

An Roinn Oideachais agus Scileanna
Department of Education and Skills

Subject Inspection in Mathematics

REPORT

Ainm na scoile / School name	Árdscoil Na Tríonóide
Seoladh na scoile / School address	Rathstewart Athy Co Kildare
Uimhir rolla / Roll number	68077S

Date of Inspection: 13-02-2020



**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 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.

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

Dates of inspection	12-02-2020 and 13-02-2020
Inspection activities undertaken <ul style="list-style-type: none">• Review of relevant documents• Discussion with the senior management team and key staff• Interaction with students	<ul style="list-style-type: none">• Observation of teaching and learning during nine lessons• Examination of students' work• Feedback to the senior management team and relevant staff

School context

Ardcoil na Tríonóide is a voluntary, co-educational secondary school operating under the patronage of Catholic Education, an Irish Schools Trust. The curricular programmes offered include the junior cycle, the Junior Certificate, an optional Transition Year, the established Leaving Certificate, the Leaving Certificate Applied and the Leaving Certificate Vocational Programme. The school has a current enrolment of 856.

SUMMARY OF MAIN FINDINGS AND RECOMMENDATIONS:

Findings

- The quality of teaching and learning was very good in the majority of lessons and good in the rest.
- The use of learning intentions was a feature of all lessons, while the use of success criteria and plenaries were observed in the best lessons.
- Effective teacher questioning was in evidence in all lessons and instances of highly effective practice, involving the use of higher-order questions featured in most.
- In the majority of lessons, students were provided with opportunities to engage in collaborative practice including, for example, group and pair work.
- Highly effective use of formative assessment was observed in the majority of lessons, but in some instances the quality of written feedback could be improved.
- Consideration is being given to rearranging the provision for Mathematics senior cycle whereby higher-level classes would no longer be mixed-ability within the bands.

Recommendations

- It is recommended that the highly effective practices in relation to assessment for learning, evident in most lessons be universally adopted across the department.
- It is recommended that the mathematics department continue to implement the existing arrangement in senior cycle, where higher-level classes are banded and mixed ability within the bands.

DETAILED FINDINGS AND RECOMMENDATIONS

- The quality of teaching and learning was very good in most lessons and good in the remainder.
- Learning intentions were shared and fully discussed at the beginning of each lesson. The very best lessons also featured the use of success criteria and student attainment of the intended learning was established through ongoing questioning and the use of a plenary at the end of the lessons.
- Teacher questioning was effective in all lessons but was at its best when students were challenged to hypothesise, propose solutions and defend their reasoning. This type of questioning which facilitates deeper thinking, prompts discussion and provides all students with an appropriate level of challenge should be more widely adopted across the department.
- Students engaged purposefully with the lesson content and all of the lessons featured high levels of student participation and engagement. It was obvious too that the students enjoyed the lessons and were confident in the manner in which they displayed their knowledge and skills.
- In the majority of lessons, students were provided with opportunities to participate in group and pair work. These collaborative approaches were very well managed and involved the students engaging in elaborate tasks that facilitated experimentation, problem solving and discussion. The lessons could be further enhanced if, following the completion of the tasks, each group were asked to present to the class to explain the approaches they adopted and explain how they arrived at any conclusions drawn.
- Highly effective assessment for learning, involving peer and self-assessment and comprehensive written feedback from teachers, was evident in the majority of lessons. In a minority of cases, however, formative feedback was mainly delivered orally during lessons. In order to engage the students in sustained critical reflection on their own learning it is recommended that the highly effective practices, evident in most instances, be mainstreamed across the mathematics department.
- The learning environment promotes positive attitudes to Mathematics and all of the lessons proceeded in an atmosphere of mutual respect.
- All of the teachers taught with enthusiasm and care. The principles and practices underpinning the junior cycle reforms have been universally adopted across the department. The teachers approach to their work is testament to the high level of collaboration within the department and their assiduous engagement with ongoing professional development both within and outside of the school.

2. SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- Subject provision and whole-school support for Mathematics is very good. Timetabling provision is generous. The arrangements relating to student access to the level of Mathematics most appropriate to their needs are efficient and involve comprehensive consultation with teachers, parents and the students themselves.
- Mathematics classes are mixed ability in first year and are banded, with mixed-ability groupings within the bands, thereafter. During the evaluation the possibility of streaming the higher-level mathematics classes in fifth and sixth-year was mooted. This proposal stems from discussions within the department as to whether the existing mixed-ability setting is

optimal in maximising student attainment. Following discussion with management and teachers it is recommended that the existing arrangements remain in place. The mathematics department has undertaken to liaise with the school's special educational needs (SEN) department to identify strategies to improve outcomes for the most able students in senior cycle mathematics.

- Provision for students with SEN or requiring additional support in Mathematics are very good. Team teaching and small-group withdrawal are both used to support identified students and where withdrawal occurs the support is provided by a member of the mathematics department. The most effective manner in which team teaching can be used has been under discussion in the school for some time. A group, operating in partnership with Maynooth University, has been established to address this and a report on its findings will issue shortly.
- The senior management team leads and supports reflective developmental practices. Apart from teach meets and the research into team teaching, a learning and teaching committee- that leads the school's self-evaluation process and a digital learning team are also in place. The mathematics department is represented on all of these groups.
- Teacher continuing professional development is valued and promoted. The mathematics teachers have availed of the various events provided to support junior cycle reform and, within the school, engage in teach meets and other collaborative activities that promote reflection and high-quality teaching and learning.
- The qualifications profile of the mathematics department is very good and they are deployed in a highly effective manner.

3. PLANNING AND PREPARATION

- Subject department planning in Mathematics is very good and benefits from the leadership of two of the mathematics teachers who jointly co-ordinate the department's planning activities and its extra-curricular provision.
- The department has collaborated very effectively in developing a very good subject department plan. Much of the collaboration focussed on grouping learning outcomes from the subject specifications into units of learning. The plan describes the order in which these units are followed within each level. The plan is subject to regular review and, in the next review, it is suggested that the sequencing of the units be re-examined with a view optimising the links between the units themselves.
- Common teaching strategies are promoted within the plan. This is designed to ensure continuity of experience of students as they move from junior cycle to senior cycle or if they change level. The plan also details the common formal assessment practices followed by the department. These practices arose from the school's self-evaluation process and are designed to track student performance and to make data-informed comparisons of the performance of students from different class groups.

The draft findings and recommendations arising out of this evaluation were discussed with the principal, deputy principals 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 quality of the school's provision of each area.

Level	Description	Example of descriptive terms
Very Good	Very good 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 outstanding 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
Good	Good 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
Satisfactory	Satisfactory 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
Fair	Fair 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
Weak	Weak 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 is very pleased with the excellent report of the Maths inspection.

The Board wishes to express its gratitude to the Maths Department for their commitment to the teaching of Maths in the school.

They welcome the very relevant recommendations and will use these as a basis for further improving the quality of teaching and learning in the department.

The board will ask management to meet with the Maths department to both acknowledge the excellent work and dedication of our teachers both to the students and the subject.

They will also investigate ways to develop and improve on the provision for Maths to maintain and enhance the already excellent work already being done in the school.

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

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