

An Roinn Oideachais agus Scileanna

Department of Education and Skills

**Subject Inspection of Science
REPORT**

**Coolmine Community School
Clonsilla, Dublin 15
Roll number: 913150**

Date of inspection: 14 September 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**

INFORMATION ON THE INSPECTION

Date(s) of inspection	13 & 14 September 2012
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 eight class periods• Examination of students' work• Feedback to principal and teachers

MAIN FINDINGS

- The overall quality of teaching and learning was very good.
- Very good use was made of *Assessment for Learning* strategies and information and communication technology (ICT) to support learning.
- Practical hands-on activities were very well used to enhance students' learning.
- An appropriate balance between teacher-led and student-centered activities was evident in most lessons but in some cases there could have been more opportunities created for students to contribute or work independently.
- Whole-school support for the provision of Science is very good.
- Planning and preparation for teaching and learning is very good.

MAIN RECOMMENDATIONS

- It is recommended that the science department give consideration to sharing good practice with respect to promoting independent student learning and student-centered activities in the teaching of science.
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INTRODUCTION

Coolmine Community School is a large co-educational school drawing its students mainly from the Dublin 15 area. The school provides the Junior Certificate, Leaving Certificate and Transition Year programmes. Enrolment currently stands at 1095 students, 612 boys and 483 girls. The school caters for a wide range of academic abilities and students come from a variety of socio-economic and cultural backgrounds.

TEACHING AND LEARNING

- The overall quality of teaching and learning was very good.
- Lessons were very well planned in terms of the structure and sequence of learning activities provided for students. Relevant resources were prepared in advance and well used to support learning.
- Very good use was made of *Assessment for Learning* strategies. This was particularly evident in the use of learning objectives to set the context for lessons and to assess progress during and at the end of the lessons.
- Very good use was made of ICT to support learning. A mix of clear and relevant PowerPoint presentations, videos and illustrations supported students' learning.
- Lessons were very well managed. Good systems regarding attendance, seating and homework have been established.
- A good emphasis on developing students' literacy skills was evident in the attention given to key scientific words and terms. In some cases, it would have been useful to allow more time to explain the words and terms and to ensure that students understood new or unfamiliar language.
- A variety of assessment techniques was well used to monitor students' progress. Good use was made of higher-order questions to probe students' understanding and homework was a strong feature in all lessons. The use of small individual white boards in some lessons allowed all students to participate in question-and-answer sessions.
- Practical hands-on activities were very well used to develop students' skills in laboratory work and their understanding of the topic under consideration.
- The main methodology used to develop lesson content was teacher-led discussion and questioning of students. This approach worked well as it allowed students to link new material to prior learning or everyday experiences. However, in some cases there could have been more opportunities created for students to contribute, to demonstrate their understanding or knowledge or to work independently. Hence, it is recommended that the science department consider how to share and make best use of good practice with respect to promoting independent student learning and student-centered activities in the teaching of science.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- The quality of whole-school support for the provision of Science is very good.

- Junior Certificate Science is a core subject in first year but optional thereafter. Good structures are in place to support students in making their choice of optional subjects at the end of first year and there is a good uptake of Science for the rest of junior cycle. Biology, Physics and Chemistry are provided in senior cycle.
- The timetabling arrangements for Science are good. All Science classes are timetabled for at least a double period in a laboratory every week.
- The school has very good resources for the teaching and learning of Science. Four well-equipped laboratories were extensively refurbished in recent years. Relevant health and safety equipment is in place and regular fire drills are organised.
- The school is very supportive of teachers' professional development both at individual level and at whole-school level. Recent inputs to the whole staff on areas such as *Assessment for Learning*, subject planning and study skills are relevant and responsive to the needs of the school.
- Extracurricular science activities are well supported. Students participate in various events such as SciFest and the Young Scientist Exhibition. The setting up of a science council in the school has provided an innovative opportunity for senior students to explore their interest in science and assist in events such as the school's open night and a first-year science club.

PLANNING AND PREPARATION

- The quality of planning and preparation is very good.
- The science department is very well organised. A comprehensive subject plan has been developed over many years and laboratory resources are very efficiently organised.
- The records of science department meetings show a very professional, collaborative and reflective approach to the development and provision for Science in the school. Issues have been considered with a view to finding and implementing solutions. Examples of such action planning include the development of sections in the school's student journal relating to coursework and to health and safety in the laboratory.
- Good use has been made of ICT to support subject planning. For example, science department materials or notices are circulated by email and a shared drive on the school's ICT system is used to record and share many useful and relevant resources such as PowerPoint presentations, worksheets and assessment materials.
- The sharing of resources is a strong feature of the science department. As well as sharing teaching resources, members of the science department have also gathered resources on more general topics such as multiple intelligences, differentiation and scientific literacy.
- Very good practice is evident in the consideration given to student outcomes in state examinations. As well as identifying positive outcomes, the science department has also identified issues requiring development and has put relevant actions into place.

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, and the response of the board will be found in the appendix of this report.

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Appendix

School response to the report

Submitted by the Board of Management

Area 2: Follow-up actions planned or undertaken since the completion of the inspection activity to implement the findings and recommendations of the inspection

At subsequent planning meetings, Science teachers discussed different practices with respect to promoting independent student learning. Individual teachers are implementing these as appropriate for their class groups.