

**An Roinn Oideachais agus Scileanna**

**Department of Education and Skills**

**Subject Inspection of Science, Biology, Anatomy and  
Physiology  
REPORT**

**Ó Fiaich College  
Dundalk, County Louth  
Roll number: 71770D**

**Date of inspection: 9 February 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,  
ANATOMY AND PHYSIOLOGY**

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**INFORMATION ON THE INSPECTION**

<b>Date(s) of inspection</b>	8 and 9 February 2012
<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 seven class periods</li><li>• Examination of students' work</li><li>• Feedback to principal and teachers</li></ul>

**MAIN FINDINGS**

- The quality of teaching and learning ranged from good to very good in almost all instances. However, some areas for development were identified.
- Detailed preparation for lessons included a good range of well-chosen resources.
- Concepts were explained with clarity and students were generally on task.
- Literacy skills were supported through a focus on key words and subject-specific terminology.
- The science team benefits from the good Information Communications Technology (ICT) facilities in the school.
- Relevant continuing professional development (CPD) courses have been attended by the science team and are supported by management.

**MAIN RECOMMENDATIONS**

- In order to engage all students, good practices in differentiation should be discussed and shared by the Science team with a view to their more widespread use in lessons.
  - Management should look at how Science can be made available to the wider cohort of students in the school.
  - In timetabling for next year, management should prioritise continuity of teachers and try to obtain a more balanced spread of classes throughout the week.
  - At the next review of the programmes of work for both junior cycle Science and senior cycle Biology, resources and details of modes of assessment used should be expanded upon.
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## **INTRODUCTION**

Ó Fiaich College operates under the management of County Louth Vocational Education Committee (VEC) and comprises a post-primary college and an Institute of Further Education that provides Post Leaving Certificate (PLC) courses, mostly at level 5. The school participates in the Delivering Equality of Opportunity in Schools (DEIS) action plan for educational inclusion. The second level school has a current enrolment of 355 students and there is a total of 969 students enrolled in the college. The school offers the full range of programmes which includes the option of Transition Year (TY) for some students.

## **TEACHING AND LEARNING**

- In almost all lessons visited the quality of teaching and learning ranged from good to very good. However, some areas for development were identified.
- In all lessons visited, the learning outcomes were shared and discussed with students at the outset. It is noteworthy that in some instances, learning outcomes were reinforced during the lesson and used in recapitulation at the end.
- Teachers had gone to great lengths to prepare for lessons and a good range of resources had been set out in advance. ICT was used in all lessons visited and included the use of well-designed PowerPoint presentations and photographs which helped to put the lesson content into everyday settings.
- Concepts were explained with clarity and students were generally on task. While there were instances in lessons where a small group of students were off-task, these were minimised through the use of appropriate strategies. It is acknowledged that there have been some inputs on differentiation at whole school level. Good practices in differentiation should be discussed and shared at meetings of the Science department with a view to their more widespread use in lessons.
- Literacy skills were supported through a focus on key words and subject-specific terminology. There is scope for students to use notebooks in order to build up a glossary of these terms.
- Work recorded in practical notebooks was of varying standards and reflected the mix of abilities present in the lessons. Effective teacher annotations and comments were observed. Best practice was observed where these annotations were formative and directional. Teachers, as a routine practice, should encourage students to follow up on these directions and comments.

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

- In first year, Science is provided as an optional subject for students in bands A and B. Management should look at how science can be made available to the wider cohort of students in the school. There is scope to include it for students in Bands C and D as part of the Junior Certificate School Programme (JCSP) programme provided.
- The school provides a TY programme. Management reported that science has been offered as an option in the TY programme. However, at present, no students have taken this option. As the TY programme is usually populated by students from the JCSP, it is expected that as Science is introduced to the JCSP, this uptake should improve.

- Biology is available to senior cycle students and, at PLC level, Anatomy and Physiology is provided as part of courses awarded by the Further Education and Training Awards Centre (FETAC) and the Irish Training and Education Centre (ITEC). The number of class periods allocated to the sciences is in line with guidelines. However, management should review the spread of classes throughout the week, in particular, the two double periods on consecutive days for first-year science classes and the allocation of triple periods in some of the PLC courses.
- Science is taught by three teachers in the junior cycle and there are two teachers of Biology in the senior cycle. It was observed from students' copybooks that there has been no continuity of teachers in the junior cycle over the past few years. Management should, where possible, maintain the same teacher with a class group through the junior cycle.
- ICT facilities are very good. One laboratory has an interactive white board while all other classrooms visited had a data projector and PC. The school is in the process of developing the interactive site MOODLE.
- There are two laboratories in the main building and one in the PLC building. These are tidy and well maintained with a good level of resources. However, a flammables cabinet in one laboratory should be relocated to the adjoining preparation area. At present a number of teachers are timetabled to use the laboratories for non-science related subjects. It is recommended, as resources become available, that this practice should cease.
- Relevant continuing professional development (CPD) courses have been attended by the science team and are supported by management. The most recent in-service course has been in the use of sensors in Science.
- All classes sit formal assessments at Christmas and summer. It is good to note that a percentage of the grade for these examinations is allocated to the standard of the mandatory practical books.

#### **PLANNING AND PREPARATION**

- Collaborative subject department plans were observed for junior certificate Science and senior cycle Biology. All plans included an overview of the course which could be disseminated to students in their examination years. Detailed planning was also provided for PLC Anatomy and Physiology.
- Programmes of study for junior Science included details of learning outcomes in appropriate timeframes. The programmes of work for senior Biology should be reviewed to include the learning outcomes for students. While some modes of assessment are outlined in the programmes, there is scope to include more detail regarding modes of assessment used.
- Numerous, high quality resources were observed during the evaluation. Some were in hard copy while a greater number were observed on the school server. Details of these resources should also be included in the programmes of work for both junior cycle Science and senior cycle Biology.
- Formal minuted planning meetings of the Science department are held. At present the duties of Science co-ordinator are shared among the team. The rotation of this responsibility annually would help support communication and aid capacity building within the science department.

- It is good to note that a review and evaluation of each programme of study is carried out by the Science teachers at the end of each school year. This good practice should be expanded by the setting of long-term targets for the development of Science in the school.

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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 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 October 2012*

# **Appendix**

**SCHOOL RESPONSE TO THE REPORT**

**Submitted by the Board of Management**

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

The science department met to discuss and share both resources and methodologies in order to facilitate the differentiation required for various classes. It was agreed that a member of the Science Department would chair these meetings and fulfil the role of head of department. The head of department post will be rotated annually within the department.

A review of the programmes at junior and senior cycle is taking place to include the learning outcomes for senior biology, to identify, match and list resources available and to identify any resources required at both junior and senior level. Differentiated learning and assessment for learning have been agreed as priorities.

The Science Department has requested school management to make adjustments to time-tabling for senior cycle science classes. This academic year (2012/2013) junior science has been offered to a wider group of first year students. Science has also been offered to transition year students.

### **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 following is currently being implemented in the light of the subject inspection:

- A head of department position will be rotated annually within the department.
- A review and refocus of the senior biology programme to include learning outcomes and to identify, match and list resources available and to identify any resources required.
- A review and refocus of the junior science programme to also identify, match and list resources available and to identify any resources required.
- As part of both junior and senior programmes a review has commenced to identify and expand the modes of assessment used.

