

An Roinn Oideachais agus Scileanna

Department of Education and Skills

**Subject Inspection of Science
REPORT**

**Merlin College,
Doughiska, Galway
Roll number: 76096S**

Date of inspection: 5 March 2015



**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

INFORMATION ON THE INSPECTION

Date(s) of inspection	5 March 2015
Inspection activities undertaken <ul style="list-style-type: none">• Review of relevant documents• Discussion with principal and teachers• Interaction with students	<ul style="list-style-type: none">• Observation of teaching and learning during four class periods• Examination of students' work• Feedback to principal and teachers

MAIN FINDINGS

- Very good quality teaching was observed in all lessons.
- Very good quality subject planning was evident with very significant work accomplished in setting up the science facilities, which provide a suitable and stimulating learning environment.
- Individual planning for lessons was of a very high quality.
- Students were capable, enthusiastic and engaged in their learning, and they demonstrated very good quality of answering.
- Whole-school supports for Science are supportive of the high-quality of teaching and learning which was observed.

MAIN RECOMMENDATIONS

- In further supporting the school's current provision for Science, where all class groups but one have a double lesson period weekly, it is recommended that the school explore ways of ensuring all class groups have a double lesson period for Science each week.
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INTRODUCTION

Merlin College, Doughiska, Galway is a co-educational post-primary school under the trusteeship of Galway and Roscommon Education and Training Board. The school's total enrolment is 168 students. The school is established for the last two years and it currently provides the Junior Certificate programme.

TEACHING AND LEARNING

- In all lessons observed a variety of suitable teaching methodologies was used. There were numerous examples of very good practice in the use of the different methodologies. For example, questioning was used very well, with use of a variety of lower-order and higher-order questions, appropriate wait time and differentiated questions according to the students' needs. Concepts were clearly explained by the teachers. Classroom activities were focused and purposeful in aiding students' learning. There was good use of group work with, for example, clear assignment of roles and responsibilities.
- All lessons had a positive atmosphere which made for a pleasant learning environment for the students. The students were addressed by name and their contributions were affirmed by their teachers. There was evident mutual respect among students and teachers.
- The physical environment in the laboratories was very pleasant as they were clean, bright, well maintained and had samples of student work on display. Classroom management was very good with clear class routines in use. These factors contributed to an environment that was positive and supportive of students and their learning needs.
- In undertaking practical work, the students worked very well together and it was clear that they were familiar with laboratory procedures. The practical work was completed safely and with appropriate regard for health and safety practices. Students displayed competence in laboratory skills when completing their practical work. They worked together in a cooperative and focused way. Good scientific practice was observed throughout lessons with, for example, students being encouraged to note their observations as they worked. It was clear that the purpose and conduct of the practical work contributed meaningfully to the students' learning.
- Samples of the students' written work were viewed. These contained good quality work in respect of the practical work that students had completed. There was very good use by the teachers of supports such as feedback sheets and a "recipe for success" sheet. Commendably, these supports, which involved the teachers monitoring and supporting the students' work, helped students to maximise their learning.
- It was evident from the students' copybooks, their homework journals and from speaking with them that homework was a regular feature of their learning experiences. The quality of the work that was viewed was good and it was clear that the homework supported the students' learning.
- In observing the students at work it was noted that they were engaged by and enthusiastic about Science. They listened attentively during lessons and they participated fully in all lesson activities. In discussing their learning with them it was clear that the students were articulate and competent in the topics under study. In particular, both in discussions with the inspector and in responding to questions from their teachers, they gave very good quality answers.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- The time allocated for Science meets with the syllabus guidelines with appropriate time available to engage in experimental work. The deployment of this time is optimal with just one exception where one class group has four single periods weekly rather than one double and two single periods. To achieve an optimal deployment of time it is recommended that the school explore ways of ensuring all class groups have a double lesson period for Science each week.
- The resources that are in place for Science are appropriate. The storage and preparation areas are wholly suitable. Merlin College is newly established and this presents a number of challenges in terms of organisation, such as stocking and managing the science laboratories. These challenges have been addressed in a most professional and well-organised manner by the science staff and their work is highly commendable.
- There are appropriate arrangements in place to support the teachers' continuing professional development with the school adopting a supportive approach. The school provided evidence of a range of professional development activities which have been completed by the staff recently all of which were wholly appropriate.
- The support which the science staff and the school give to students' involvement in science-related extracurricular and co-curricular activities is very beneficial to the students' motivation and their engagement with science. For example, students have been involved in an after-school science club, SciFest, Science Week and the BT Young Scientist and Technology Exhibition.

PLANNING AND PREPARATION

- The subject plan was of a very high quality with obvious attention given to ensuring that planning supported teaching and learning, as well as organisational issues. The plan provides an excellent framework which guides the teaching and learning that takes place in Science.
 - For individual lessons there was very high-quality planning and preparation. Each lesson was purposeful, had a clear set of intended outcomes and followed a logical progression. In all lessons the teachers demonstrated high levels of subject matter expertise. They displayed this by responding expertly to questions which the students asked and also by challenging and motivating the students in their learning while grounding that learning in concrete examples from the students' lives.
 - The use of formative assessment is a core feature of the practice in Science in this school. This is very beneficial because it provides solid support for the students in improving their learning. The results of students' assessments help to inform the teachers' planning, which is good practice. The arrangements that are in place for reporting to parents and guardians on the students' progress are appropriate and they include the use of school reports, parent-teacher meetings and the students' homework journals.
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The draft findings and recommendations arising out of this evaluation were discussed with the 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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