

**An Roinn Oideachais agus Scileanna**

**Department of Education and Skills**

**Subject Inspection of Science and Biology  
REPORT**

**Royal School Cavan**

**Co Cavan.**

**Roll number: 61080S**

**Date of inspection: 9 April 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**

<b>Date of inspection:</b>	<b>9 April 2014</b>
<b>Inspection activities undertaken</b> <ul style="list-style-type: none"><li>• Review of relevant documents</li><li>• Discussion with principal and teachers</li><li>• Interaction with students</li></ul>	<ul style="list-style-type: none"><li>• Observation of teaching and learning during four class periods (two single lessons and one double lesson)</li><li>• Examination of students' work</li><li>• Feedback to principal, deputy principal and teachers</li></ul>

**MAIN FINDINGS**

- The quality of teaching and learning ranged from good to very good with some excellent practices observed.
- Lessons were well structured with an appropriate focus on learning outcomes.
- Classroom management was very good; all activities were well organised and well managed.
- Clear action plans are in place, based on evident strengths and areas for development.
- A good range of continuing professional development activities has been attended by teachers.

**MAIN RECOMMENDATIONS**

- The good practices identified in teaching and learning, particularly in the area of questioning, should be shared among the science team.
  - Teachers should include more directional and formative feedback to students when correcting notebooks and encourage students to follow up on this advice.
  - Programmes of study in Science and Biology would benefit from linking the existing learning outcomes to methodologies and modes of assessment.
-

## **INTRODUCTION**

The Royal School Cavan is a co-educational secondary and boarding school which caters for a total of 240 students. The school provides the Junior Certificate and Leaving Certificate programmes and includes a compulsory Transition Year (TY) programme.

## **TEACHING AND LEARNING**

- The quality of teaching and learning ranged from good to very good. While some areas for development were noted, there were also instances where practice was excellent.
- The science team demonstrates a consistent approach to lesson planning with sections of the white board allocated to learning outcomes, homework and keywords in every classroom visited.
- Learning outcomes were discussed with students at the outset of every lesson, they were used to structure the lesson and formed the framework for a comprehensive summary at the conclusion of lessons. This is best practice.
- Classroom management was very good. All activities were well organised and well managed. The atmosphere in all lessons was positive and conducive to learning. Student behaviour was exemplary.
- In practical activities, there was a good emphasis on appropriate health and safety procedures and good routines have been established for setting up and clearing away apparatus.
- In all lessons, teachers employed a wide range of teaching methodologies including many active learning methodologies. There was a good focus on assessment for learning in the majority of lessons with the use of traffic lights, show-me boards and think-pair-share activities. This is in line with the science department's action plan.
- A good range of resources was used including information and communication technology (ICT) and particularly commended was the use of photographs and animated diagrams to demonstrate a skill or clarify an abstract process.
- Students worked purposefully and engaged well with the lesson content. Some good questioning strategies were observed with appropriate wait-time. Excellent questioning strategies were observed in one lesson with the incorporation of challenging, higher-order questioning. However, this practice should be more widespread.
- A range of student notebooks, hardback books and folders was examined. The majority were tidy and well maintained with a good record of work. Teachers should encourage all students to maintain good records of their work which can be utilised later as revision aids.
- All notebooks showed evidence of teacher annotation and checking. However, there is scope to provide students with more directional feedback on their work.
- It is good to note that the school self-evaluation practice of the science team includes action planning with a focus on teaching and learning methodologies. Best practice in this area should be discussed and shared among the team.
- All classrooms contained good displays of keywords, subject specific terminology and examples of students' work.

### **SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT**

- There is very good provision and whole-school support for the Sciences. Timetabling of the subjects at all levels is appropriate and teachers are deployed according to their qualifications.
- Science is a core subject at junior cycle level. There is a TY programme which contains elements of all four sciences. At Leaving Certificate level, the school provides Biology, Chemistry and Agricultural Science.
- There is one laboratory which has been recently refurbished and it is maintained to a high standard. There is an adjacent preparation area and chemical store. Chemicals are well-organised and flammables are stored in appropriate cupboards.
- Teachers' continuing professional development (CPD) is well supported by management and a good range of CPD activities has been attended by the science team.
- There is a good focus on health and safety in the science department. A health and safety statement and policy is in place and has been recently reviewed.

### **PLANNING AND PREPARATION**

- There is a very enthusiastic and dedicated science department in the school and the subject is well co-ordinated. The role of subject co-ordinator rotates amongst the science teachers and this is good practice.
  - A good level of collaboration exists among the team members and minutes of subject department meetings indicate that there is a proactive and organised approach to subject planning.
  - A comprehensive subject department plan has been developed which includes details regarding the organisation, planning, teaching and assessment of the subject in the school. The programmes of study detail topics to be completed by each year group in an appropriate timeframe and are linked to learning outcomes. These programmes would be greatly enhanced by the inclusion of methodologies and assessment modes for each topic.
  - Planning for the science modules offered in TY is in line with the key principles of the TY programme and includes a good balance of activities and skills. Programmes of study for TY are detailed and would benefit from the inclusion of modes of assessment for each topic.
  - It is positive that the science department has adopted a reflective approach to subject planning and there is evidence of ongoing review of the programmes of work. An analysis of student achievement in certificate examinations has been carried out over the past five years and attainment is good. Strengths and areas for development have been identified by the science team and an action plan with a good focus on teaching and learning has been compiled including specific targets, a timeframe and success criteria. This is best practice.
-

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 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 the Royal School Cavan acknowledges the commitment and dedication of the Science department and congratulates them on their work.

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

The Board of Management, Senior Management and Science Department welcome the recommendations of this report. All are committed to continuing to improve the teaching and learning experienced by our students. The Science Department are incorporating the recommendations regarding directional and formative feedback when correcting notebooks and are continuing to link methodologies and modes of assessment with learning outcomes in their programmes of study in Science and Biology.