

**An Roinn Oideachais agus Scileanna**

**Department of Education and Skills**

**Subject Inspection of Science and Biology  
REPORT**

**Holy Family Community School  
Rathcoole, Co. Dublin  
Roll number: 91301D**

**Date of inspection: 12 April 2011**



**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**

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**INFORMATION ON THE INSPECTION**

<b>Date(s) of inspection</b>	11 and 12 April 2011
<b>Inspection activities undertaken</b> <ul style="list-style-type: none"><li>• Discussion with principal</li><li>• Discussions with science and biology teachers</li><li>• Review of teachers' notes, plans and records</li><li>• Interaction with students</li></ul>	<ul style="list-style-type: none"><li>• Examination of students' laboratory notebooks and copybooks</li><li>• Observation of teaching and learning in thirteen class periods</li><li>• Feedback to science and biology teachers and principal</li></ul>

**MAIN FINDINGS**

- Teaching in the lessons observed was of a uniformly high standard and, in two instances, was of a very high standard.
- The teaching strategies and methodologies used were appropriate to the material being taught and sensitive to the level of the students.
- When using information and communication technology (ICT), it is commendable that teachers retained the flexibility to switch to alternative methodologies to emphasise a point or provide clarification.
- Students' laboratory notebooks were mostly of a high standard, in particular where developmental feedback was provided.
- Teachers and management are commended for their commitment to supporting an extensive range of science-related extracurricular activities, involving students at all levels.
- An effective science department is in place, characterised by a high level of collegiality and co-operation, and ably co-ordinated by one member.

**MAIN RECOMMENDATIONS**

- Sharing learning objectives with students at the opening of lessons and reviewing these at the close of lessons should be adopted as standard practice across the science department.
- Teachers should agree a common standard for monitoring students' written work and providing supportive feedback.
- It is recommended that teaching schedules in science planning documents are broken down into portions of content for delivery on a termly basis, as has been done for Biology, to enable more detailed monitoring of progress.
- It is recommended that the science department members build on their annual detailed analysis of state examination outcomes by setting targets for improvement and by agreeing concrete steps to achieve these targets on an ongoing basis.

## **INTRODUCTION**

Holy Family Community School, Rathcoole offers Science as a core subject in junior cycle. Biology, Chemistry and Physics are offered as optional subjects in senior cycle and are also on the curriculum of the school's optional Transition Year. The school has a current enrolment of 772 students who come from a wide variety of social and cultural backgrounds.

## **TEACHING AND LEARNING**

- Teachers were well prepared and taught with enthusiasm resulting in the good quality teaching that was evident in all the lessons observed. Teaching was of a very high quality in two lessons.
- Most lessons were well structured, as exemplified by sharing lesson objectives with students at the start of lessons, providing students with an appropriate sequence of learning opportunities and then reviewing the successful attainment of the objectives at the close of the lessons. It is recommended that this structure be adopted as standard across the science department.
- New material was appropriately introduced and developed in all lessons observed. Students were then given an opportunity to put their new learning into practice and learning was then summarised and reviewed.
- The teaching strategies and methodologies used were appropriate to the material being taught and sensitive to the level of the students. There was a good variety of methodologies used in each lesson and changes were seamless. Teacher-led sections of lessons were well balanced with student-centred phases and, in most instances, students were kept active and busy at all times.
- A variety of questioning styles was used effectively to check recall and assess the level of students' understanding of topics. In two classrooms visited, a combination of good quality questioning, the classroom board and ICT was used very effectively to develop the lesson content, based almost entirely on the input of the students. In one lesson, it is commendable that students' input was recorded on the board, placing a high value on their contributions, giving them greater ownership of the lesson and reinforcing the learning.
- In making appropriate use of ICT to support students' learning, it is commendable that teachers retained the flexibility to respond to students' needs by switching to alternative methodologies, as needed, to emphasise a point or provide clarification.
- Practical work was efficiently and safely managed, with teachers' leading by example in wearing eye protection, when warranted. Clear instruction was provided to students in advance and, in the best examples, an investigative approach was fostered.
- Students' laboratory notebooks were mostly of a high standard, in particular where developmental feedback was provided. It is recommended that teachers agree a common standard for monitoring students' written work and providing supportive feedback.
- Students' progress is monitored and assessed effectively by a range of modes, including questioning, class assessments, homework and examination questions.

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

- The time allocation for Junior Certificate Science is in line with syllabus recommendations. Class structure is based on a combination of banding and streaming

with the purpose of creating flexibility to cater for the needs of a wide range of student abilities.

- The uptake of Biology in senior cycle is very strong and the time allocated is in keeping with syllabus guidelines. In general, two higher level and two mixed-ability class groups are formed in both fifth and sixth year.
- Teachers and management are commended for their commitment to supporting an extensive range of science-related extracurricular activities, involving students at all levels.
- An appropriate system of formal and informal assessment of students' progress and of reporting to parents is in place and reports are issued twice each year. Formal parent-teacher meetings are held once each year for every year group and additional contact with parents is as required.
- The laboratories are well stocked, well maintained and fit for purpose. All students have weekly access to a laboratory. The ICT infrastructure is good with data projectors and laptop computers in each laboratory. Broadband access and access to personal and shared folders on the school's central server is also available in each laboratory.
- Teachers are appropriately qualified and deployed. They have a wide range of expertise which is well used to support students' learning. Extensive continuing professional development opportunities have been supported by school management and availed of by teachers.

#### **PLANNING AND PREPARATION**

- An effective science department is in place, characterised by a high level of collegiality and co-operation, and is ably co-ordinated by one member. Each member takes responsibility for specific functions, thereby distributing the workload of running a large and active department.
  - A detailed planning document describes the manner of operation of the science department. Topics to be taught in each year of the junior cycle are listed, facilitating common assessments at the end of first and second year. Topics in Biology for fifth and sixth year have been listed on a termly basis. It is recommended that the teaching schedules for Science are subdivided to list content to be taught on a termly basis, to enable more detailed monitoring of progress.
  - It is recommended that the science department members build on their annual detailed analysis of state examination outcomes by setting targets for improvement and by agreeing concrete steps to achieve these targets 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.
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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 welcomes the very positive inspection report. The Board is pleased with the strengths identified. It is particularly pleased that the teaching was of a uniformly high standard and that in two out of the seven lessons observed it was of a very high standard.

The Board is examining the recommendations with a view to their implementation.

### **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 Science Department aims to ensure that the current practice of sharing learning objectives with students at the opening of lessons and reviewing these objectives at the close of lessons becomes standard practice.
- The implementation of an agreed common scheme for monitoring students' written work and providing supportive feedback is under discussion by the Science Department.
- A common term schedule is being implemented for First Year Science. This will be extended to all Junior Certificate Science groups.
- The Science Department have extended the annual detailed analysis of state examination outcomes to include a three-year rolling analysis as recommended by the Inspector. The targets for further improvement and concrete steps to achieve them are under discussion.