

An Roinn Oideachais agus Scileanna

Department of Education and Skills

**Subject Inspection of Science and Chemistry
REPORT**

Cnoc Mhuire Secondary School

Granard, County Longford

Roll number: 63730S

Date of inspection: 21 September 2012



**AN ROINN | DEPARTMENT OF
OIDEACHAIS | EDUCATION
AGUS SCILEANNA | AND SKILLS**

REPORT
ON
THE QUALITY OF LEARNING AND TEACHING IN SCIENCE AND CHEMISTRY

INFORMATION ON THE INSPECTION

Date(s) of inspection	21 September 2012
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 eight class periods• Examination of students' work• Feedback to principal and teachers

MAIN FINDINGS

- The quality of teaching and learning in most lessons was good or very good. However, there was scope for development in some cases.
- Very good use was made of information and communication technology (ICT) to support learning.
- Practical activities were well organised and effectively supported the development of students' laboratory skills and their understanding of the relevant topic.
- An appropriate balance between teacher-led and student-centred activities was observed in most lessons; however, in some cases there was insufficient student activity.
- The quality of whole-school support for Science and Chemistry is very good.
- The overall quality of planning and preparation for the teaching of Science and Chemistry is good, but there is room for further development of the subject plan.

MAIN RECOMMENDATIONS

- It is recommended that, where necessary, more student-centred learning activities are incorporated in lessons.
 - It is recommended that, as part of the subject planning process, the science department develop and share good practice with respect to the use of *Assessment for Learning* (AfL) strategies, teaching methodologies, and supporting literacy and numeracy in science teaching.
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INTRODUCTION

Cnoc Mhuire Secondary School is one of two second-level schools in Granard. The school's current enrolment of 461 boys and girls is drawn from a large catchment area. The school provides the Junior Certificate, Leaving Certificate, Leaving Certificate Vocational Programme and Transition Year.

TEACHING AND LEARNING

- The quality of teaching and learning in most lessons was good or very good. However, there was scope for development in some cases.
- Good planning was evident in the range of teaching strategies used during the lessons, the sequencing of topics and the variety of resources prepared in advance.
- Lessons were well managed and good systems with respect to the recording of attendance, seating and the use of homework journals have been established.
- Very good use was made of ICT to support learning. For example, simple and clear PowerPoint presentations were well used to highlight key points and to illustrate lesson content.
- Practical activities were well organised and effectively supported the development of students' skills and understanding.
- Students' progress was well assessed during most lessons, particularly through the use of higher-order questions.
- An appropriate balance between teacher-led and student-centred activities was observed in most lessons. However, in some cases, there was insufficient student activity. In these situations, it is recommended that more opportunities for student-centred learning activities are included in the lesson plan.
- In all lessons, students were informed of the focus of the lesson. In a few cases, this was expressed in the form of the intended learning outcomes to be achieved by the end of the lesson. It would be beneficial if this good use of an AfL approach were extended to all lessons.
- The use of an AfL approach could also be usefully extended to the correction of written work. While notebooks showed some monitoring for completion of work, there was little evidence of formative assessment such as guidance for students on how to improve. Hence, it is recommended that the science department research, and share good practice in the use of AfL strategies.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- The quality of whole-school support for the provision of Science and Chemistry is very good.
- Science is well provided for on the school's curriculum. Junior Certificate Science is a core subject and four science subjects, including Chemistry, are provided in senior cycle.
- The school encourages students to take higher-level Science in the Junior Certificate examination in order to maximise their options when choosing a science subject in senior cycle.

- Timetabling provision for Science and Chemistry is appropriate.
- The school has good resources for the teaching of Science and Chemistry. There are two well-stocked and organised laboratories, a demonstration room and one general purpose classroom used for teaching science subjects. All rooms are well equipped with ICT.
- The school has a health and safety statement and appropriate safety equipment, such as first-aid kits and fire extinguishers, is provided.
- Teachers' attendance at professional development courses is facilitated and whole-staff training has been provided on relevant topics such as differentiation and the use of ICT in teaching and learning. A teachers' handbook, developed by the school, is a useful resource for teachers.

PLANNING AND PREPARATION

- The overall quality of planning and preparation for the teaching of Science and Chemistry is good but there are some areas for development.
- Subject planning is facilitated by the holding of regular formal meetings throughout the school year and also by on-going informal collaboration among the science teachers. For example, teachers collectively arrange laboratory access for class groups and develop common end-of-year tests.
- One teacher acts as subject coordinator and good practice is evident in the plan to rotate this role among the members of the teaching team.
- The school's ICT system is undergoing an upgrade at present and it is planned to develop an electronic folder to be used by the science department members to collate and share teaching resources. It is recommended that this development be prioritised for action by the science department as it will facilitate the sharing of the teaching resources already developed by individual teachers.
- The subject plan for the sciences includes programmes of work, and sections dealing with planning for students with special educational needs and cross-curricular planning. However, there is scope for a deeper level of planning to be developed in respect of some aspects of the plan. For example, the plan simply lists effective teaching methodologies but does not relate these to syllabus content or to programmes of work.
- Science department meetings focus mainly on administrative issues such as laboratory maintenance and resources. It is recommended that the science department members further develop their subject plan by developing and sharing good practice with respect to issues such as the use of *Assessment for Learning* strategies, teaching methodologies, and literacy and numeracy requirements in science.

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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