

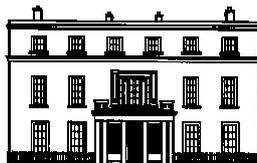
An Roinn Oideachais agus Scileanna

Department of Education and Skills

**Subject Inspection of Science
REPORT**

**Coláiste an Eachréidh,
Baile Átha an Rí, Contae na Gaillimhe
Roll number: 76102K**

Date of inspection: 15 December 2010



**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**

SUBJECT INSPECTION REPORT

This report has been written following a subject inspection in Coláiste an Eachréidh, Athenry. It presents the findings of an evaluation of the quality of teaching and learning in Science, and makes recommendations for the further development of the teaching of this subject in the school. The evaluation was conducted over one day during which the inspector visited classrooms and observed teaching and learning. The inspector interacted with students and teachers, and examined the students' work. The inspector reviewed school planning documentation and teachers' written preparation. Following the evaluation visit, the inspector provided oral feedback on the outcomes of the evaluation to the principal. The board of management of the school was given an opportunity to comment on the findings and recommendations of the report; the board chose to accept the report without response.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

Coláiste an Eachréidh is a post-primary, co-educational school that provides education through the medium of the Irish language. The school was founded in August 2006. The enrolment has shown sustained growth since then. The school authorities expect that the enrolment will, in time, reach approximately two hundred students.

The school offers Biology, Chemistry and Physics in senior cycle and Science is a compulsory subject in junior cycle. While the numbers in the school are small, and this creates limitations when undertaking analysis, it is apparent that the uptake of science subjects is good. Given the size of the school and therefore the teaching resources available to it, the fact that it offers such a wide range of science subjects shows that the school is committed to meeting students' curricular needs, to the greatest extent possible. The time allocated to Science is appropriate and meets with the syllabus guidelines. The option blocks for senior cycle are created based on the students' choices and this is good practice.

Most of the school's accommodation consists of modular, temporary accommodation. Notwithstanding the limitations that can attach to such accommodation, the facilities for science subjects are satisfactory. Very good work has been done in adapting the pre-existing facilities to create a science laboratory and in ensuring that all materials and resources are appropriately stored. The science laboratory is clean and well maintained. It benefits from displays of the students' work as well as scientific charts, posters, glassware and apparatus. Science classes are also taught in a classroom and this is a clean, bright, and well maintained room. All of the rooms in which Science is taught have very good access to information and communication technology (ICT). During the inspection, the school's computer file system was viewed and it was evident that very good work has been done in creating and compiling a very wide range of electronic resources. Currently, the school is working to create a virtual learning environment to which

teachers and students will have access. This project and the work already completed in developing the use of ICT in the school are to be commended.

There is good support for the teachers' continuing professional development. The school encourages and supports the teachers to participate in the Irish Science Teachers' Association and the teachers are facilitated in attending relevant in-service education courses.

The science teachers support the students' participation in a number of extracurricular science-related activities such as Science Week, quizzes, and lectures by visiting speakers. The students' participation in these activities helps to foster their interest in Science and enables them to gain a deeper appreciation of how Science is a part of everyday life.

PLANNING AND PREPARATION

In this school, the manner in which subject planning for Science occurs is wholly satisfactory. While there are formal meetings each term, as there are two teachers of science subjects, most of the communication is informal and occurs regularly throughout the school week. It was evident from discussions with the teachers that their approach to planning is highly collaborative. Their planning work has resulted in a formal subject plan. This document was viewed and it is of very high quality. It was evident from the quality of the planning documentation, the work done in refurbishing and organising the science laboratory, and the development of ICT resources that the science teachers are committed in their work to providing the highest possible quality of education for their students. Examination of documentation and discussion with the teachers showed that they are reflective in their practices. They have identified a number of areas for development. In building on this good work, it is recommended that they prioritise the area that will have the greatest impact on the students' learning and make that area the focus of their work.

Individual planning for each lesson that was inspected was of very high quality. The lessons were well structured, the requisite materials were to hand and had been prepared in advance, the teachers were expert in their subject knowledge, and the planned activities were wholly suitable and successful in advancing the students' learning.

TEACHING AND LEARNING

The quality of teaching and learning was very good in all lessons. Each lesson used a range of teaching methods to capture the students' interest, to present and explain new information, to actively engage the students in learning and to ensure that the students understood and had internalised what they had seen and heard. Good use of ICT was a notable feature of the lessons that were viewed. All lessons took place through the medium of the Irish language. There was a sound emphasis on ensuring that all students had acquired the relevant technical vocabulary for the topic. The explanation of new terms was undertaken without reliance on translation to English.

The students benefitted from high levels of support from their teachers. They were encouraged to ask questions, and where any student appeared to be experiencing difficulty the teacher provided individual support.

In each lesson that was inspected, the quality of classroom management was very good. Established classroom routines that worked well were used in each lesson. The learning activities

were well managed and well paced. The students were motivated by their teachers, encouraged to participate fully in the lessons and challenged to consider the topics that were being studied. Observation of the students at work showed that they were purposeful and focused in their work. They worked well together and it was evident that they were used to working as part of a team.

The classroom atmosphere in each lesson was very positive. There was a relaxed but purposeful learning environment. It was obvious that the teachers and the students enjoyed mutually respectful relations. The students were comfortable in asking questions and their questions were dealt with positively by their teachers. The students' responses and efforts were affirmed by their teachers and this contributed to the positive learning atmosphere.

In addition to observing lessons, the inspector interacted with the students and it was evident that the students were engaged during their lessons and participated well. The students were enthusiastic about their learning and they were eager to pose and to answer questions. They showed a good level of interest in Science and they held favourable attitudes to the subject, resulting from the positive learning experiences that they had enjoyed. The quality of the students' answers to questions posed by their teachers and by the inspector was, on the whole, very good.

ASSESSMENT

The school has appropriate arrangements in place for regularly assessing students' progress and for reporting on this progress periodically to the students' parents. Comparing the school's results in the certificate examinations with the national averages is part of the practice in this school and this practice is supportive of the subject-planning process. Most significantly, students' progress is monitored throughout their schooling, and the school reports that they are supported and encouraged to attain to the highest level possible. The systems that are in place to ensure communication between the school and parents are satisfactory. These systems include formal reports, parent-teacher meetings, and use of the students' diaries to exchange messages.

The science teachers have developed the good practice of awarding marks in the Christmas and summer examinations for the work done by students in recording their experiments, the cumulative work throughout the year, and the quality of students' copybooks. This practice is beneficial as it provides an overall indicator of the students' progress as well as rewarding students for sustained effort throughout their studies. There may be some scope to build on this good practice by including an element of formal assessment of the students' experimental skills. The inclusion of such an element would support the existing practice of assessing and rewarding the write-up of the outcomes of the students' experimental work.

Samples of the students' work were viewed during the inspection. They showed that homework is a standard feature of the students' learning. It is given and corrected regularly, and the copybooks that were viewed contained guiding and affirming comments that the teachers had provided to help the students improve their work. Students had completed a good amount of experimental work, relative to their year group and the time of year. Overall, the use of assessment in this school is highly supportive of the students' learning.

SUMMARY OF MAIN FINDINGS AND RECOMMENDATIONS

The following are the main strengths identified in the evaluation:

- The science staff is professional, dedicated and committed in its work.
- The quality of subject provision and support for the sciences was very good.
- The quality of planning for Science was very good.
- Teaching and learning of a very high quality was observed.
- Assessment is used well to provide good supports for the students' learning.

As a means of building on these strengths and to address areas for development, the following key recommendation is made:

- In building on the good work already completed in drawing up a list of areas for future development, it is recommended that the science teachers prioritise the area that will have the greatest impact on the students' learning and make that area the focus of their work.

A post-evaluation meeting was held at the conclusion of the evaluation when the draft findings and recommendations of the evaluation were presented and discussed with the principal.

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