice could be usefully employed in more lessons.
- Common assessment takes place for formal school based assessments. While a review of student performance in state examinations is undertaken, a more detailed analysis of

student participation and attainment should now be done. This should identify trends and areas of development and support the long-term development of a strategic plan to ensure that student attainment reflects students' full potential, particularly at junior cycle. Data available within the school should be used to support work in this area.

- Effective feedback was observed in student copybooks. Many teachers included written formative feedback identifying areas for improvement for students. A consistent approach to such feedback should be discussed and agreed at department meetings.

### **SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT**

- Time allocated to the subject is mostly in line with syllabus requirements. However, the practice of allocating four class periods of Mathematics per week to first-year students should be reviewed. Such a review should allow for daily contact with the subject in light of Circular 0025/2012.
- Students are assigned to mixed-ability mathematics classes in first year. Two bands are arranged for Mathematics for the remaining years of junior cycle. This practice offers students the opportunity to access a level commensurate with their ability. The deployment of additional teachers to these bands facilitates the creation of small class groupings.
- The mathematics department comprises ten teachers, some of whom have limited contact with the subject. Over time, management should work towards developing a core team of teachers each of whom would have significant contact with the subject.
- The qualifications profile of the mathematics department is mostly very good. The majority of teachers are graduates of the subject, some teachers are undertaking additional studies while others are pursuing upskilling courses in the subject.
- Appropriate arrangements are in place to facilitate the rotation of teaching levels. Commendably, ongoing developments are resulting in increasing capacity for teaching higher-level Mathematics to Leaving Certificate.
- A good range of co-curricular and extra-curricular opportunities is available to students which supports and promotes the mission statement of the mathematics department in developing a positive attitude towards Mathematics. Mathematics events should be documented more prominently within the department plan.
- Arrangements to identify and support students who find Mathematics challenging are appropriate. In line with best practice a range of models of provision including team teaching, one-to-one instruction and withdrawal are in place to provide such support.

### **PLANNING AND PREPARATION**

- Formal and informal subject department meetings are convened during the school year. The coordination of Mathematics has remained with one person for a few years. To ensure that all teachers share in the responsibility for the coordination and development of a department the practice of rotation should be re-established.
- Minutes of meetings indicate that time at meetings is generally used to discuss organisational issues. Time at meetings should be used to collaborate and share teaching methodologies and resources that have proved successful for lessons. In addition, it is

recommended that teachers collaborate and devise common strategies to teach common topics.

- The mathematics plan provides an overview of the organisation of Mathematics in the school. Schemes of work are currently based on topics from the textbook and should be updated to ensure greater alignment with Project Maths syllabuses. In addition, teaching methodologies, assessment modes and a focus on literacy and numeracy should also be included within the schemes of work. This should allow for the alignment of topics between levels.
- The TY plan is appropriately designed and is offered in four modules. Topics include the history of Mathematics, consolidation of junior cycle algebra and Mathematics as a profession, all of which offer students an opportunity to engage with the subject in a diverse manner.

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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.