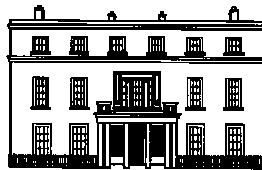


An Roinn Oideachais agus Scileanna
Department of Education and Skills

Subject Inspection of Science and Biology
REPORT

Árdscoil na Trionóide
Athy, County Kildare
Roll number: 68077S

Date of inspection: 26 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 BIOLOGY**

INFORMATION ON THE INSPECTION

Date(s) of inspection	25 & 26 March 2014
Inspection activities undertaken <ul style="list-style-type: none">• Discussion with principal• Discussions with science and biology teachers• Review of teachers' notes, plans and records• Interaction with students	<ul style="list-style-type: none">• Examination of students' laboratory notebooks and copybooks• Observation of teaching and learning in eleven class periods• Feedback to science and biology teachers and principal

MAIN FINDINGS

- The quality of teaching was good in all of the lessons observed and was very good in three instances.
- Students engaged very well with the learning process. They worked hard in a positive and supportive atmosphere and their behaviour was very good.
- Students were appropriately affirmed for their efforts in class. However, written work was less evenly affirmed and the provision of developmental feedback was inconsistent.
- The sciences are well supported in Árdcoil na Tríonóide, time allocation to all science classes is good.
- Teachers and management are commended for their support for an extensive range of extracurricular activities and their promotion of the sciences.

MAIN RECOMMENDATIONS

- It is recommended that teachers agree a common approach and common standards for giving developmental feedback to students on their written work and their laboratory reports.
 - It is recommended that the storage of chemicals be reviewed and brought into compliance with best practice at an early date.
 - It is recommended that the schedules for the delivery of courses are adjusted to facilitate additional common assessments at the end of the first term.
 - It is recommended that the science department identifies those elements of its work that are successful and where deficits exist in order to plan for improvement.
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INTRODUCTION

Árdscoil na Tríonóide is a co-educational school operating under the trusteeship of CEIST. The school has a current enrolment of 807 students, drawn from a wide range of socio-economic and cultural backgrounds. Science is a core subject in junior cycle and Agricultural Science, Biology, Chemistry and Physics are offered as optional subjects in senior cycle. The curriculum of the school's optional Transition Year (TY) includes a module in the sciences.

TEACHING AND LEARNING

- The quality of teaching was good in all of the lessons observed and was very good in three instances. Overall, practice was solid, consistent and student focussed.
- Teachers worked hard to create good quality learning opportunities for students. Students responded by engaging very well with the learning process. They worked hard in a positive and supportive atmosphere in all lessons and their behaviour was very good.
- The balance between whole-class teaching, group work and the provision of individual attention was appropriate to the needs of students and to the material being taught. Lessons were very interactive and a good rapport between teachers and students was evident during all lessons. Students' input was sought and valued. However, on occasion, care should be taken to ensure that the more reticent students are encouraged to engage to a greater extent.
- Lessons were well planned and, for the most part, well structured. Best practice was evident where learning objectives were shared with students at the opening of the lesson and revisited when reviewing learning at the close of the lesson. It is suggested that this practice be implemented as standard across the science department.
- Teaching methodologies were appropriate to the level of knowledge and experience of the students and to the material being taught and good learning was facilitated by the creation of links with students' prior learning and everyday experiences.
- Questioning of students was well used to test recall and understanding through the use of an appropriate mix of lower-order and higher-order questions, with questions being directed to named students in most instances. Very skilful questioning was used in one lesson to elicit information from students in order to develop the lesson topic, thereby giving students ownership of the lesson content.
- Students were appropriately affirmed for their efforts in class and this contributed to the positive atmosphere apparent during lessons. Written work was less evenly affirmed and the best examples of students' written work were seen where good quality feedback was given. It is recommended that teachers agree a common approach and common standards for giving developmental feedback to students on their written work and their laboratory reports.
- Classroom and other resources, for example information and communication technology (ICT) resources, the whiteboard and worksheets, were well used to stimulate students' interest, to illustrate lesson content and to provide students with opportunities to put their learning into practice. Practical work was efficiently and safely managed.
- Students' progress was closely monitored and assessed through a combination of questioning and individual support that was enabled by the good level of teacher circulation that occurred during all of the lessons observed. Homework was given and corrected in all lessons observed.

- Teachers expressed a good level of awareness of the importance of developing students' literacy and numeracy skills. Although elements of good practice were evident, a systematic approach to literacy and numeracy skills development was not apparent and it is recommended that a planned approach be adopted.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- The sciences are well supported in Árdcoil na Tríonóide, time allocation to all science classes is good and there is appropriate allocation of double periods.
- All students have weekly access to a laboratory and the laboratories are very well maintained, well stocked and well used. The adjacent storage and preparation area is well managed. However, it is recommended that the storage of chemicals be reviewed and brought into compliance with best practice at an early date.
- It is recommended that the area immediately outside the laboratories be further developed to promote the sciences and to serve as a resource for students.
- An appropriate system of formal assessment of students and of reporting to parents is in place.
- Continuing professional development has been well supported by school management and availed of by teachers. Teachers and management are also commended for their support for an extensive range of extracurricular activities and their promotion of the sciences.

PLANNING AND PREPARATION

- Teachers were working to common schedules for the delivery of all courses. Common assessments are used at the end of each year for all students not taking state examinations. It is recommended that the schedules be adjusted to facilitate additional common assessments at the end of the first term.
- The science department is very well led by a co-ordinator who has been in place for a number of years. It is recommended that the role of the co-ordinator be reviewed and that the position be rotated every two or three years, to facilitate the development of leadership within the department. In addition, the roles and functions of all members of the department should be examined in order to share the workload of maintaining a busy department.
- A comprehensive analysis of state examination results, which is carried out each year, suggests that there is room for improvement amongst the higher achieving students at higher level in Biology. It is recommended that the science department identifies those elements of its work that are successful and where deficits exist. This information can then be used to set targets for improvement, for all year groups, and concrete steps to achieve these targets can be planned and implemented on an ongoing basis.
- Record keeping by individual teachers is good and sufficient information is recorded to provide a profile of each student and to support the provision of advice to students.

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

The Board of Management is very pleased with the excellent report of the Science and Biology inspection. The Board wishes to express its gratitude to the Science Department for their commitment to the teaching of Science and Biology in the school. They would also like to thank the inspectorate for conducting the inspection and for making some very relevant recommendations.

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 A process has been initiated to review the storage of chemicals in the school to ensure compliance with best practice.
- 2 Common assessments will be introduced for students at the end of the first term next year as recommended in the report. This is in addition to the common assessment already in place at the end of each year.
- 3 The school is actively promoting the “Assessment for Learning” model which will further underpin the good practice evident in the Science department.
- 4 The role of Co-Ordinator for the department will be rotated on a two year basis and a new co-ordinator has already been appointed.
- 5 Ardscoil na Tríonoide will continue to promote the sciences in every way possible and will dedicated the area outside the science laboratories as to serve as a resource for students.
- 6 The school has completed its whole school report in accordance with the requirements under School Self Evaluation and a whole school plan to improve literacy and numeracy skills is in place and will be introduced throughout the school from September 2014.