

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

**Subject Inspection in Mathematics**

**REPORT**

<b>Ainm na scoile / School name</b>	Loreto College
<b>Seoladh na scoile / School address</b>	Swords Rivervalley Swords Co Dublin
<b>Uimhir rolla / Roll number</b>	60810B

**Date of Inspection: 24-10-2018**



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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.

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.

## **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>	23 and 24-10-2018
<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 eight class periods</li><li>• Examination of students' work</li><li>• Feedback to principal and relevant staff</li></ul>

### School context

Loreto College, Swords is a voluntary Catholic school with a current enrolment of 630 girls. Transition Year (TY) is optional for students.

### SUMMARY OF MAIN FINDINGS AND RECOMMENDATIONS:

#### Findings

- The quality of teaching and learning was very good in most lessons; in a few lessons, students were overly-dependent on teacher input and some students were under-challenged by the learning tasks.
- Some lessons included highly effective group or pair work and the quality of assessment was very good in all lessons.
- Subject provision and whole school support for Mathematics is very good; continuing professional development (CPD) for the new Junior Cycle and various whole-school CPD events have been provided.
- Arrangements for students to study Mathematics at a level suited to their ability are good but the practice of creating a small ordinary-level mathematics class in second year should be reviewed.
- Students who experience difficulty with Mathematics are very well supported.
- Teacher collaborative practice is good overall; however, subject department meetings are overly focused on operational matters.

#### Recommendations

- Classroom approaches that encourage students to be more independent and active agents in the own learning should be included in lessons.
- The good practice noted in most lessons of including learning tasks that challenge students to problem solve and deeply understand the concepts taught should be extended to all lessons.
- Consideration should be given to retaining students in mixed-ability classes until at least the end of second year and for in-class support to be provided as necessary.
- Subject department meetings should include collaborative lesson planning as a means of sharing classroom practice.

## DETAILED FINDINGS AND RECOMMENDATIONS

### 1. TEACHING, LEARNING, AND ASSESSMENT

- The quality of teaching and learning was very good overall. Individual lesson planning was of a high standard and teachers had prepared a range of suitable resources to support learning. All lessons were well structured around clear learning intentions that were shared with students at the outset and checked at appropriate points in the lesson.
- Teacher explanations and instructions were clear. Overall, the quality of teacher questioning was very good. A mix of higher-order and lower-order questioning strategies was used to assess learning and to encourage students to explore concepts.
- In general, lessons progressed at a suitable pace. However, a few lessons would have benefitted from a slower pace to enable students to engage with the key learning in a more meaningful way.
- In some lessons, highly-effective learning was noted when the students were actively engaged in open-ended, challenging tasks that allowed them to work independently and to problem solve. In other lessons, high quality learning occurred when a discovery approach enabled students to access new learning through completing well-designed tasks. In a few lessons the students were more passive; mainly listening to teacher instruction and completing exercises similar to the examples presented by teachers at the board. Classroom approaches that encourage students to be more independent and active agents in the own learning should be included in lessons.
- Some lessons included group or pair work that was highly effective. In these lessons, the students discussed the work at hand, listened well to the contributions of others and confidently fed back to the class as a whole. Furthermore, they demonstrated a good understanding of the concepts taught, an enthusiasm for Mathematics and enjoyment of their learning.
- In general, very good attention was given to developing students' mathematical literacy. The English meaning of key words was effectively used to explain mathematical concepts. Best practice was noted, in some lessons, where the students demonstrated fluency in using key mathematical terms. All of this good practice should be replicated across lessons.
- Almost all teachers circulated the classroom to provide assistance to any student experiencing difficulty. In some instances, the support provided was in the form of general encouragement for students to persist. This approach was highly effective in enabling students to think for themselves. In other lessons, the students demonstrated an over-dependence on teacher input. The good practice of encouraging students to be persistent and to show resilience in their efforts to work out mathematical problems should be extended.
- The quality of assessment was very good in all lessons. Mini-white boards, traffic lights, and very good monitoring and questioning were used to assess student progress. Very good practice was observed when teachers adapted instruction on foot of assessment.

- In a few lessons, the stage of the learning was too advanced for the level of student understanding. The concepts were not thoroughly explored, and although connections between concepts were made, they were not developed enough. In order for students to complete the learning tasks, the teacher provided the conceptual steps and the students did the routine elements. It is recommended that learning more strongly focus on deep conceptual understanding rather than procedural proficiency.
- In all lessons, the relationships between students and teachers was observed to be warm and affirming.

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

- Subject provision and whole school support for Mathematics is very good. There is a very good range of resources available for teaching and learning in the subject, including information and communications technology (ICT). CPD for the new Junior Cycle has been accessed and various whole-school CPD events have been provided.
- Students who experience difficulty with Mathematics are very well supported. Individual and small-group support is provided. In-class support has also been introduced recently; this is a positive development. In line with good practice, students with the greatest level of need in Mathematics receive support from teachers with the greatest level of expertise.
- Students are assigned to mixed-ability groups in first year. In second year there are four higher-level classes and one small ordinary level class currently. There are effective strategies in place for encouraging students to study the subject at the highest level possible for as long as possible. To further support this aim, consideration should be given to retaining mixed-ability classes through second year at least, and for in-class support to be provided where necessary. This measure will also support the implementation of the new Junior Cycle specification for Mathematics.
- Valuable extra-curricular opportunities are provided for students to experience Mathematics for fun and to extend learning. There are some good numeracy strategies in place to highlight Mathematics in the world around. The mathematics teachers provide additional assistance to students preparing for the certificate examinations.

## **3. PLANNING AND PREPARATION**

- The quality of planning and preparation is good overall. The junior cycle programmes of work comprise a general list of topics for each year group and level. While the new Junior Cycle specification is included in the planning documentation, further work needs to be done to integrate it into the programme plans. This work will involve planning for suitable methodologies for the delivery of the plan and ensuring that the full range of necessary skills is developed. The senior cycle programmes of work better reflect how the subject is examined in the certificate examinations.
- Teachers' collaborative practice is good. The mathematics teachers meet regularly as a department. Teachers in each year group meet frequently to discuss issues particular to them. The minutes of meetings indicate that operational matters, such as, class lists, budgets, and resources are well discussed. Overall curriculum planning for Mathematics and some valuable reflective practices are also on the agenda. However, some meeting time should be given to collaborative lesson planning as a means of sharing classroom 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 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 of quality 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;