

An Roinn Oideachais agus Scileanna
Department of Education and Skills

Subject Inspection in Mathematics

REPORT

Ainm na scoile / School name	Saint Bricin's College
Seoladh na scoile / School address	Belturbet County Cavan
Uimhir rolla / Roll number	70350W

Date of Inspection: 11-11-2016



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.

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.

Subject Inspection

INSPECTION ACTIVITIES DURING THIS INSPECTION

Dates of inspection	10-11-2016 and 11-11-2016
Inspection activities undertaken <ul style="list-style-type: none">• Review of relevant documents• Discussion with principal and key staff• Interaction with students	<ul style="list-style-type: none">• Observation of teaching and learning during four class periods• Examination of students' work• Feedback to principal and relevant staff

SCHOOL CONTEXT

Saint Bricin's College is a co-educational school under the trusteeship of Cavan Monaghan Education and Training Board. Currently, there are 246 students enrolled. The school provides the Junior Certificate, the established Leaving Certificate, the Leaving Certificate Vocational Programme (LCVP) and the Leaving Certificate Applied (LCA) programme. Transition year (TY) is an optional programme.

SUMMARY OF MAIN FINDINGS AND RECOMMENDATIONS:

FINDINGS

- The overall quality of teaching and learning observed was very good.
- Assessment and monitoring of student progress were very good in all lessons.
- There is very good whole-school support for Mathematics.
- Planning for the subject is good.
- There is scope for improvement in the programmes of work for Mathematics.

RECOMMENDATIONS

- The teachers should plan a small number of lessons collaboratively, then teach, observe and amend the planned lessons as a means of sharing good practice.
- The programmes of work should be developed into a more comprehensive document that better supports delivery of the curriculum, in line with how it is examined, and ensuring that students learn for understanding.

DETAILED FINDINGS AND RECOMMENDATIONS

1. TEACHING AND LEARNING

- The overall quality of teaching and learning was very good. In all lessons observed, there were high levels of student engagement, a range of activities and clear teacher instruction. All lessons were well planned.
- Learning was well differentiated to suit the ability levels in all lessons. For example, in one lesson, the handouts provided to students were in different colours representing the difficulty

level of the questions; the students chose to work from the handout that suited them best. In the other lessons, the activities differentiated learning by allowing students to work at their own pace.

- A variety of valuable methodologies was used. Students worked independently and in pairs; this approach was particularly worthwhile in a lesson on percentages. On many occasions, students engaged in lively mathematical discussions. However, in one lesson, students followed pre-determined steps to get the answers to a number of questions; this approach did not provide any opportunity for the students to learn the essential mathematical skill of devising the procedure themselves. It is recommended that the strategic elements of the learning in each lesson be explicitly taught and that the focus is on understanding rather than solely on procedure.
- In a lesson on algebra, factorisation was very well linked to prior learning. The progression of learning from the concrete, using numbers, to the abstract is good practice. However, the rationale for factorising—why we do it and where it fits into the overall mathematical landscape—was not explored. It is recommended that mathematical concepts should be taught within their mathematical context.
- The quality of the TY lesson observed was excellent. It was taught by two of the students but designed and facilitated by the teacher. The quality of student attention and engagement in this lesson was of a very high standard.
- Assessment and monitoring of students' progress were very good in all lessons. The learning intentions were shared with students and, at the end of some lessons, students rated their levels of understanding.
- All teachers used questioning and observation very well to assess learning. Best practice in the use of questioning was seen where it helped students to explore mathematical concepts; teachers should extend this type of higher-order questioning.
- The relationships in all classrooms were observed to be very good. Teachers provided plentiful opportunities for students to experience success at Mathematics. A poster on the wall of one of the classrooms, that outlines the learning process and how mistakes are essential to success, was indicative of the approach taken in encouraging students.

2. SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- Mathematics is very well supported at whole-school level. Timetable allocation and the provision of resources, including information and communication technology (ICT), to support teaching and learning in Mathematics are very good.
- There is very good practice in relation to assigning students to levels for Mathematics. Students are assigned to mixed-ability classes for first year and levels are set in every other year. Students are encouraged to study the subject at the highest level possible for as long as possible.
- A range of valuable opportunities is provided for students to participate in extra-curricular mathematics activities. Teachers are very generous in providing additional support, in their own time, to students.
- There is one TY class group and it comprises students with a wide range of mathematical ability and experience. During the evaluation, it was observed that the dynamic within this class group was not as good as it should be. It is recommended that the school plans more effectively for this group's particular needs.

- There is very good monitoring of students' progress in Mathematics. The subject department completes a comprehensive analysis of student achievement against national norms. This analysis is limited, however, because the school is small. Plans to introduce an individualised target setting, tracking and monitoring system are well advanced; this new system will be very beneficial in helping students to reach their full potential.

3. PLANNING AND PREPARATION

- The quality of planning for Mathematics is good. The teachers work well together and share resources. However, they plan all of their lessons individually and, consequently, lesson planning does not benefit from a sharing of expertise. The teachers should plan a small number lessons collaboratively, then teach, observe and amend the planned lessons as necessary. All aspects of planning for this work should be included in the mathematics plan.
- Commendably, there are common programmes of work. However, there is scope for improvement as the programmes are presented simply as lists of topics. Planned teaching approaches are recorded separately. The programmes of work should be developed into a more comprehensive document that better supports delivery of the curriculum, in line with how it is examined, and ensuring that students learn for understanding.
- The TY plan for Mathematics includes a valuable range of topics to develop students' interest and their core mathematical skills; it was designed with input from student surveys. However, it was evident during the evaluation that activities and material of a higher level of difficulty need to be provided in order to ensure that all students are challenged sufficiently in TY mathematics.
- TY provides an opportunity for teachers to try new approaches to teaching Mathematics. It is recommended that the more experimental approach that is taken in TY be further refined; successful aspects of this approach could then be extended to other year groups.

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 <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. Overall, learners have access to a basic level of provision. 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;