

An Roinn Oideachais agus Scileanna
Department of Education and Skills

Subject Inspection of Science and Chemistry
REPORT

Coláiste Pobail Bheanntaí
Bantry, County Cork
Roll number: 76090G

Date of inspection: 25 November 2015



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

Dates of inspection	24 and 25 November
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 nine class periods• Examination of students' work• Feedback to principal and teachers

MAIN FINDINGS

- The standard of teaching and learning observed was consistently good and included many instances of excellent practice.
- Innovative approaches to revision and homework were observed and these very effectively promoted the enhancement of teaching and learning.
- Management and the science teachers are very supportive of student learning in the sciences and the profile of the sciences is constantly being raised.
- The school is very well resourced for the teaching and learning of the sciences.
- Very good levels of teacher preparation, and of subject department co-ordination and collaboration, were noted during the inspection.

MAIN RECOMMENDATIONS

- It is recommended that students revisit the learning intentions during and at the end of lessons in order to assist in their self-assessment of learning.
 - It is recommended that the investigative approach be used to a greater extent to promote student learning and practical work in Science.
 - A stronger emphasis on encouraging students to make notes for themselves rather than taking notes is recommended.
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INTRODUCTION

Coláiste Pobail Bheantraí is a co-educational school, operating under the joint patronage of Cork Educational and Training Board (ETB) and the Diocese of Cork and Ross. The school offers the Junior Certificate, Transition Year (TY), established Leaving Certificate, the Leaving Certificate Vocational Programme (LCVP) and the Post Leaving Certificate programme (PLC) to its students. Currently, the school has an enrolment of 668 post-primary students and thirty-four Post Leaving Certificate (PLC) students.

TEACHING AND LEARNING

- The standard of teaching and learning observed was consistently good and included many instances of excellent practice.
- All lessons observed were characterised by a warm classroom atmosphere, with very good interpersonal relations between the teachers and the students, and with exemplary student behaviour.
- Lessons were very well prepared and structured, were pitched and paced appropriately, and included teaching that was supportive of all students. As a result, there was a seamless transition from one part of the lesson to the next.
- Good practice was observed when intended learning intentions were shared with students at the outset of lessons. It was particularly effective when these learning intentions were used by the teacher during review of student learning. Building on this good practice, it is recommended that students revisit the learning intentions, during and at the end of lessons, in order to assist in their self-assessment of learning.
- Some very good examples of student-centred approaches were observed in many lessons. These included students being given opportunities to work both independently and collaboratively in pairs or in small groups. This good practice facilitated students' active engagement in learning and is an approach that should be used in all lessons.
- Student activities were extremely well planned, organised and managed.
- It was clear that students' practical skills develop as they progress through the school. Notwithstanding that, it is recommended that a more investigative approach be taken to student learning and practical work in Science. This could involve asking students to predict the answer to a particular problem, to suggest and plan how they might find out the answer to the problem, to implement the planned investigative activities and to draw conclusions.
- The quality of questioning observed was very good. In many cases higher-order questions were used to extend learning.
- Learning was consolidated through clear linking with previous knowledge and understanding. This is very good.
- Teachers used both the whiteboard and information and communication technology (ICT) effectively to visually reinforce important concepts. Some very good deployment of visual stimuli and film clips was observed. Use of animations was encouraged in one lesson.

- A stronger emphasis on encouraging students to make notes for themselves, discerning what is important or relevant, rather than taking notes, is recommended. This would facilitate more active learning on the part of students.
- Innovative approaches to revision such as a ‘head-to-head’ challenge stimulated students’ interest, in addition to reviewing and consolidating learning.
- It is good to note that development of students’ oral literacy and student use of subject-specific terminology was effectively facilitated through student group work and whole-class discussion.
- In some lessons, opportunities to enhance students’ numeracy development was effectively integrated into teaching and learning through the use of problem-solving and investigative methodologies, in addition to relevant use of mathematical operations. This is good practice.
- In addition to the more traditional types of homework, alternative tasks such as researching the answer to a question posed and finding out the wattage of various appliances at home were also given. This is very good as it makes the subject relevant and interesting.
- Students’ copybooks and practical books illustrated a good level of work. Some copybooks illustrated the desirable practice of the teacher annotation providing advice in areas where students needed to improve. This good approach reflects the principle of assessment for learning (AfL) and teachers are recommended to use it to a greater extent.
- The science department allocates a percentage of the marks for coursework A and this is included in the final grade of students’ achievement at Christmas and in the summer. This is very good as it reflects assessment practices in the Junior Certificate science examination.
- The school conducts an analysis of student performance in the certificate examinations. This is good practice. Where fluctuations in performance are observed in comparison with, for example, an average of performance over the last number of years, the school should investigate further.
- Commendably, students are given opportunities to participate in a good level of co-curricular and extracurricular activities in the sciences.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- School management is very supportive of the sciences in the school. Science is a core subject in junior cycle and in TY. Students are given the opportunity to study Agricultural Science, Biology, Chemistry and Physics for Leaving Certificate.
- Timetabling is in keeping with Department of Education and Skills (DES) guidelines with all class groups receiving the recommended allocation of time. Lessons are appropriately spaced throughout the week.
- The profile of the sciences is constantly being raised and events such as science week activities help to do this. For example the science jokes, which are displayed throughout the school, emphasise the fun aspect of Science. The corridor walls outside the laboratories are decorated so as to provide a distinctive science space, thus helping to stimulate interest in the sciences.

- The school is very well resourced for the teaching and learning of the sciences. Facilities include four well-equipped laboratories, a demonstration room, a polythene tunnel and a glasshouse. These facilities provide a very inspiring learning environment for the students. Examples of student work, scientific models and posters contribute enormously to providing print-rich visual learning environments. An extensive range of ICT equipment supports teaching and learning in the sciences.
- A very good approach to health and safety pertains in the science department. Risk assessments are carried out. A high standard of safety equipment is present in the laboratories and preparation areas, and chemicals are stored in accordance with Departmental guidelines. This is very positive.
- Commendably, science teachers actively engage in continuing professional development activities.

PLANNING AND PREPARATION

- The science department planning documentation is very comprehensive. The documentation presented at the evaluation included yearly schemes of work outlining material for all groups, more detailed plans written in the form of learning outcomes, strategies to enhance literacy and numeracy, and analyses of the certificate examination results.
- Teachers are aware of the needs of all students. The planning documentation also includes differentiation strategies and explanation of support to be provided for individual students with identified needs. This is very good practice.
- Very good levels of teacher preparation, and of subject department co-ordination, were noted during the inspection. The organisation of resources and the systematic approaches to matters such as ordering of equipment and chemicals are indicative of a very professional department.
- A high level of collaboration exists among the science teachers. This is facilitated by formal minuted meetings in addition to ongoing informal communication.

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.