

An Roinn Oideachais agus Scileanna

Department of Education and Skills

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

**RockwellCollege
Cashel, County Tipperary
Roll number: 65300D**

Date of inspection: 4 March 2013



**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	4 March 2013
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 five class periods• Examination of students' work• Feedback to principal and teachers

MAIN FINDINGS

- In the main, the quality of teaching and learning observed was of a high standard, with some examples of very good practice.
- Lessons were very well managed by teachers, with affirmation of student effort creating a positive learning atmosphere.
- Good use was made of range of written materials and visual stimuli, including information and communication technology (ICT), to communicate lesson content.
- The science facilities are well organised and maintained by the science team.
- Lessons observed had a high level of preparation and planning.

MAIN RECOMMENDATIONS

- The science team should review how the students' record their practical activities with reference to how the learners' skill development in this area is achieved over time.
 - The science team should review subject plans and move to writing them in the form of learning outcomes, linked to methodologies, assessment strategies, resources and timeframes required.
-

INTRODUCTION

Rockwell College is a co-educational school, situated outside Cashel, County Tipperary. It is both a day and boarding school. At the time of the inspection, it had an enrolment of 501 students. It offers a broad curriculum which includes the Junior Certificate and an optional Transition Year (TY) programme. At senior cycle, students can choose between the Leaving Certificate and the Leaving Certificate Vocational Programme (LCVP).

TEACHING AND LEARNING

- In the main, the quality of teaching and learning observed was of a high standard, with some examples of very good practice. Lesson content, the pace of lesson delivery and time management were good. At the outset of most lessons, the learning outcome was shared with the students. More reference could be made to these outcomes during the lesson and especially at lesson summation. Where there was a definite lesson summation, student learning was consolidated with reference to the initial learning outcomes. This practice should be adopted for all lessons.
- Lessons were linked to students' prior learning and instructions were clear and concise. Attention was given to the development of students' literacy skill, where new words were explained and also written on the board. Learner use of subject-specific terminology was encouraged. To support this further, the laboratories should be utilised to display current key terms and students should record these terms in their notes.
- Teachers adopted a good range of questioning strategies during the lessons. In some lessons, students were challenged to think for themselves and apply their knowledge. The promotion of these analytical and critical-thinking skills is encouraged in all lessons.
- Practical activities and field trips to the college farm observed were well organised and gave students an opportunity for hands on active development of relevant skills and understanding. Active and independent learning was also supported through the use of group work in some lessons. Teachers monitored student tasks, with help and guidance given when required.
- In some lessons, students were encouraged to make their own records of practical tasks undertaken. This is good practice. However, in general the quality of student written work varied both in presentation and content. The science team should look at this and plan how to improve and further develop the learners' skill in written work over time.
- A range of methodologies was used in lessons observed. There was a balance between teacher input and student participation in the lessons. This resulted in positive student engagement with the work. Good use was made of a range of visual and written materials, including ICT, to communicate lesson content. The team should consider greater use of differentiation to support learners in mixed-ability settings.
- The lessons were well managed with clear systems regarding attendance and seating arrangements in place. Classroom management was supported by teacher movement around the room during all lessons observed. A positive rapport was evident between teacher and student with affirmation of student effort a key feature of the lessons observed.
- Previously assigned homework was corrected during the lessons. New homework assigned was designed to reinforce classwork for the learner.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- Science, Biology and Agricultural Science are allocated the recommended contact time as outlined in the respective syllabuses. However, the spread of contact during a day and week is not optimal for one year groups. Management should make every effort to ensure class groups have an even spread of lessons across the week.
- Science is a core subject in junior cycle. Senior cycle students can avail of four science subjects. Subject option bands are appropriately based on student input. The opportunity to sample different subjects in TY helps students to make their choices for Leaving Certificate. There is a high student take-up of the inspected subjects (Biology and Agricultural Science) in the school. In addition, the other senior science subjects are also studied by a significant number of students in the school, which is positive.
- The school has four well organised and maintained laboratories, with associated storage and preparation areas. A demonstration room is also available for use by the science team. All rooms are ICT enabled which supports teaching and learning.
- A safety statement has been devised. This should be reviewed annually with cognisance taken of recently devised official guidelines.
- The professional development of teachers is well supported both through attendance at external events and through the provision of in-school training. Teachers' high level of participation is commended. Procedures to ensure information from these events is disseminated to the whole team should be discussed.
- Assessment and homework policies are in place. The assessment policy makes reference to the use of in-class assessment, homework and external assessment procedures. Revision and examination plans were given to students in some lessons observed. Teachers retain records of all assessments, which is good practice.
- Some work in developing cross-curricular linkages between other subjects and the sciences has occurred. This should continue. Participation in Science Week, various quizzes and field trips and the hosting of visiting speakers all contribute to the learning experience of the student. The commitment of the science team in this regard is acknowledged.

PLANNING AND PREPARATION

- Departmental planning has resulted in the development of programmes of work for each science subject and for each scientific module taught in TY. To develop these plans further, they should be written in the form of learning outcomes that are linked to methodologies, assessment strategies, resources and timeframes required.
- The role of co-ordinator is shared. Formal science department meetings are held at the start of the school year and at various times during the year, with informal meetings ongoing throughout the year. Minutes of formal meetings are recorded, which is positive.
- The team has begun the process of self-evaluation through the review and appraisal of current plans. This good practice should be further explored. The science team should also look at the area of literacy and use keyword lists and word-banks already used in the Sciences as a starting point for this work.
- Individual teacher planning and preparation were of a very high standard in the lessons observed. Resources, including worksheets, handouts, practical and ICT equipment, were sourced and available for use.

- There was evidence of very good record keeping with regard to students' attendance and behaviour, topics and homework completed and achievement in assessments.
-

The draft findings and recommendations arising out of this evaluation were discussed with the 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.

Published November 2013

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 Rockwell College thanks the Inspectorate for the Report received following the inspection of Science, Biology and Agricultural Science. It welcomes the positive observations of teaching and learning, the high level of preparation and planning, and the positive learning atmosphere generated in the classes observed. The Board appreciates the Report's acknowledgement of the high level of participation by the Science teachers in external professional development as much of this is undertaken in the teachers' own time.

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

Rockwell College management has ensured that the issue regarding the spread of lessons across the week has been addressed and that all year groups now have their lessons in Science and science subjects spread across the school week. The recommendation that subject plans should be reviewed has resulted in a re-focusing of those plans on learning outcomes, as recommended. Other subjects within the College have re-examined their subject plans also in light of this recommendation. The recommendation in relation to the recording of practical activities has also resulted in a review of the practices in place with a view to improving the skill development of the pupils.

Many positive practices have been identified in the Report and were detailed at the time of the Inspection. The content of this report will be used to further develop the good practices in place for the benefit of the pupils at Rockwell College.