

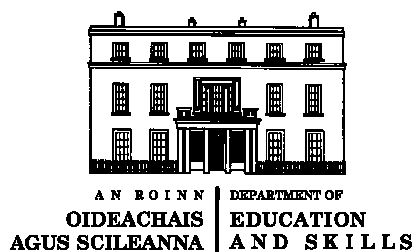
An Roinn Oideachais agus Scileanna

Department of Education and Skills

**Subject Inspection of Science and Biology
REPORT**

**Carrigallen Vocational School
Carrigallen, County Leitrim
Roll number: 71540J**

Date of inspection: 25 February 2016



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

INFORMATION ON THE INSPECTION

Date of inspection	25 February 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 three class periods• Examination of students' work• Feedback to principal and teachers

MAIN FINDINGS

- The quality of teaching and learning ranged from good to excellent.
- Classroom management was very good and lessons proceeded in a positive and supportive learning environment.
- Excellent practices were observed where students were challenged to think, recall, investigate and predict thus developing their critical and analytical skills.
- Information and communication technology (ICT) facilities are very good.
- Homework was allocated and checked in all lessons.
- Student activities were well monitored and teachers provided one-to-one assistance where appropriate.

MAIN RECOMMENDATIONS

- There is scope to provide more opportunities for students to engage with collaborative learning activities.
 - Collaborative input from the Science team to the subject department plan is recommended to help develop an effective working document.
 - A flame-retardant cabinet should be used to house flammable chemicals.
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INTRODUCTION

Carrigallen Vocational School is a co-educational post-primary school which operates under the auspices of Mayo Sligo Leitrim Education and Training Board (MSLETB). The school caters for 289 students and participates in the Department of Education and Skills' Delivering Equality of Opportunity in Schools (DEIS) initiative. The school provides the Junior Certificate, Leaving Certificate, Leaving Certificate Vocational Programme (LCVP) and an optional Transition Year (TY).

TEACHING AND LEARNING

- The quality of teaching and learning ranged from good to excellent. All teachers shared the learning intentions with students at the outset and used them to give structure to lessons. The introduction to lessons included links to students' prior learning and everyday activities which served to increase student engagement.
- ICT was used in all lessons. Very good use was made of visual stimuli such as video clips and electronic presentations as well as the use of shared drives and applications in lessons where students had their own tablets. Best practice was observed where students, as a consolidation of learning, completed a class quiz using tablets where the questions, the class-participation level and achievement was displayed following each question.
- In one lesson, where energy conversions were demonstrated by the teacher, the activity was recorded by a student on a tablet and used to display to the whole class. A range of other resources was well used and included worksheets and diagrams to be labelled.
- In all lessons, classroom management was very good and activities were well organised and planned. A very good rapport was seen to exist between students and their teachers and lessons proceeded in a positive and supportive learning environment.
- Where practical work was observed, students worked in small groups or pairs and displayed good routines for setting up and clearing away apparatus. Excellent practice was observed where students were asked to investigate and make predictions based on prior knowledge.
- Best practice in questioning strategies were observed where students were challenged to think and recall, developing their critical and analytical skills. Direct recall questions were followed by higher-order follow-up questions and appropriate wait-time was allocated. Students were affirmed for their contributions to lessons and responses were clarified and reinforced.
- While some opportunities for collaborative learning were observed, there was potential to structure small groups to allow peer-review and peer-tutoring to take place. This approach would have given students opportunities to talk about and show their learning and should be included in lessons.
- Homework was allocated in all lessons and students recorded it in their journals. Students' notebooks were generally well maintained. A good level of teacher monitoring was observed in all lessons through checking written tasks and providing one-to-one assistance where necessary.
- Lessons included an appropriate focus on developing students' literacy skills through the use of key words and keyword journals and a focus on calculations, formulae and units in numeracy development.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- Science is a core subject at junior-cycle level. Science is also provided in the optional TY and at senior cycle there are classes of Biology, Physics and Agricultural Science.
- The school is in the early stages of an application, to the Department of Education and Skills, for an extension to the current building. There are two laboratories, one of which is in a prefab, and both have adjacent chemical store and preparation areas. While the chemical stores are tidy and well organised, a flame-retardant cupboard should be provided in the storage area in order to house flammable chemicals.
- Both laboratories are well resourced; ICT facilities are very good. One laboratory has an interactive whiteboard while the second has a dataprojector. All first and second-year students have tablets that contain their textbooks and a shared drive for assignments.

PLANNING AND PREPARATION

- Management facilitates subject-department meetings and the position of co-ordinator is rotated. Minutes of meetings indicate that discussions of the analysis of state examination results are held and action plans are in place. In order to make these reflections more relevant to the current cohort of students, there is scope to widen discussions to incorporate student attendance and achievement in other assessments.
- The Science subject department plan is good. It gives a good overview of how Science is organised in the school and provides a framework for the teaching of Science at Junior Certificate level.
- It is good to note that both long-term plans for each year group and shorter-term programmes of study are included. The long-term plans give a very good overview of the learning for the year while the programmes of study give more detailed learning intentions for each topic and relate them to the resources and assessment modes to be used.
- There is scope for the science team to further develop the activities and resources section of the programmes of study to include reference to pedagogy and any new resources utilised. This detail would contribute to the development of a collaborative working document.
- Planning documentation included the school self-evaluation strategies on literacy and numeracy; these should be incorporated in to the relevant areas of the programmes of study for each year group.

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

Published September 2016