

An Roinn Oideachais agus Scileanna

Department of Education and Skills

**Subject Inspection of Science and Physics
REPORT**

**Castlerea Community School,
Castlerea, County Roscommon
Roll number: 91493P**

Date of inspection: 13 April 2011



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

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

INFORMATION ON THE INSPECTION

Date(s) of inspection	12, 13 April 2011
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 seven class periods• Examination of students' work• Feedback to principal and teachers

MAIN FINDINGS

- The quality of learning and teaching in the science and physics lessons observed was good to very good in the case of each lesson.
- Very good use was made of ICT in all lessons and it was clear that this enhanced and helped students in their learning.
- The school's policies with regard to its taster year and the optional nature of Science on its curriculum have the potential to impact on the take-up of Science in the school and on students' achievement in Science. It is noted that the school has both of these issues under continuing review and that it is of the view that considerable benefits accrue through the taster year from students making good choices of their optional subjects.
- The provision of science in the curriculum of the school's special education class is an indicator of the importance that school management attaches to Science.
- Very good practice was seen with regard to the use of student projects in science that develop in students a wide range of science-related skills that include students presenting their own projects for the Coursework B assessment in the junior certificate examination.

MAIN RECOMMENDATIONS

- The practice should be established of using learning objectives for all lessons.
 - Teachers should as a rule comment in writing on students' written work, giving feedback that is positive, and guidance on how students can do better.
 - The arrangement whereby the science department's plans for second and third year are rotated should be reconsidered in order to ensure that it best meets the learning needs of students.
 - The science department should broaden further its use of the investigative approach to student practical work as was seen in some of the lessons observed.
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INTRODUCTION

Castlerea Community School has an enrolment of 496 and is under the trusteeship of Co Roscommon VEC and the Sisters of Mercy. As the sole second-level education provider in its area it seeks to cater for a wide range of educational needs. It has a post-leaving certificate programme and also a special class for students with learning disabilities. 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.

TEACHING AND LEARNING

- All lessons in Science and in Physics were well planned and prepared for.
- The quality of teaching in the science lessons observed was good or very good in the case of each science lesson. In the case of the physics lesson the quality of teaching was very good.
- The quality of students' learning was good or very good in all science and physics lessons.
- Learning objectives were used to introduce several lessons. The practice should be established of using learning objectives in all lessons.
- Very good use was made of ICT in all lessons and it was clear that this enhanced and helped students in their learning.
- Student practical work observed was well organised. The science department should broaden further its use of the investigative approach to student practical work as was seen in some of the work observed.
- Students in each lesson received good individual attention from their teacher. Classroom atmosphere, classroom management, and student-teacher relationships were very good in all classes.
- Given the mixed-ability nature of all classes in science, the use of keywords should be routine.
- The examples seen of students researching on areas of science and presenting to the class on these areas represent very good practice.
- Very good examples were seen of the assessment of students' learning that were linked to the learning objectives of lessons.
- In order to further develop the good practice seen regarding the assessment of students' written work by teachers, the subject department should adopt as policy that teachers comment in writing on all students' written work, giving feedback that is positive, and guidance on how students can do better.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- There is good support at a whole-school level for science. Although science is an optional subject at junior cycle level, up to 90% of students take science.
- As a result of the school's taster year for first-year students the overall time allocation for science is below the guideline level. The school is of the view that the benefits that accrue

from students making good choices of their optional subjects more than compensates for this deficit.

- By keeping the optional status of Science in its curriculum and the structure of its taster year under continuing review, the school is showing good practice. In doing this the impact of these school policies on the status of Science in the school and potentially on students' achievement in Science should be borne in mind, especially in the context of national priorities with regard to science, mathematics, and technology.
- The science department's strategy should be to build the confidence and expectations of students from first year on so as to maintain and increase further the proportion of students taking science at higher level.
- There is a need for further coordination in relation to resources, including procedures in relation to stock control and ordering for the laboratories.
- Teachers have engaged in professional development including in one case providing professional development for teachers at a national level. The impact of this is evident in the classroom.
- The provision of science in the curriculum of the school's special education class is an indicator of the importance that school management attaches to Science.

PLANNING AND PREPARATION

- To enhance the effectiveness of its operation there should be a greater number of formal meetings of the science subject department, initially at least one each term.
- The subject plan for the teaching and learning of Science is well presented and it is evident that considerable thought and effort has been put into its preparation including very good practice in the use of student learning objectives. In further developing the plan the department should include information on methodologies, practical work, both student-based and teacher demonstration, and the assessment of students.
- The science department plans for second and third year are rotated so that each year all of the third-year and all of the second-year classes follow the same science curriculum. The arrangement should be reconsidered in order to ensure that it best meets the learning needs of students.
- The physics department curricular planning documentation inspected was of a very high quality.
- As part of its future planning, the department should work towards a situation in which all teaching and learning resources are shared.
- The science department should further develop its use of ICT as resources allow with the aim of bringing about a virtual learning environment for its students.
- The good co-ordination of the science department is assisted by the availability of a job description for its coordinator.
- There is very good practice in the use of student projects in science that develop in students a wide range of science-related skills, including students presenting their own projects for the science Coursework B assessment in the junior certificate examination. This very good practice should be further structured and reflected in the department's planning documentation.

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

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