

**An Roinn Oideachais agus Scileanna**

**Department of Education and Skills**

**Subject Inspection of Science and Biology  
REPORT**

**St Mary's Diocesan School  
Beamore Road, Drogheda, County Louth  
Roll number: 63841E**

**Date of inspection: 5 December 2014**



**AN ROINN | DEPARTMENT OF  
OIDEACHAIS | EDUCATION  
AGUS SCILEANNA | AND SKILLS**

**REPORT**  
**ON**  
**THE QUALITY OF LEARNING AND TEACHING IN SCIENCE AND BIOLOGY**

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**INFORMATION ON THE INSPECTION**

<b>Dates of inspection</b>	4 and 5 December 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 seven class periods</li><li>• Examination of students' work</li><li>• Feedback to deputy principal and teachers</li></ul>

**MAIN FINDINGS**

- The quality of teaching and learning ranged from good to very good with instances of excellent practice.
- Teachers had planned meticulously for their lessons.
- The atmosphere in all lessons was positive and respectful and student behaviour in classes was very good.
- Very good practices in the use of active teaching methodologies, appropriately selected resources, and the reinforcement of keywords was observed in lessons.
- Homework is regularly set and checked.
- Science is a core subject and is taught in a mixed-ability setting.

**MAIN RECOMMENDATIONS**

- Good practices identified in teaching and learning should be shared among the science team.
  - The school health and safety statement should be updated.
  - The programmes of study should be expanded to include learning outcomes linked to methodologies, activities and resources.
  - The long-term plans should now be used as the basis for common programmes of study.
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## **INTRODUCTION**

St Mary's Diocesan school is a voluntary secondary school catering for 810 boys. The school provides an optional Transition Year (TY) programme which contains modules of all four science subjects.

## **TEACHING AND LEARNING**

- The quality of teaching and learning ranged from good to very good with instances of excellent practice. Teachers had planned meticulously for their lessons.
- Lessons were well structured and had a clear focus. The learning outcomes of the lessons were shared with students at the outset. Best practice was observed where learning outcomes were first discussed with students and used to structure the lesson. In some instances the learning outcomes were revisited at the end of the lesson to provide a comprehensive consolidation of learning.
- The atmosphere in all lessons was positive and respectful. Student behaviour was very good. Well-established routines were evident in practical lessons with good attention to health and safety procedures. In many cases, there was a good focus on fair-testing and developing a hypothesis and these are excellent practices.
- Teachers made commendable efforts to ensure that explanations were clear. Very good use was made of higher-order questioning strategies and students were encouraged to analyse, apply and critically appraise content. Best practice was observed where students were allowed sufficient time to think and develop their responses.
- Good use of active teaching methodologies was observed where students were set paired tasks and small group work. There was an appropriate balance between teacher inputs and student activities and this is good practice.
- A good range of resources was utilised including very good use of information and communications technology (ICT) to enhance understanding and illustrate complex concepts.
- In a number of lessons, very good attention was devoted to ensuring that students were familiar with and used the correct subject-specific terminology. Teachers placed a good focus on keywords and students were encouraged to use them in their interactions.
- Some very good practices were observed in assessment for learning including placemats and muddiest point. These good practices should be shared among the science team and their more widespread use is recommended.
- Students showed good understanding of the concepts taught. They engaged well with the lesson content. Their progress in class is monitored predominantly through oral questioning and the checking of written work. Homework is regularly assigned and corrected. Students should be encouraged to follow up on all corrections made.

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

- Science is provided in a mixed-ability setting in Junior Cycle and is a core subject. The allocation of class periods is appropriate and management should strive to avoid classes split between two teachers. At senior cycle, Biology, Chemistry, Physics and Agricultural Science are provided.

- The school has three laboratories and one demonstration room. All are linked to a preparation room and chemical store. These rooms are tidy and well maintained and resources are well organised. It is good to note that a planned extension to the school will provide two more laboratories by September 2015.
- Appropriate health and safety equipment was available in all laboratories. The school has a health and safety statement which should be updated with input from the science team.
- Teachers have been deployed in line with their qualifications. Members of the science team have attended a range of continuing professional development activities and information has been disseminated appropriately.

#### **PLANNING AND PREPARATION**

- The science teachers work well together as a team and have adopted a good collaborative approach to the planning and organisation of Science in the school. A subject co-ordinator is in place and this role is rotated among the team on a biennial basis.
- Regular meetings of the science team are held and minutes show details of ordering stock, allocating students to classes, ICT and common end-of-year examinations. It is good to note that long, medium, and short-term action plans were also included as well as records of discussions around student achievement. This is good practice
- Subject planning folders provided a good overview of how the sciences are organised in the school. They contained a list of topics to be taught in each year of Junior Certificate Science and Leaving Certificate Biology programmes. These long-term plans should now be used as the basis for common programmes of study.

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The draft findings and recommendations arising out of this evaluation were discussed with the deputy principal and subject teachers at the conclusion of the evaluation. The board of management of the school was given an opportunity to comment on the findings and recommendations of the report; the board chose to accept the report without response.