

**An Roinn Oideachais agus Scileanna**  
**Department of Education and Skills**

**Subject Inspection in Mathematics**

**REPORT**

<b>Ainm na scoile / School name</b>	Colaiste Lorcaín
<b>Seoladh na scoile / School address</b>	Castledermot Co. Kildare
<b>Uimhir rolla / Roll number</b>	70670R

**Date of Inspection: 23-11-2018**



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**An Roinn Oideachais  
agus Scileanna**  
Department of  
Education and Skills

## **SUBJECT INSPECTION**

Subject Inspections report on the quality of work in individual curriculum areas within a school. They affirm good practice and make recommendations, where appropriate, to aid the further development of the subject in the school.

### **HOW TO READ THIS REPORT**

During this inspection, the inspector evaluated learning and teaching in Mathematics under the following headings:

1. Teaching, learning and assessment
2. Subject provision and whole-school support
3. Planning and preparation

Inspectors describe the quality of each of these areas using the Inspectorate's quality continuum which is shown on the final page of this report. The quality continuum provides examples of the language used by inspectors when evaluating and describing the quality of the school's provision in each area.

## **CHILD PROTECTION**

During the inspection visit, the following checks in relation to the school's child protection procedures were conducted:

1. The name of the DLP and the Child Safeguarding Statement are prominently displayed near the main entrance to the school.
2. The Child Safeguarding Statement has been ratified by the board and includes an annual review and a risk assessment.
3. All teachers visited reported that they have read the Child Safeguarding Statement and that they are aware of their responsibilities as mandated persons.

The school met the requirements in relation to each of the checks above.

## SUBJECT INSPECTION

### INSPECTION ACTIVITIES

<b>Dates of inspection</b>	22 & 23-11-2018
<b>Inspection activities undertaken</b> <ul style="list-style-type: none"><li>• Review of relevant documents</li><li>• Discussion with principal and key staff</li><li>• Interaction with students</li></ul>	<ul style="list-style-type: none"><li>• Observation of teaching and learning during six class periods</li><li>• Examination of students' work</li><li>• Feedback to principal and relevant staff</li></ul>

### School context

Coláiste Lorcaín is a co-educational designated community college with 415 students under the aegis of Kildare and Wicklow Education Training Board and the Poor Servants of the Mother of God. It offers the Junior Cycle, the established Leaving Certificate, and an optional Transition Year (TY) programme.

### SUMMARY OF MAIN FINDINGS AND RECOMMENDATIONS:

#### Findings

- The quality of teaching and learning was very good and the student experience of Mathematics was very positive.
- Student-centred and inquiry-based learning featured in the majority of lessons with some lessons incorporating multiple representations to bolster student understanding.
- The learning environment was both supportive and challenging and designed to promote positive attitudes to Mathematics.
- Learning outcomes were used in every lesson and very good teacher questioning was used to support exploration and student reflection there is, however, scope to enhance the quality of written feedback provided to students.
- Whole-school provision, including timetabling and arrangements for students to access the level most appropriate to their needs is very good.
- While subject department and individual teacher planning in Mathematics are good there is scope to enhance planning in to reflect the Junior Cycle Framework and collaboration with the local primary schools.

#### Recommendations

- The school's assessment policy should be adapted by the mathematics department to reflect the introduction of the Junior Cycle Framework and to include assessment practices designed to particularly support student learning in Mathematics.
- The mathematics department should incorporate the Maths Competency Test provided by The Professional Development Service for Teachers as part of its suite of tools for assessing incoming first-year students.
- The subject department's approach to formative assessment should be extended to enhance the quality of written feedback provided to students.

## DETAILED FINDINGS AND RECOMMENDATIONS

### 1. TEACHING, LEARNING, AND ASSESSMENT

- The quality of teaching and learning was very good in all lessons with a number of lessons featuring teaching of the very highest quality.
- Student experience of the lessons was very positive and was underpinned by a culture that was at once supportive and challenging. Every student was expected to achieve to their potential and received timely and effective support in doing so.
- The majority of lessons featured a student-centred, inquiry-based, approach. This involved the students working in pairs or small groups exploring and discussing the material under investigation. This approach developed and reinforced the students' mathematical skills and ensured that dispositions such as resilience and tolerance of ambiguity were also developed.
- In some lessons multiple representations were used to support student learning. In one case, for example, the use of graphics provided the student with an invaluable tool to solve problems involving direct and inverse proportions. This made the material, which might otherwise be regarded as abstract, accessible and practical.
- All of the lessons were orderly and the learning environment, both visually and the manner in which the lessons were conducted, was highly effective in engaging the students and developing positive attitudes to Mathematics. One lesson, for example, was entirely student-led with the teacher adopting a supporting role. The student designed and delivered the lesson and fielded questions from his peers. The teacher interjected providing support to the presenter when the need arose.
- The outcomes for students was uniformly very good and was evidenced from the quality of their responses to teacher questions and the questions they asked as the lessons progressed. It was common practice to ask students to come to the board and explain the approach they adopted in solving problems, this developed confidence and provided a platform for further discussion.
- The use of learning outcomes at the outset of lessons was universal and, in the very best lessons, students were given appropriate time to strategize, explain their reasoning and explore the wider application of the lesson content. Very good teacher questioning was utilised to support exploration and ensure that the students reflected on the approach they adopted and defended any conclusions they drew.

### 2. SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- Timetabling provision for Mathematics is very good. The time allocated is generous, and balance of provision of across the week which includes one double period per week in fifth and sixth year supports continuity and consistency in the teaching and learning of Mathematics.
- Arrangements for student access are also very good. Mathematics classes are mixed ability in first year. Higher and ordinary-level classes are formed in second year and are timetabled concurrently within each year thereafter. This means that while students are encouraged to follow higher-level for as long as possible they can change level when the need arises without impacting the remainder of their timetable.

- The school has a very good assessment policy which details the purpose of evaluation and the forms of evaluation promoted within the school. Formative assessment is identified as being particularly important and while this form of assessment was evident during lessons through teacher questioning, there is scope for improvement in the quantity and quality of written feedback provided to students.
- In developing its assessment practices, it is recommended that the mathematics department adapt the school's policy to reflect the particular needs of Mathematics. The adapted policy should reflect the Junior Cycle Framework and a need to engage the students in problem solving, problem posing and collaborative learning.
- Furthermore the mathematics department should consider including the Maths Competency Test provided by The Professional Development Service for Teachers as part of its suite of tools for assessing incoming first-year students in order to inform the content and delivery of the first-year mathematics programme.
- The mathematics department is very well resourced and the teachers have access to a bank of resources and digital technologies for collaborative planning and for classroom use.
- The mathematics teachers are committed to their continuing professional development and their attendance at formal and informal professional learning events is exemplary.

### **3. PLANNING AND PREPARATION**

- Subject department planning in Mathematics is very good. Through the school's self-evaluation process, areas for improvement have been identified and a plan to increase participation and attainment in higher-level Mathematics has been developed. One intervention included in the plan is the deployment of TY students, trained in advance, as tutors to first years.
- Additional support is also provided for students in the remaining years through drop-in services provided prior to school on a number of mornings during the week. In further developing this work, consideration should be given to collaboration with the local primary schools in relation to the teaching and learning of Mathematics in both sectors with a view to ensuring that students experience during transition is as positive as possible.
- A very good subject department plan for Mathematics is in place and reflects the dynamism of the head of the department and the collegial spirit in which the department operates. In order to reflect the changes being introduced as part of the Junior Cycle Framework, the plan needs to be adapted to embrace the unifying strand and explicitly link appropriate learning outcomes in the revised specification.
- Teachers' individual planning practices are very good and in all cases their lessons were well planned and featured the very effective integration of resources.

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 of the school was given an opportunity to comment in writing on the findings and recommendations of the report, and the response of the board will be found in the appendix of this report.

## THE INSPECTORATE'S QUALITY CONTINUUM

Inspectors describe the quality of provision in the school using the Inspectorate's quality continuum which is shown below. The quality continuum provides examples of the language used by inspectors when evaluating and describing the quality of the school's provision of each area.

Level	Description	Example of descriptive terms
<b>Very Good</b>	<b>Very good</b> applies where the quality of the areas evaluated is of a very high standard. The very few areas for improvement that exist do not significantly impact on the overall quality of provision. For some schools in this category the quality of what is evaluated is <b>outstanding</b> and provides an example for other schools of exceptionally high standards of provision.	Very good; of a very high quality; very effective practice; highly commendable; very successful; few areas for improvement; notable; of a very high standard. Excellent; outstanding; exceptionally high standard, with very significant strengths; exemplary
<b>Good</b>	<b>Good</b> applies where the strengths in the areas evaluated clearly outweigh the areas in need of improvement. The areas requiring improvement impact on the quality of pupils' learning. The school needs to build on its strengths and take action to address the areas identified as requiring improvement in order to achieve a <i>very good</i> standard.	Good; good quality; valuable; effective practice; competent; useful; commendable; good standard; some areas for improvement
<b>Satisfactory</b>	<b>Satisfactory</b> applies where the quality of provision is adequate. The strengths in what is being evaluated just outweigh the shortcomings. While the shortcomings do not have a significant negative impact they constrain the quality of the learning experiences and should be addressed in order to achieve a better standard.	Satisfactory; adequate; appropriate provision although some possibilities for improvement exist; acceptable level of quality; improvement needed in some areas
<b>Fair</b>	<b>Fair</b> applies where, although there are some strengths in the areas evaluated, deficiencies or shortcomings that outweigh those strengths also exist. The school will have to address certain deficiencies without delay in order to ensure that provision is satisfactory or better.	Fair; evident weaknesses that are impacting on pupils' learning; less than satisfactory; experiencing difficulty; must improve in specified areas; action required to improve
<b>Weak</b>	<b>Weak</b> applies where there are serious deficiencies in the areas evaluated. Immediate and coordinated whole-school action is required to address the areas of concern. In some cases, the intervention of other agencies may be required to support improvements.	Weak; unsatisfactory; insufficient; ineffective; poor; requiring significant change, development or improvement; experiencing significant difficulties;

# **Appendix**

**SCHOOL RESPONSE TO THE REPORT**

**Submitted by the Board of Management**

## **Area 1 Observations on the content of the inspection report**

The Board of Management welcomes the content of this report as a true and accurate reflection of the student experience of Mathematics in the school. The Board congratulates the teachers of Mathematics on the quality of their work and thanks the school's leaders for their support of Mathematics. The Board, also, compliments the students for their commitment to quality learning.

## **Area 2 Follow-up actions planned or undertaken since the completion of the inspection activity to implement the findings and recommendations of the inspection.**

The Maths Department has agreed that the implementation of the recommendations will be a key part of their work, with immediate effect.

The school will publish this report to teachers, so that all teachers and learners can benefit from both existing good practice and the inspector's recommendations.

The school will publish this report on the school website, so that it can be viewed and discussed by all school partners.