

**An Roinn Oideachais agus Scileanna**

**Department of Education and Skills**

**Subject Inspection of Science and Biology  
REPORT**

**Deele College  
Raphoe, County Donegal  
Roll number: 71230R**

**Date of inspection: 30 September 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**

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**INFORMATION ON THE INSPECTION**

<b>Date of inspection</b>	30 September 2014
<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 the science department ranged from good to very good with instances of excellent practice.
- Meticulous planning was in evidence and the planned learning outcomes were used to give structure and direction to lessons.
- Teachers made good use of everyday examples to explain abstract concepts and linked lesson content to prior learning where possible.
- In all lessons the classroom atmosphere was positive, conducive to learning, and there was good affirmation of student work taking place.
- There is a high level of collaboration among the science team, particularly evidenced in the new subject-department planning template which has been recently developed.
- Some very good differentiated methodologies were observed in lessons.

**MAIN RECOMMENDATIONS**

- The science team should continue to progress the development of the programmes of study for Leaving Certificate Biology.
  - The sharing of good practices in teaching and learning should form part of the agenda of all meetings of the science team.
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## **INTRODUCTION**

Deele College provides the full range of Department of Education and Skills programmes to meet the learning needs of the current enrolment of 544 students. This includes an optional Transition Year. The school is included in the Department's Delivering Equality of Opportunity in Schools (DEIS) action plan for educational inclusion. This co-educational college operates under the trusteeship of County Donegal Education and Training Board (ETB).

## **TEACHING AND LEARNING**

- The quality of teaching and learning in the science department ranged from good to very good with instances of excellent practice.
- Teachers had planned meticulously for their classes. Learning outcomes to be achieved were outlined to students at the outset of lessons. They were clarified and explained by the teacher. This is good practice. Excellent practice was observed where the learning outcomes were used to structure the lesson, revisited during a learning check, and used in conjunction with a range of differentiated methodologies, to consolidate learning.
- In all lessons teachers identified a manageable number of keywords. Students were encouraged to use these words in both their oral and written responses during the lesson. This good practice is in line with the school's plans for the development of students' literacy skills.
- Teachers made good use of everyday examples to explain abstract concepts and linked lesson content to prior learning. It is noteworthy that the science team had selected this as a strategy to be used where possible in lessons as part of their action plan for methodologies.
- Teaching was clear and concise. Teachers demonstrated a high level of competence and skill. Questioning strategies were varied and adapted to challenge students to think for themselves.
- A good range of resources was utilised including visual stimuli, Information Communication Technology (ICT), posters and worksheets. All activities were well structured and well managed. Students were given the opportunity to work in pairs and small groups, discussion was encouraged and teachers brainstormed feedback on the whiteboard. Best practice was observed where lessons were structured to give opportunity for a learning check to take place at intervals.
- Students worked purposefully, they were attentive and engaged with the lesson content. They showed a good understanding of concepts and facts taught. Teachers monitored students' work with an appropriate level of intervention. Some very good differentiated practices included higher-order and lower-order questioning where appropriate, tasks which were differentiated for input and output as well as some differentiated worksheets.
- Very good assessment-for-learning practices were observed in lessons where teachers provided students with directional feedback on their work in both group settings and on a one-to-one basis. These good practices should be shared among the science team.
- Hardback books and copybooks were generally tidy and well maintained. They contained an appropriate volume of work.
- In all lessons the classroom atmosphere was positive, conducive to learning, and there was good affirmation of students' efforts and contributions taking place.

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

- Science is a core subject in the junior cycle with a very good allocation of class periods. Science is available in Transition Year on a modular basis and Biology, Physics and Agricultural Science are provided at senior cycle.
- The school has two laboratories which are linked by a tidy and well-organised preparation area. The adjacent chemical store is secure and chemicals are stored appropriately. Provision for Science will be significantly enhanced in the school by an extension project with increased facilities, due to begin this school year. Refurbishment of the existing laboratories is included in this project. This will help alleviate the high demand for laboratory access in the school and the restrictions due to storage of science equipment and materials.
- All classrooms are well resourced with regard to ICT facilities and it is good to note that these are used in both planning and in lesson delivery.
- The school has a health and safety statement which was reviewed at the end of the previous school year.
- Teachers are deployed according to qualifications and they have accessed a good range of subject-specific continuing professional development in recent years.

## **PLANNING AND PREPARATION**

- There is a strong ethos of collaboration among the science team. It is good to note that the science department members have been working on the development of a new subject-department planning template and have worked with other subject departments in the school in the collaborative development of this instrument.
- Detailed long-term and medium-term planning documentation for Junior Certificate Science was made available at the time of the evaluation and a similar format is being developed for Leaving Certificate Biology plans. This approach is encouraged. All resources are shared using Google drive which is good practice.
- The science team members meet regularly and minutes of meetings are recorded. They have put in place an action plan for the sharing of methodologies and resources. This is very good practice and can be developed further by the inclusion of SMART (strategic, measurable, attainable, realistic and time-bound) targets as part of the school's self-evaluation practices. The science team also analyses student participation and attainment in certificate examinations which is good practice.
- The good practices observed in teaching and learning should be documented and shared at meetings of the subject team.

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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; a response was not received from the board.

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