An Roinn Oideachais agus Scileanna

Department of Education and Skills

Subject Inspection in Mathematics

REPORT

Ainm na scoile / School name	Ardscoil Mhuire
Seoladh na scoile / School address	Corbally Limerick
Uimhir rolla / Roll number	64290V

Date of Inspection: 31 March 2017

AN ROINN OIDEACHAIS AGUS SCILEANNA | DEPARTMENT OF EDUCATION AND SKILLS

WHAT IS A 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. Learning, teaching 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.

Subject Inspection

INSPECTION ACTIVITIES DURING THIS INSPECTION

Date of inspection	31 March 2017
Inspection activities undertaken • Review of relevant documents • Discussion with principal and key staff • Interaction with students	• Observation of teaching and learning during six class periods • Examination of students' work • Feedback to principal and relevant staff

SCHOOL CONTEXT

Ardscoil Mhuire is an all-girls' voluntary secondary school which operates under the trusteeship of the Catholic Education Irish Schools Trust (CEIST). The full range of post-primary programmes is on offer to students including the option to participate in the school's Transition Year (TY) programme. Enrolment currently stands at 459. The school is involved in the Delivering Equality of Opportunity in Schools (DEIS) action plan for educational inclusion.

SUMMARY OF MAIN FINDINGS AND RECOMMENDATIONS:

FINDINGS

- A high standard of teaching was observed in the majority of lessons.
- The overall quality of learning was very good in the majority of lessons.
- Good assessment practices have been well established with room to further develop the use of written formative feedback.
- Planning and preparation for learning and teaching Mathematics are good with scope to further develop the short-term schemes of work.
- Subject provision and whole-school support for Mathematics are very good.
- The TY mathematics plan is in need of review to ensure it aligns with the objectives of the programme.

RECOMMENDATIONS

- It is recommended that the practice of giving written formative feedback to guide further improvement and praise specifics be extended to further support learning.
- Short-term schemes of work should be further developed to link specific learning outcomes with resources, methodologies and assessment modes for all year groups and levels.

DETAILED FINDINGS AND RECOMMENDATIONS

1. TEACHING, LEARNING AND ASSESSMENT

- The quality of teaching in the majority of lessons was very good. Students worked on well-planned tasks which were suitably pitched and all students progressed and experienced some level of challenge. A variety of methodologies was used. Reflecting on the success and levels of engagement of students after lessons should help inform future planning and improve students' learning, where necessary.
- In the majority of lessons, a very good standard of learning was observed. In the best lessons, teachers' expectations of students' performance were suitably high, students worked collaboratively and purposefully in pairs or groups and they also demonstrated good levels of ability to work independently. Students showed enthusiasm for their work and used relevant terminology confidently when providing solutions. Clearer instruction, to ensure that learning tasks and assessment criteria were fully understood, would have benefited one lesson. In another, the approach was overly teacher-led and the learning intentions should have reflected that the content being revised had recently been covered in class.
- A variety of assessment modes was used to check for understanding and to monitor progress. Individual whiteboards and traffic lights were used in some lessons providing immediate feedback on student progress and understanding. A combination of higher and lower-order questioning was used as well as peer and self-assessment. Where questioning was best, higher-order questioning was combined with adequate wait time to encourage students to think and formulate answers. Peer and self-assessment were well facilitated in most lessons and it is recommended that future planning include effective strategies for students to assess incorrect and incomplete solutions. It is recommended that the good practice of providing written formative feedback be further developed and extended to all class groups.
- The whole-school emphasis on creating positive, bright and inspiring learning environments was evident throughout the school. Displays of student-produced material and relevant posters helped establish positive and stimulating learning environments, both in classrooms and in communal areas.
- Parents are very well informed of student progress throughout the school year. As well as an annual parent-teacher meeting for each year group, parents receive progress reports and academic reports on four occasions annually for each student.
- Team teaching was observed in one of the lessons. A collaborative approach was used to very good effect. Instructional tasks were shared, students' learning was supported and their progress monitored by both of the teachers who circulated as students worked in groups on pre-prepared activities. High-quality planning, a very good working relationship between the teachers and very good rapport with and among the students all helped to ensure students had a very high quality learning experience in this lesson.
- Students with special educational needs (SEN) are well supported through a combination of in-class support and individual or small group lessons where necessary. The mainstream teachers are well-informed of the needs and abilities of each of the students and provide for them through differentiation and by using a variety of methodologies which enriches the learning experiences for all.

2. SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- Subject provision and whole-school support for Mathematics is very good. Management supports and facilitates teachers' engagement with continuing professional development

(CPD). The good practice of sharing what was learned at CPD events with the whole staff is commended as is the whole-school sharing of findings and recommendations from inspections.

- The amount of time allocated to the teaching of Mathematics is in line with syllabus requirements for the junior cycle and there is a generous allocation of six periods per week for fifth and sixth year students and four for TY students. One of the first year students' mathematics lessons each week is dedicated to developing students' numeracy skills and reports of its success were very positive.
- First-year students are taught in a mixed-ability setting which is in line with good practice. In all other year groups students are taught in level-specific classes. Students are encouraged and supported to remain at the highest level possible for as long as possible and concurrent timetabling allows for movement between levels as the need arises. It is recommended that TY mathematics timetabling be reviewed with the aim of providing mixed-ability lessons for the entire year group.
- The mathematics department is well resourced. This year the mathematics department received funding after making a successful application to the board of management. It was used to add to the bank of resources available to support teaching and learning.
- The teachers of Mathematics have a very good qualifications profile and all satisfy the requirements of the Teaching Council for the teaching of Mathematics, some through completing the Professional Diploma in Mathematics for Teaching in the University of Limerick. Their commitment to upskilling is commendable. The practice of rotation when assigning teachers to classes and levels is good and helps build capacity and ensures all teachers remain fully aware of the entire mathematics syllabus content.

3. PLANNING AND PREPARATION

- Planning and preparation for Mathematics are good. The mathematics department is co-ordinated by a senior member of the team. Department meetings are held regularly, the minutes of which are detailed and retained in the subject department folder. The mathematics team also maintain records of informal meetings held throughout the year. This is very good practice.
- Individual lesson planning was of a very high quality for the majority of lessons observed. Teachers sourced and prepared relevant material which significantly enhanced the learning experiences of the students. Huge value was placed on students' prior knowledge and potential capability in the very good lessons and the high quality of planning meant that lesson content adapted as necessary.
- Schemes of work for each year group and level have been developed and are included in the subject department plan. To extend the benefits of these schemes of work, specific learning outcomes should be linked to resources, methodologies and assessment practices with relevant time-frames included.

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.

Appendix

SCHOOL RESPONSE TO THE REPORT

Submitted by the Board of Management

Part A Observations on the content of the inspection report

The Board of Management is pleased with the findings of the Mathematics Inspection Report which took place in Ardscoil Mhuire in March 2017 and welcomes the recommendations and guidance given by the inspectorate in relation to further development. The Board acknowledges the Inspectorate's affirmation of the following in particular:

- The high quality of learning and teaching at Ardscoil Mhuire.
- The very good standard of learning observed in mathematics lessons.
- The good assessment practices used to check for student understanding and monitor their progress.
- The whole-school emphasis on creating positive, bright and inspiring learning environments.
- The collaborative team teaching approach used to very good effect in lessons, which ensured that students had a very high quality learning experience.
- The support offered to students with special education needs (SEN) through a combination of in-class support and individual or small group lessons where necessary.
- The very good subject provision and whole-school support for Mathematics.
- The encouragement and support offered to students by the school to remain at the highest level possible for as long as possible and concurrent timetabling that allows for movement between levels.
- The emphasis the school places on ensuring that parents are very well informed of student progress throughout the school year.
- The very good qualification profile of the school's Mathematics teachers.
- The good planning and preparation for learning and teaching Mathematics and the very high quality of individual lesson planning.

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

The Board of Management welcomes the recommendations and guidance given by the inspectorate in relation to further development. Ardscoil Mhuire has already undertaken or will undertake the following actions to address the recommendations of the Inspectorate:

- The school has embraced the practice of giving written formative feedback to guide further improvement and will, as recommended by the inspectorate, continue to extend this approach to further support learning. As part of the School Self Evaluation Process, Ardscoil Mhuire has devised and is currently implementing its School Improvement Plan in relation to assessment. As part of this process the school in the coming year will be focusing on enhancing the quality of written feedback provided to students.
- Short-term schemes of work are being further developed. Sample templates of how to effectively link specific learning outcomes with resources, methodologies and assessment modes were devised in order to offer guidance to all departments, and build on the extensive work that had already been completed. Subject departments are currently utilising this improved template in order to modify and improve their schemes of work for all year groups.
- The timetabling of Transition Year mathematics was reviewed. While Mathematics classes continue to be co-scheduled, all Transition Year mathematics students are now currently taught in mixed-ability lessons. The Transition Year mathematics plan was reviewed and, due in part to the establishment of mixed ability classes, aligns to a greater degree with the objectives of the programme.

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 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 *very good* 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;