

**An Roinn Oideachais agus Scileanna**

**Department of Education and Skills**

**Subject Inspection of Science & Physics  
REPORT**

**Saint Joseph's Secondary School  
Foxford, County Mayo  
Roll number: 64640W**

**Date of inspection: 20 September 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 AND PHYSICS**

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**INFORMATION ON THE INSPECTION**

<b>Date of inspection</b>	20 September 2013
<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 six class periods</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 in Science and Physics was good with very good use of an investigative approach to teaching and learning observed in one lesson.
- The lessons were well prepared and very good use of information and communication technology (ICT) enhanced student learning.
- Homework is being set and monitored in all lessons and some formative feedback was seen in samples of students' work.
- The school has two science laboratories and a demonstration room and the vast majority of the school's science lessons take place in these rooms.
- Science is not a core subject at junior cycle, but most students choose to study it.
- Planning for Science and Physics is well advanced and the science department is continually adding to the large number of resources it has already stored.

**MAIN RECOMMENDATIONS**

- Teachers should ensure that they provide students with a clear statement of learning outcomes which remain accessible throughout the lesson to help focus students' learning.
- Greater use should be made of formative feedback as a means of encouraging students to reflect on and to improve the quality of their work.
- The science department should reorganise the large amount of planning documentation it has gathered into more simplified and efficient schemes of work.

## **INTRODUCTION**

St Joseph's is a co-educational voluntary secondary school under the trusteeship of the Catholic Bishop of Achonry. At the time of the inspection it had an enrolment of 376 students. Science is an optional subject in junior cycle and is compulsory during the optional Transition Year (TY) programme. The school also provides the Leaving Certificate Vocational Programme (LCVP) in addition to the Established Leaving Certificate.

## **TEACHING AND LEARNING**

- The quality of teaching and learning in Science and Physics was good overall. In one Science lesson, very good use of an investigative approach to teaching and learning was observed. The subject department should strive to incorporate this very good practice into as many lessons as possible.
- Learning outcomes were shared with students in some of the lessons observed. The science department has detailed learning outcomes in their planning documents and teachers should ensure that these outcomes are shared during the lesson to enable students to focus and reflect on their own learning.
- The lessons were very well prepared and very good use of ICT resources enhanced student learning. The high level of preparation by the teachers allowed for a good sequence and structure to the lessons.
- Classroom management was excellent and a very good student-teacher rapport was evident. Students were affirmed by the teachers and this helped create a positive environment. The laboratories in which the lessons took place were print-rich and contained stimulating posters as well as the students own work.
- In the practical lessons visited students prepared and cleared up the equipment that they had used. Students worked actively and collaboratively in small groups to complete tasks. The good practice of enabling students to be active and co-operative learners should be extended to as many lessons as is applicable and particularly in theory classes.
- Good use of questioning was observed in all lessons. Teachers enabled students to provide answers through mostly directed and some higher-order questioning. The good practice of student note making, rather than note taking, was observed in most classes. Greater use of higher order questioning or student discussion is recommended as a useful assessment for learning strategy.
- Differentiation strategies were evident throughout the lessons. Teachers moved around the classroom providing students with individual assistance where needed. Groups of mixed ability were formed during group work, however teachers should be mindful of providing work that is challenging to all students especially the high achievers.
- Homework was assigned in all lessons. There was evidence that students' homework was monitored by their teachers. Some use of formative feedback was observed. It is recommended that greater use be made of written formative feedback, particularly in students' practical work, to ensure that graphs are drawn and that correct procedures for experiments are written up.
- Keywords were integrated into the lessons observed. The teachers used them as recapitulation strategies in the main. The teachers should place even more emphasis on these keywords throughout the lessons in order to support the school's literacy strategy.

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

- There is good support at a whole-school level for the science subjects. While Science is an optional subject for students at junior cycle, most students select it each year group. Physics and Biology are currently the two science subjects being offered by the school as part of the Leaving Certificate programme. The school has also started to provide Chemistry to its students by means of an internet link with a school nearby. It also hopes to add Agricultural Science to its senior cycle programme next year. The optional TY programme provides students with a range of experience across almost all the sciences. It is recommended that a module in Chemistry should be included in the TY programme.
- Timetabling arrangements for Science are good. Management should review the practice of providing two double periods that occurs in some year groups and replacing one of these with two single periods to ensure that students' contact with science is more spread throughout the week.
- Through teacher collaboration, all classes have very good access to the two well-presented laboratories in the school for the completion of practical work. Almost all science lessons occur in these two laboratories.
- Management and teachers ensure that the science department is well-resourced. ICT facilities in the laboratories are good.
- The school has a health and safety policy which at the time of the inspection was at review stage. A flame proof cabinet is urgently needed however for the storage of flammable materials.

## **PLANNING AND PREPARATION**

- A subject co-ordinator is appointed on a voluntary basis and is tasked with organising and chairing meetings and ordering materials and resources for the science department. This role is rotated on a systematic basis thus giving all members the opportunity to benefit from the experience.
  - The department's record-keeping is good. Formal meetings are held each term and as the science department is small it is able to have regular informal meetings. Analysis of student results and attainment is undertaken each year and this is used to guide future subject planning.
  - Planning for Science and Physics is well advanced and the science department is continually adding to the large number of resources it has already stored. The science department should reorganise the large amount of planning documentation it has gathered into more simplified and efficient schemes of work.
  - All year groups are assessed at Christmas and summer and teachers work closely in accordance with their plans to try and ensure that each year group has covered the same material. Management and teachers should consider trying to place common assessments at these times where possible.
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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.

*Published January 2014*

# **Appendix**

**SCHOOL RESPONSE TO THE REPORT**

**Submitted by the Board of Management**

**Area 1 Observations on the content of the inspection report**

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

Arrangements have been put in place for the installation of a flame proof cabinet.