

An Roinn Oideachais agus Scileanna
Department of Education and Skills

**Subject Inspection of Science, Biology and Agricultural
Science
REPORT**

Coláiste Mhuire
Askeaton, County Limerick
Roll number: 71700F

Date of inspection: 17 April 2012



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, BIOLOGY AND
AGRICULTURAL SCIENCE**

INFORMATION ON THE INSPECTION

Date of inspection	17 April 2012
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 six class periods• Examination of students' work• Feedback to principal and teachers

MAIN FINDINGS

- The standard of teaching and learning was good with some very good practice observed.
- Lessons included a clear statement of learning outcomes at the outset which helped focus students' learning.
- There was skilful preparation and good planning for the lessons with a variety of methodologies utilised including the effective use of Information and Communication Technology (ICT).
- The school has three well-organised and well-presented laboratories to which students have good access.
- Students are awarded credit for their practical activities as part of assessment in the sciences, which is good practice.

MAIN RECOMMENDATIONS

- Teachers should maximise the potential of learning activities to challenge the students, to promote targeted discussions and questioning to aid course integration and to further support assessment for learning.
 - The departmental plan should include a detailed section on practical work which would make reference to students' skills development and a timeframe for same.
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INTRODUCTION

Coláiste Mhuire, Askeaton, is a co-educational post-primary school under the auspices of County Limerick Vocational Education Committee (VEC). At the time of the inspection, the school had an enrolment of 504 students. It offers an optional Transition Year (TY) programme. Both the Leaving Certificate and Leaving Certificate Vocational programme (LCVP) are offered in the school.

TEACHING AND LEARNING

- Overall, teaching and learning were good with some very good practices noted.
- Learning outcomes were shared with students at the start of each lesson, which is good practice. Links were made with prior learning, which is also good practice. In addition, in some lessons, teachers made cross-curricular links for the students which supported student learning.
- Key learning points and keywords were highlighted and recorded in some lessons. The use and explanations of scientific terminology by the teacher was good. These supported the school's literacy focus. The team is encouraged to use these in lesson delivery.
- The teachers exhibited good subject knowledge. In turn student's contributions to the lessons, and questions both asked and answered, showed significant knowledge and understanding.
- A variety of methodologies was used in the lessons observed. 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. Teachers are encouraged to identify further opportunities for differentiated teaching and learning.
- Students engaged with tasks positively and were able to complete assigned work either individually, in pairs or as part of a group. All work was monitored by the teacher. During the lessons, the teachers assessed the students' learning mainly through questioning, observation of group work and short written exercises. Greater use of targeted discussion and the questioning of individuals and groups of students while engaged in learning activities, individually and in groups, are recommended. This form of in-class assessment should challenge the students, help with course integration and inform the teacher of any adaptations to teaching required.
- Teachers are conscientious and hardworking, as was evidenced by the preparation and well-planned approach to each lesson observed. It is acknowledged that considerable time and effort were put into the creation of the resources used in the many tasks observed.
- Classroom management was good and effective in all lessons. Students responded positively and courteously to teachers' instructions and they were in turn positively affirmed. High expectations were aspired to in all lessons observed.
- Homework, which was compatible with the established learning outcomes, was assigned in all lessons. Monitoring of student's practical copies was noted. Follow-through on students' corrections should occur to ensure accuracy. The very good practice of awarding students marks for their practical copies as part of their overall grade in the subject is acknowledged.
- Students' participation in practical activity or engaged with teacher demonstration of practical work was observed in some lessons. Students were very enthusiastic and

enjoyed being engaged with these activities. It is important to ensure students have sufficient time for completion of the assigned activity.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- Whole-school support for the sciences is good. All students study Science in mixed-ability classes. Four science subjects are offered as optional subjects in senior cycle. This is the first year that Agricultural Science has been part of the Leaving Certificate timetable, with the hope that it will be retained in the future. Biology is the most popular senior science subject currently. Subject-option bands for senior cycle are created based on students' initial subject choices, which is positive.
- Four single lessons are allocated weekly for all Junior Science classes. The curriculum guidelines recommend two single lessons and one double lesson weekly. The team should review the existing arrangement and how it impacts on the completion of the practical sections of the course, the development of the enquiry-based approach and student's skill development. The time allocation for Biology and Agricultural Science is within curriculum guidelines.
- Assessment practices are good. Students are assessed on completion of units of work. Formal assessments take place at Christmas, as part of pre-certificate examinations and in summer, with reports issued home after these assessments. Teachers retain records of all assessments completed.
- The school has three well maintained and organised laboratories. Student's access to the laboratories is good, with teachers organising rotation of access when required, which is good practice. The facilities were visually stimulating with much of the display of student origin, which is very positive. This display should be updated regularly to reflect and support current learning.
- There is good evidence of the sharing of resources with the development of a shared folder on the school's computer system.
- Science teachers are diligent in ensuring that their subject knowledge is current. They are members of their subject association and have participated in in-service and continuing professional development (CPD) activities relating to their subjects.
- Students are given the opportunity to participate in extracurricular activities such as the Young Scientist competition and science quizzes. The school also organises a Science Week, attends the national ploughing championship, organises ecology trips and invites relevant visiting speakers to the school or attends lectures and workshops in local third level institutions. All these activities help to promote and support science learning in the school, which is very positive and to be encouraged.

PLANNING AND PREPARATION

- Subject department planning is well organised. Science teachers work in a collaborative and supportive manner and are very committed to the continuing development of their subjects.
- A co-ordinator is appointed which facilitates the running of the department. It is advised that this role be rotated among the science teaching team, which will facilitate skill development among all the team.

- The team have regular formal and informal meetings. Minutes are recorded with actions clearly outlined and defined.
- Comprehensive planning materials in the subjects are available. In addition, the team has begun to engage with self-evaluation and reflection. Team discussions have focused on the use of various methodologies. This ‘what works’ approach which guides the team’s planning and supports effective classroom practice, is commended.
- Building on the planning work to date, it is recommended the departmental plan should include a detailed section on practical work which would make reference to students’ skills development and a timeframe for same.

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 of the school 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 of Coláiste Mhuire welcomes the findings of the Inspector's report affirming good practice in the teaching of Science in the school.

The report also commends the teachers for their commitment to their work, their planning and preparation and their high quality teaching. It praises the variety of resources including the effective use of ICT in the classroom to enhance teaching and learning.

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

Suggestions and recommendations have been noted and are currently being addressed as a means of building on existing strengths. The Science department places a very strong emphasis on the development of practical skills for which it was commended. Specific reference to students' skills development is now part of the subject department plan into the future.

A double period has been timetabled in 1st & 2nd year this year as per curriculum guidelines. The role of subject coordinator will be rotated, with a change this year re same.

The Board would like to thank the Inspector for the professional and courteous manner in which the inspection process was conducted and for the constructive feedback given to school management and the teachers.