

An Roinn Oideachais agus Scileanna

Department of Education and Skills

**Subject Inspection of Science and Chemistry
REPORT**

**Loreto College, Cavan
Co. Cavan
Roll number: 61070P**

Date of inspection: 13 March 2014



**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 AND CHEMISTRY

INFORMATION ON THE INSPECTION

Dates of inspection	12 and 13 March 2014
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">• Examination of students' work• Observation of teaching and learning during eight class periods• Feedback to principal and teachers

MAIN FINDINGS

- The quality of teaching and learning observed was very good and all lessons were well planned and prepared with a clear aim and focus.
- Practical activities were very well organised and provided students with a hands-on investigative experience of working as a scientist.
- Very good use was made of resources such as worksheets and information and communication technology (ICT) to support learning.
- Good attention was given to the development of students' literacy skills, but there was varied practice with respect to the correction of written work such as laboratory reports.
- Very good whole-school support for the provision of science is reflected in the uptake of science subjects and the support for teachers' professional development.
- The science teachers work in a collaborative and professional manner.

MAIN RECOMMENDATIONS

- The science department should develop and consistently implement agreed practice with respect to the assessment of written work such as laboratory reports.
- The science department should review the current subject plan in order to ensure that it better reflects their views and planned actions on issues such as literacy, numeracy, teaching methodologies, assessment, differentiation, special educational needs (SEN), gifted students and attainment.

INTRODUCTION

Loreto College, Cavan, is a voluntary secondary school for girls with a current enrolment of 730 students. The school offers the Junior Certificate programme, an optional Transition Year (TY) programme, the Leaving Certificate programme, and the Leaving Certificate Vocational Programme.

TEACHING AND LEARNING

- The quality of teaching and learning in the lessons observed was very good.
- All lessons were well planned and prepared and had a clear aim and focus. Good thought had been given to how to support students' learning.
- A very student-centered approach in all of the lessons promoted independent learning and allowed teachers to assume the role of facilitator. For example, the extensive use of practical activities allowed students to work at their own pace with the teacher providing differentiated support as needed to individual students or groups.
- Throughout the lessons, students were actively engaged in learning activities such as discussions and problem solving and it was clear that teachers have high expectations of their students.
- Practical activities were very well organised and provided students with a hands-on investigative experience of working as a scientist. The students were very confident and competent in completing the tasks assigned to them. Over and above the acquisition of scientific knowledge and understanding, development of key skills such as 'being creative' and 'working with others' were well supported through the completion of practical work.
- Lessons were very well managed. Classroom routines had been clearly established and students were very cooperative, attentive and interested in their work.
- Good attention was given to the development of students' literacy skills. For example, key words were highlighted and discussed with students. In addition, the laboratories provided a very print-rich environment with good examples of how to present and process information on display.
- Very good use was made of resources such as worksheets and ICT to support learning. A very good example of the effective use of ICT was the setting of a quiz for students using a virtual learning environment.
- Some very good questioning strategies were used to assess students' progress, particularly where individual students were given sufficient time to formulate their response. This encouraged students to give more lengthy inputs and is something to be encouraged. Good use of higher-order questions also gave students an opportunity to bring deeper thinking to their responses.
- There was varied practice with respect to the correction of written work such as laboratory reports. Best practice was evident when guidance had been given to students on how they could improve their work. However, in other cases, completion of reports was simply monitored. It is recommended that the science department develop and implement a consistent practice with respect to the assessment of written work such as laboratory reports.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- Whole-school support for the provision of science subjects is very good.
- Though Science is an optional subject in junior cycle after first year, there is a very good uptake of the subject with the great majority of students opting to take Science for the Junior Certificate.
- There is also a very good uptake of Leaving Certificate science subjects with two class groups being formed for Chemistry. All TY students study science and students who have not taken Junior Certificate Science are facilitated to take up a Leaving Certificate science subject if they wish.
- The school's three laboratories and demonstration room are well equipped and maintained. Relevant health and safety systems are in place.
- The overall allocation of lesson periods for science subjects is in line with syllabus guidelines; however, some class groups have not been allocated double periods. Though it is acknowledged that the school has made every effort to avoid this situation within the resources available, it is a less than ideal arrangement for the provision of practical activities. The school should continue to make every effort to avoid this situation recurring.
- Class groups are of mixed ability and are of an appropriate size for the conduct of practical activities.
- The school is very supportive of teachers' professional development. Participation in external in-service events is facilitated, relevant fees are paid and whole-school training on issues such as using ICT in the classroom and differentiation has been provided.
- The school is very supportive of teachers and students involvement in extra-curricular activities and the school has had great success in events such as the Science Olympiads.

PLANNING AND PREPARATION

- The science department and subject planning is well established and the science teachers work in a collaborative and professional manner.
- Regular formal meetings are supplemented by a high level of ongoing co-operation regarding issues such as laboratory access and resources. Good practice is evident in the record of subject meetings which shows that time has been given to discussions on issues relating to teaching and learning such as literacy, assessment, and student attainment.
- Subject plans have been developed and include detailed schemes of work which allow for common assessment of particular year groups. However, the plans would benefit from some streamlining and further development in order to ensure that they more clearly record the decisions made by the science department. Thus, it is recommended that the science department review the current subject plan in order to ensure that it better reflects their views and planned actions on issues such as literacy, numeracy, teaching methodologies, assessment, differentiation, SEN, gifted students, attainment.
- There are good systems in place to ensure that the necessary laboratory resources are maintained and available.

- The sharing of teaching resources is facilitated by the use of electronic folders. The development of a virtual learning environment which allows students access to teaching resources is a commendable initiative.

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, and the response of the board will be found in the appendix of this report.

Appendix

SCHOOL RESPONSE TO THE REPORT

Submitted by the Board of Management

Area 1: Observations on the content of the inspection report

Area 2: Follow-up actions planned or undertaken since the completion of the inspection activity to implement the findings and recommendations of the inspection

The B.O.M. have recommended that the Principal facilitate the implementation of the two recommendations in all subject departments.