

An Roinn Oideachais agus Scileanna
Department of Education and Skills

Subject Inspection of Science
REPORT

Templecarrig School
Greystones, Co. Wicklow
Roll number: 68081J

Date of inspection: 23 February 2016



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

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| Dates of inspection | 23 February 2016 |
| Inspection activities undertaken <ul style="list-style-type: none">• Review of relevant documents• Discussion with principal, deputy principal and teachers• Interaction with students | <ul style="list-style-type: none">• Observation of teaching and learning during one double and three single class periods• Examination of students' work• Feedback to principal, deputy principal and teachers |

MAIN FINDINGS

- The overall quality of teaching and learning ranged from good to very good in most lessons, although there was scope for development in a small minority of lessons.
- There was a very good atmosphere combined with positive classroom interactions observed in all lessons.
- Information and communications technology (ICT) was appropriately utilised to support subject planning, student learning and assessment.
- Students were actively engaged in learning and in investigative activities in most lessons though in some cases improvement in this regard was required.
- Appropriate assessment strategies were implemented in most lessons.
- Science education is very well supported with the provision of core Science together with optional short courses in Science.
- The overall quality of subject planning is good though some development is required.

MAIN RECOMMENDATIONS

- Some lessons required better individual planning by teachers for their effective implementation.
 - Teachers should implement enhanced levels of meaningful student activity and interaction in some lessons.
 - All teachers should extend and maximise the use of formative written feedback.
 - Subject planning and schemes of work will require further development by teachers as the school develops.
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INTRODUCTION

Templecarrig School is a co-educational voluntary secondary school under the patronage of the Church of Ireland. This newly established school has a current school enrolment of 266 first-year and second-year students. The school currently offers the Junior Certificate and is planning for Transition Year and senior cycle. Science is offered as a core subject at junior cycle and students can also opt for short courses in Sports Science or Horticulture.

TEACHING AND LEARNING

- There was a very high level of individual teacher planning in some lessons which resulted in well-structured and well-delivered lessons. Some lessons were less structured and required better individual planning for their effective implementation. Subject department planning should support teacher personal reflection and the sharing of best practice between colleagues.
- Lesson intentions were written on the board or screen and were re-visited at the conclusion of some lessons. This good practice should be extended to all lessons.
- The overall quality of teaching and learning ranged from good to very good in most lessons, although there was scope for development in a small minority of lessons. In one lesson, student activity should be prioritised over teacher instruction while in another lesson the purpose and focus of the student task required review. There was a positive sense of challenge in most lessons.
- There was a very good atmosphere combined with positive classroom interactions observed in all lessons. Students were interested and motivated and, when examined, were very knowledgeable regarding lesson content. Students were affirmed and encouraged by teachers for their efforts and contributions.
- ICT was appropriately utilised to support subject planning, student learning, differentiation and assessment. It is praiseworthy that teachers have developed and identified very good physical and computer-based resources which are appropriately used by students to support their learning. Students' tablets were expertly utilised to support learning. An example was taking time-lapse videos of investigations which will serve as a useful revision resource for students. In one lesson, the use of the video clip chosen by the teacher should be reviewed and in another instance the board or screen should be used to collate responses from groups of students leading to enhanced classroom discussion.
- Students were actively and successfully engaged in investigative activities to support learning in most lessons. However, enhanced levels of meaningful student activity and interaction was required in some lessons. The quality of students' responses to questions relating to these activities was very good.
- Appropriate assessment strategies were implemented in most lessons. The use of formative written feedback for students should be extended and maximised. It is recommended that the quality of students' written practical records be further monitored and feedback by teachers on how to improve should be relayed to students.
- Scientific literacy and numeracy were effectively integrated into learning in many instances. Best practice was observed when keywords were recorded on the board during lessons and when students' use of keywords contributed to lesson progression.
- Methodologies utilised were successful overall in fulfilling lesson intentions. However, when charts are used, they should be placed in a position which is visible to all students. There was very good focus on the history of Science and on applications of the subject.
- Homework was assigned in all lessons. A shared ICT resource was utilised for this purpose in many instances.

- Questioning strategies were effective overall though some global questions were less effective. Enhanced input from students will be necessary through directed questions.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- Science education is well supported in the school. Science is offered as a core subject. All students sample the school-designed short courses in advance of making an informed choice. It is praiseworthy that two short courses offered are entitled Sports Science and Horticulture.
- The science laboratories and the preparation area are very well organised and maintained. Laboratory ICT facilities are very good and support student learning.
- Time provision for Science is in line with syllabus recommendations. School management has assigned two project days for the completion of Coursework A.
- Health and safety practices observed were very good.
- Students are encouraged to partake in a number of co-curricular and extra-curricular activities including the *SciFest* competition.
- Whole school in-service and relevant continuing professional development courses are supported by school management for all teachers. Some teachers are actively engaged with third-level institutions on collaborative projects. This is praiseworthy.

PLANNING AND PREPARATION

- The overall quality of subject planning for Science is high although some development will be required. The Science plan promotes active teaching methodologies and focuses on key aspects of subject provision including literacy and numeracy strategies, health and safety, strategies for students with special educational needs and student involvement in extra-curricular activities. Future planning should include strategies to facilitate the sharing of best practice not only with science colleagues but across the entire school.
- The science plan has a very useful section on planning future science education in Transition Year and senior cycle.
- Teacher commitment to the development of science education in the school has resulted in the formulation of focused topic sheets for students called ‘Science Brief’ which are used in lieu of text books. This approach also supports assignment of homework and student note-taking.
- Schemes of work listing topics for each term are in place. These schemes will require ongoing review and development to include appropriate focus on assessment strategies, active methodologies, literacy and numeracy and differentiated resources linked to each learning outcome. An appropriate template should be developed by the science department for this purpose.

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.

Published September 2016