

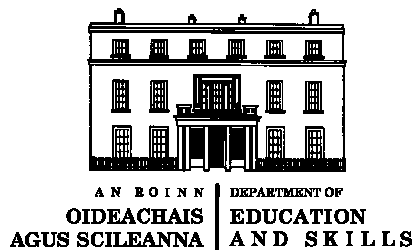
An Roinn Oideachais agus Scileanna

Department of Education and Skills

**Subject Inspection of Science and Chemistry
REPORT**

**Presentation Secondary School
Ballyphehane, Cork
Roll number: 62693K**

Date of inspection: 26 April 2016



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

INFORMATION ON THE INSPECTION

Dates of inspection	25 and 26 April 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 seven class periods• Examination of students' work• Feedback to principal and teachers

MAIN FINDINGS

- The quality of teaching ranged from excellent in some lessons to that which had scope for improvement in other instances.
- A very supportive, caring and respectful atmosphere was evident in the interactions between teachers and students.
- Student learning was of the highest quality in those lessons where students were thinking, doing, discussing and collaborating, with the teacher providing structured support.
- There is strong support for science education, which is offered in all programmes in the school.
- A very good level of co-curricular and extracurricular activities supports students' learning in the sciences.
- A high level of co-ordination and collaboration exists among the science teachers.

MAIN RECOMMENDATIONS

- The school should review its Transition Year (TY) programme so as to ensure that all TY students receive an equally-weighted subject sampling of the three Leaving Certificate science subjects.
 - In the context of the new subject specification for Science, the department should plan for the use of a range of assessment modes, in addition to summative assessment.
-

INTRODUCTION

Presentation Secondary School provides education to girls in the south side of Cork city. The Junior Certificate, Transition Year (TY), established Leaving Certificate, the Leaving Certificate Applied (LCA) and the Leaving Certificate Vocational Programme (LCVP) are offered to the students. The current enrolment is 272 girls.

TEACHING AND LEARNING

- The quality of teaching ranged from excellent in some lessons to that which had scope for improvement in other instances.
- Overall lessons were well structured. Very good quality of lesson structure was observed where whole-class questioning and discussion were seamlessly interspersed with purposeful student activity.
- In almost all lessons, learning intentions were shared at the outset. Very good practice occurred where these were revisited during recapitulation periods, thus promoting students' self-assessment of learning.
- Where best practice was observed, shared learning intentions were differentiated, thus providing sufficient challenge for the more able students and ensuring that the needs of students studying at both higher level and ordinary level were met.
- In some instances, differentiation was also facilitated through the effective use of questioning, which was used to both ascertain previous learning and develop lesson content.
- Most lessons facilitated learning through effective use of students' prior knowledge. In one instance, ascertaining and subsequent use of student prior learning should have been central to the introduction to the topic.
- Where learning was student-centred, students' interest was stimulated and their active engagement with the learning processes was facilitated through structured practical and task work. This is commended. In other lessons, there was considerable scope for development in the use of methodologies to support structured co-operative learning.
- In one instance, students' learning experiences would have been enhanced through student use of information and communication technology (ICT) to research a topic. In this way students' would have been more actively engaged in the learning process and could have made their own notes rather than engaging in note taking.
- The effective use of a student design process in undertaking short concrete activities was observed in one lesson. This approach ensured that a difficult concept was made tangible and that significant learning occurred.
- In the practical lesson observed, students demonstrated a very good level of skill training, with due regard given to the balance and incorporation of theory, practical skill and health and safety issues.
- A very positive learning environment permeates throughout the science department. A very supportive, caring and respectful atmosphere was evident in the interactions between teachers and students. Students' contributions were encouraged and affirmed in all lessons.

- Student learning was of the highest quality in those lessons where students were thinking, doing, discussing and collaborating, with the teacher providing structured support.
- In one lesson, students engaged in peer assessment of written work and provided feedback to their peers. This approach to correction of student work also provided the students with an opportunity to enhance their own learning. There is significant scope for the use of self and peer assessment as a form of feedback in all lessons.
- A very good focus on developing students' understanding, and subsequent use, of subject-specific terminology was observed in lessons.
- Use and development of students' numeracy skills were effectively integrated into lesson activities although on one occasion, an increased use of the investigative approach to science teaching was recommended.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- Strong support for the sciences is evidenced by Science being a core subject in both Junior Cycle and TY. In addition Chemistry, Biology and Physics are offered as part of an open subject choice for Leaving Certificate.
- Weekly timetable provision for the science subjects is very good.
- The school is well resourced for the teaching of the sciences, with two well-equipped laboratories and a demonstration room. Storage and preparation areas adjoin the two laboratories.
- There is a good level of safety equipment in the laboratories. Good work has been done to ensure the safe storage of chemicals. In line with best practice, this should be enhanced by colour coding the chemicals according to storage classifications.
- The health and safety statement has been recently reviewed and this includes risk assessments for the laboratories and preparation area.
- A very good level of co-curricular and extracurricular activities supports students' learning in the sciences and students have participated in science-related competitions. Commendably, student projects are displayed in the corridors, thus acknowledging students' work in addition to providing a scientific environment in the school. The laboratories are also visually stimulating.
- The considerable expertise that exists in the science department should be central to supporting the introduction of the new science specification.

PLANNING AND PREPARATION

- A collegial and collaborative approach is undertaken to subject department planning.
- Meetings support the high level of co-ordination and collaboration that exists among science department members. Building on this good practice, and in the context of syllabus reform, it is recommended that the department put teaching and learning on the agenda of science meetings, with a view to formalising the sharing of effective practices, and discussing how key skills and the nature of science strand might be integrated into other strands.

- The science department has a considerable capacity to undertake formative assessment practices. For example, peer assessment was effectively used in one lesson. Therefore, in the context of the new subject specification for Science, the department should plan for the use of a range of assessment modes, in addition to summative assessment.
- A range of topics is covered in the Transition Year (TY) science modules. However, the science topics are disproportionally focused on Biology. This imbalance should be rectified in future TY science plans, with a parity given to Physics, Chemistry and Biology. In addition to providing a broader scientific education, this would also ensure that students would have sufficient subject sampling in advance of choosing subjects for Leaving Certificate.
- The use of an online platform by one teacher significantly supports students' learning experiences. The use of ICT in such an effective way should be extended across the department.
- The level of teacher preparation for lessons was good or very good in almost all lessons.

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 accepts the report as the final inspection report available for publication and wished to respond formally to the report. The board agrees that the response submitted will be included as an appendix to the published report. The board's response is submitted below.

Appendix

SCHOOL RESPONSE TO THE REPORT

Submitted by the Board of Management

Area 1 Observations on the content of the inspection report

1. With reference to point 8 in Teaching and Learning, student access to an individual computer for research is quite difficult for teachers to implement, due to our one computer room and poor reliability of the internet at present.

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

1. The TY programme has been revised to give equal weighting to all three sciences.
2. A greater variety of assessment modes are now being used in our teaching, including, self-assessment, peer assessment and practical assessment. Teachers look forward to gaining more knowledge and ideas on assessment on receiving Continuing Professional Development (CPD) for the new science programme.