

An Roinn Oideachais agus Scileanna

Department of Education and Skills

**Subject Inspection of Science
REPORT**

**Ballinode College
Sligo, County Sligo
Roll number: 72360M**

Date of inspection: 22 October 2013



**A N R O I N N | D E P A R T M E N T O F
O I D E A C H A I S | E D U C A T I O N
A G U S S C I L E A N N A | A N D S K I L L S**

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

INFORMATION ON THE INSPECTION

Date of inspection	22 October 2013
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 five class periods• Examination of students' work• Feedback to principal and teachers

MAIN FINDINGS

- The quality of teaching and learning was good overall and some good use of an investigative approach to learning was observed.
- All lessons were very well prepared and very effective use of information and communication technology (ICT), including students' use of tablet devices, was observed.
- Homework was corrected and set in all lessons and formative feedback was being provided to students by teachers in their copybooks.
- Science is a core subject in the junior cycle and Agricultural Science and Agriculture and Horticulture are provided at senior cycle as well as a number of post leaving certificate (PLC) science courses.
- The school has one well-resourced science laboratory and the science teachers work collaboratively to ensure as many double lessons as possible take place there, though providing access to all students is difficult given the number of students taking the sciences.
- The science department has very good planning documentation including detailed schemes of work developed collaboratively.

MAIN RECOMMENDATIONS

- Greater use should be made of an investigative approach to teaching and learning.
 - The science department should extend the formative approaches used in the correction of homework to the monitoring of students' practical copybooks.
 - In the context of the future development of the school, priority should be given to the need for a second science laboratory.
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INTRODUCTION

Ballinode College is a co-educational school operating under the auspices of Mayo, Sligo and Leitrim Education and Training Board (ETB). The school participates in the Delivering Equality of Opportunity in Schools (DEIS) initiative. At the time of the inspection it had an enrolment of 150 junior cycle and senior cycle students as well as 580 PLC students. The school provides the Junior Certificate Schools Programme (JCSP) in addition to the Junior Certificate (JC) at junior cycle. At senior cycle, the established Leaving Certificate (LC), Leaving Certificate Vocational Programme (LCVP), and the Leaving Certificate Applied (LCA) are all offered.

TEACHING AND LEARNING

- The quality of teaching and learning was good overall and some good use of an investigative approach to learning was observed. Greater use of an investigative approach to teaching and learning, rather than teacher instruction and note taking, should be incorporated into as many lessons as applicable.
- Teachers were very well prepared and learning outcomes were shared with students in all lessons. In one lesson they were negotiated with the students. This is good practice.
- Classroom management was excellent in all lessons. In some lessons where a very small number of students were disengaged with the tasks presented to them, the teachers were skilfully able to encourage and gently persuade the students to re-engage with these tasks. This led to a good and respectful student-teacher rapport and students were positively affirmed for their contributions.
- Questioning was used to good effect to check on learning. Differentiated questions were used to challenge students of all levels. Greater use should be made however, of directed questioning to ensure maximum student engagement, in all lessons.
- The very good use of ICT among students and teachers enhanced learning and teaching. All students used tablet devices at structured times during their practical and theory lessons. In some lessons teachers emailed notes and learning outcomes to the students' devices to aid them in their class work and homework.
- Practical work observed was well organised and students worked well in small groups. Students cleared up the equipment once the activities were completed. However, this good practice should also be extended to ensure that students are involved in the initial setup of the practical work where possible.
- Homework was corrected and set in all lessons and was also used as an introduction to the topic of the lesson. Greater use of mind maps or student-led discussion to assess students' prior knowledge of lesson topics is recommended. Teachers provided students with written formative feedback in their copybooks and this very good practice should be extended by the science department to the monitoring of students' practical copybooks
- Good literacy and numeracy strategies were observed in most lessons. The main literacy strategy used was key words and in some lessons students were asked to spell these words as well as provide its meaning. The use of units, where possible, was a numeracy strategy that was incorporated into some lessons. The use of these two strategies is commendable.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- There is good support at whole-school level for the science subjects. Science is a core subject at junior cycle. The school offers Biology and Agricultural Science for LC and Agriculture and Horticulture for LCA students as well as a range of science-related PLC courses. There was no uptake in the last few years for LC Biology.
- The time allocation for Science is within curriculum guidelines. Management and teachers ensure that the science department is well resourced. ICT facilities in the laboratories are very good.
- As the school only has one laboratory and offers students a wide range of science subjects, particularly PLC courses, individual students' access to the laboratory is poor. Teachers collaborate as much as possible to ensure that most double periods are held within the laboratory but many science classes take place in general classrooms. In the context of the future development of the school, priority should be given to the need for a second laboratory.
- All teachers are members of the Irish Science Teachers' Association (ISTA), have engaged in professional development and are facilitated by senior management in doing so.
- The school has a health and safety policy which is reviewed annually and the science department ensures a risk assessment of the laboratory takes place during this review.

PLANNING AND PREPARATION

- A subject co-ordinator is appointed and this role is rotated annually. Formal meetings are facilitated by management each term and very good minutes are recorded, kept on file and emailed to senior management. The small size of the science department also allows teachers to meet informally on a regular basis.
 - The science department has very good planning documentation including detailed schemes of work developed collaboratively. These plans also include self reflection practices as well as analysis of strengths and weakness of the department which aid in future planning. This is highly commendable.
 - The department undertakes an analysis of certificate examination results and compares them with national averages every year. This good practice further enhances future planning.
 - As all teachers in the science department follow the agreed schemes of work, it would be beneficial to set common assessments at various times throughout the year.
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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 was given an opportunity to comment in writing on the findings and recommendations of the report; a response was not received from the board.