

An Roinn Oideachais agus Scileanna

Department of Education and Skills

**Subject Inspection of Science, Biology and
Agricultural Science
REPORT**

**St Finian's College
Mullingar, County Westmeath
Roll number: 63280N**

Date of inspection: 19 May 2016



**REPORT
ON
THE QUALITY OF LEARNING AND TEACHING IN SCIENCE, BIOLOGY AND
AGRICULTURAL SCIENCE**

INFORMATION ON THE INSPECTION

Dates of inspection	18 & 19 May 2016
Inspection activities undertaken <ul style="list-style-type: none">• Review of relevant documents• Discussion with principal and teachers• Interaction with students	<ul style="list-style-type: none">• Observation of teaching and learning during nine class periods• Examination of students' work• Feedback to deputy principal and teachers

MAIN FINDINGS

- The overall quality of teaching and learning in the lessons observed ranged from fair to good but with elements of very good teaching apparent in many of the lessons.
- Classroom management was uniformly very good, as was student behaviour, in a positive and supportive learning environment.
- There was a tendency for teacher-led methodologies to predominate, even in active-learning situations.
- The quality of planning is good and an effective science department, ably led and co-ordinated, facilitates sharing the workload of managing a busy department.

MAIN RECOMMENDATIONS

- The balance between teacher-led and student-centred phases in lessons is an area that should be reviewed to make classrooms more student focussed.
 - It is important to make use of more higher-order questions to challenge students to a greater extent, to encourage discussion and increase the level of teacher-student interaction.
 - A description of what constitutes good teaching, in the modern context, should be explored and a coherent and planned approach to developing practice in the agreed direction should be implemented.
 - In order to ensure that benefits arise from the analysis of certificate examination, targets for improvement should now be stated and strategies to achieve these should be defined and implemented.
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INTRODUCTION

St Finian's College is a co-educational voluntary secondary school operating under the trusteeship of the Bishop of Meath. Following a period of rapid expansion, the school has a current enrolment of 687 students. Science is a core subject in junior cycle and Agricultural Science, Biology, Chemistry and Physics are offered as optional subjects in senior cycle.

TEACHING AND LEARNING

- The overall quality of teaching and learning in the lessons observed ranged from fair to good but with elements of very good teaching apparent in many of the lessons.
- These lessons were mostly well planned and prepared with necessary resources to hand. The learning intentions were clear and were shared with students in an appropriate manner in almost all of the lessons.
- Classroom management was uniformly very good as was student behaviour.
- All the lessons were conducted in a positive and supportive learning environment and teachers had a good relationship with their students.
- While lessons proceeded at an appropriate pace, and were well pitched, care is needed to ensure that there is time available, at the end of the lessons, to review and consolidate learning. Otherwise, lessons were well structured.
- Information and communications technology (ICT) and the classroom whiteboard were well used to illustrate lesson content and to summarise points of information.
- The use of active learning methodologies was in evidence in many lessons. However, there was a tendency for teacher-led methodologies to predominate, even in active-learning situations. The balance between teacher-led and student-centred phases in lessons is an area that could be reviewed to make classrooms more student focussed. The use, to a greater extent, of student-centred active learning approaches is recommended.
- In some of the lessons, lower-order questioning predominated. It is important to make use of more higher-order questions to challenge students to a greater extent, to encourage discussion and increase the level of teacher-student interaction, thereby providing feedback to teachers on how students are progressing. Such feedback can then be used to modify teaching approaches to support individual students and maximise learning.
- Support for students' literacy development, as observed in the lessons visited, was uneven and numeracy support was almost entirely absent. A review of planned interventions by the science teachers and a renewed impetus to implement these is required.
- Examples of good assessment practices, including teacher circulation amongst students and the provision of written developmental feedback on students' written work, were sometimes observed. However, the overall quality of assessment, and assessment for learning in particular, was weak and a review of assessment procedures is needed.
- To build on existing good practice and to support students' learning, a description of what constitutes good teaching, in the modern context, should be explored. A coherent and planned approach to developing practice in the agreed direction should be implemented.
- Students engaged well in the learning process, they mostly worked hard and there was good evidence of learning.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- Science is a core subject in junior cycle. Uptake of the sciences is very positive at senior level and all four science subjects are offered as optional subjects.
- The allocation of class periods to Science needs to be reviewed. The current allocation in first and second year is below syllabus recommendations. In addition, it is important that existing provision be adapted to accommodate a double period each week to facilitate practical work.
- While laboratory access is problematic at present, this difficulty has been mitigated by the preparation by teachers of portable experiment kit boxes. These enable practical work and demonstrations to be carried out in a number of different locations.
- The members of the science department have expressed a desire to increase the provision of co-curricular and extra-curricular activities provided in order to develop and extend students' curricular experiences. This is praiseworthy and the department is encouraged to take the necessary steps to plan for and implement such activities at an early date.
- Health and safety issues are actively managed and an up-to-date safety statement is in place.
- There is regular formal assessment of students and parents are kept well informed on students' progress.
- Good practice is followed with regard to the encouragement and support of teachers' continuing professional development.

PLANNING AND PREPARATION

- The quality of planning in the Science department is good and the folders for Science, Biology and Agricultural Science are comprehensive.
- An effective science department, ably led and co-ordinated, facilitates sharing the workload of managing a busy department.
- A variety of aspects of the department's work is being reviewed and updated at present.
- The delivery of all courses is in accordance with common schedules, which facilitate the provision of common assessments. These schedules are kept under review and adapted in the light of experience, each year.
- Similarly, the science department is adapting its approach to implementing the mandatory experiments to achieve greater efficiency.
- The enhancement of ICT support, through setting up shared cloud storage by the science department, is a very useful initiative. This development is already influencing in a positive manner the preparation and sharing of resources.
- It is positive that a planned approach to increasing and upgrading the resources available for teaching the sciences is being prepared with the support of senior in-school management.
- The analysis of certificate examination outcomes by the department is a positive development. In order to further this work, targets for improvement and strategies to achieve them should now be stated. Additional evidence, from the detailed analysis of in-house assessments and other sources, should also contribute to this process.

The draft findings and recommendations arising out of this evaluation were discussed with the deputy principal and subject teachers the conclusion of the evaluation. 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.

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