

**An Roinn Oideachais agus Scileanna**

**Department of Education and Skills**

**Subject Inspection of Science and Biology  
REPORT**

**Meán Scoil Mhuire  
Convent Road, Longford Town,  
County Longford  
Roll number: 63760E**

**Date of inspection: 7 November 2012**



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

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**INFORMATION ON THE INSPECTION**

<b>Date(s) of inspection</b>	6 & 7 November 2012
<b>Inspection activities undertaken</b> <ul style="list-style-type: none"><li>• Discussion with principal</li><li>• Discussions with science and biology teachers</li><li>• Review of teachers' notes, plans and records</li><li>• Interaction with students</li></ul>	<ul style="list-style-type: none"><li>• Examination of students' laboratory notebooks and copybooks</li><li>• Observation of teaching and learning in thirteen class periods</li><li>• Feedback to science and biology teachers and principal</li></ul>

**MAIN FINDINGS**

- The quality of teaching was good in all cases with elements of very good teaching frequently apparent.
- Lessons observed were all very well structured and key words and terms associated with each topic were highlighted.
- The sciences are very well supported in Meán Scoil Mhuire, with appropriate time allocated to Science and Biology and provision is made for smaller classes for practical lessons.
- The school's two laboratories are well equipped and well managed, and student access is maximised.
- A very collegial and active science department, which has been well led and managed, is in operation.
- Comprehensive science and biology folders evidenced a thorough and reflective approach to planning. A detailed longitudinal study of examination outcomes has been carried out.

**MAIN RECOMMENDATIONS**

- It is recommended that teachers agree a consistent approach to providing feedback towards improvement to students on their written work.
- The role and functions of the science co-ordinator should be reviewed and clearly defined and the post rotated amongst department members over time.
- The outcomes of the longitudinal study of examination results, and other relevant evidence, should now be used as a baseline for action planning for improvement.

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## INTRODUCTION

Meán Scoil Mhuire is a girls' school operating under the trusteeship of CEIST. It has a current enrolment of 588 learners who are drawn from a wide range of socio-economic and cultural backgrounds. Science is a core subject in junior cycle and Biology, Chemistry and Physics are offered as optional subjects in senior cycle. The sciences are included in the school's optional Transition Year (TY) programme.

## TEACHING AND LEARNING

- All lessons observed were well planned and prepared and were in keeping with planned schedules.
- The quality of teaching was good in all cases with elements of very good teaching frequently apparent.
- It is particularly noteworthy that all lessons observed were very well structured, with a clear opening, which included the sharing of lesson objectives with students. This was followed by a developmental stage and an opportunity for students to put their learning into practice before the lesson content was reviewed at the close of the lesson.
- Key words and terms associated with each topic were highlighted in all lessons observed. Opportunities to make further reference to subject-specific terminology were availed of in all but a few lessons.
- Good use was made of the school's information and communication technology (ICT) infrastructure, and very good practice was seen in a number of lessons where ICT was used in combination with other methodologies.
- Lessons were mostly student centred and interactive, with good quality questioning evident, leading to valuable discussion-based learning opportunities for students. In a few lessons, a better balance between teacher-centred and student-centred phases would have been more empowering for students and would have provided teachers with additional opportunities to gauge students' progress and understanding.
- Practical work was efficiently and safely managed and carried out in a well-structured manner, with a good preparatory plenary session and an appropriate review of the learning outcomes at the end.
- The quality of assessment practices was somewhat varied. Questioning of students was generally good, with a mix of lower-order and higher-order questions. Students were well affirmed for their efforts in class but there is a need to extend this more consistently to their written work. While some good examples of developmental feedback were seen in students' copybooks and laboratory reports, overall practice was uneven and it is recommended that teachers agree a consistent approach to providing such valuable written feedback to students.
- The level of differentiation observed during lessons was good and students were well supported as individuals. The use of differentiated worksheets, with progressive levels of challenge to students, is encouraged.
- Classroom management was uniformly good and, in turn, students behaved well, worked hard and contributed well to lessons. There was a positive atmosphere apparent in the classrooms and a high level of rapport between teachers and students.

- The quality of students' learning was good, as evidenced by their level of engagement, examination outcomes, the quality of their written work and their participation in lessons.

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

- The sciences are very well supported in Meán Scoil Mhuire, with Science being a core subject in junior cycle. There is extensive provision and choice in senior cycle. Classes are mixed ability at all levels.
- Appropriate time is allocated to Science and Biology. Additional allocation of staff, by senior management, has resulted in smaller classes for practical lessons to the significant benefit of students.
- The school's two laboratories are well equipped, well managed, and student access is maximised through appropriate management of the timetable. The adjacent storage room is well stocked and chemicals storage is in accordance with good practice. A good display of posters and charts, some of which is student generated, was noted in the laboratories.
- The provision of health and safety equipment is in accordance with good practice.
- The school operates a good system of formal and informal testing of students and of reporting to parents.
- Opportunities for continuing professional development are supported by school management and availed of by teachers.
- It is positively noted that a variety of extracurricular activities are supported by the science department, and it is suggested that additional ways of highlighting *Science Week* be considered.

#### **PLANNING AND PREPARATION**

- A very collegial and active science department is in place. The department has been well led and managed and there is evidence of much reflective work having been carried out. A large bank of resources has been developed, is stored centrally and is available to all members of the department.
- Due to pressures on the post of responsibility system in the school, it is timely that the role and functions of the science co-ordinator be reviewed and clearly defined and that the post is rotated amongst department members over time.
- Comprehensive science and biology folders were presented, with very useful and well-thought-out contents. The delivery of all courses is scheduled and common assessments are used extensively. Common plans have been further adapted by individual teachers to support their own work.
- It is commendable that a detailed longitudinal study of examination outcomes has been carried out. The outcomes of this study, and other relevant evidence, should now be used as a baseline for action planning for improvement.

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 on the findings and recommendations of the report; the board chose to accept the report without response.

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