

**An Roinn Oideachais agus Scileanna**  
**Department of Education and Skills**

**Subject Inspection of Science and Biology**  
**REPORT**

**Carrigaline Community School**  
**Carrigaline, County Cork**  
**Roll number: 91388S**

**Date of inspection: 25 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 AND BIOLOGY**

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**INFORMATION ON THE INSPECTION**

<b>Dates of inspection</b>	24 and 25 September 2012
<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 fourteen 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 was good overall.
- A positive and supportive learning environment was clearly evident.
- First-year science classes are allocated three lessons weekly which is below what is recommended in the curriculum guidelines.
- The laboratories and preparation areas were well presented and resourced.
- All facilities were Information and Communication Technology (ICT) enabled, and this technology was used effectively in many lessons.
- Very good and comprehensive planning was evident for the lessons observed.

**MAIN RECOMMENDATIONS**

- Learning outcomes for lessons should be shared with students in all lessons.
  - The science team should develop a more enquiry-based approach to student activities and practical work.
  - Management, in consultation with the science department, should review the timetabling of junior cycle science and endeavour to meet curricular recommendations.
  - Subject plans should link learning outcomes, methodologies and resources to the various topics.
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## **INTRODUCTION**

Carrigaline Community School is a co-educational school which currently provides post-primary education to 988 students. It offers Junior Certificate, an optional Transition Year (TY) programme, the Leaving Certificate, the Leaving Certificate Vocational Programme (LCVP) and the Leaving Certificate Applied Programme (LCA). The school is experiencing a steady growth in enrolment and it is planned to begin another extension on the site in the near future.

## **TEACHING AND LEARNING**

- Overall, teaching and learning was good in the lessons observed. Established routines were evident in all lessons with a statement of the learning outcomes for students used to good effect in some of the lessons observed. These statements were built on through the use of “learn checks”, and were used at lesson summation which aided consolidation of learning for the students. It is recommended that the further development of this approach be considered.
- Lesson pace and content were appropriate. There was good use of subject-specific language by both the teachers and the learners. The recording of new terminology through the use of the keyword concept was effectively managed in some lessons. Good use was made of wall-charts to provide subject-specific literacy support.
- In the main, there was good student engagement in the lessons. This was especially evident in lessons where students were more active in their learning and where there was a good balance between teacher and student activity.
- During group work, students participated well and were focused on the task in hand. They displayed enthusiasm for the subject. To further the potential of these activities, teachers should consider encouraging students engaged in these activities to think for themselves, further challenging them to make linkages between the theory and practical parts of the course through the use of higher-order questioning and quality discussion. This will further support the enquiry and investigative approach to the completion of practical work. The use of methodologies such as differentiation should also be considered.
- Teachers made good use of ICT in their lessons, which supported lesson delivery and stimulated student interest in topics. Presentations were well designed, clear and visually appealing. Video-clips, photographs, animations and downloads from the Internet were also used to enhance lessons to good effect. Care should be taken to ensure the learner is not overwhelmed by the content presented before they have had an opportunity to assimilate it during the lesson.
- Questioning was a feature of all lessons observed. A range of question types was utilised to ascertain student learning. The use of more probing techniques is encouraged and it is advised that teachers should refrain from answering questions they themselves have posed.
- A positive and supportive learning environment was clearly evident. Student-teacher rapport was good and all lessons were well managed. Student efforts were positively affirmed.

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

- Junior Science forms part of the core curriculum and Biology is the most popular of the three science subjects available at senior cycle in the school. Student access to this subject is good with option bands produced based on students' preferences.
- First-year students have a weekly allocation of three lessons of Science. Second-year and third-year students have four lessons in the form of two double lessons. The curriculum recommends that students have four lessons, including one double lesson, in each year of junior cycle. Management in consultation with the science department should review this situation and endeavour to meet curricular recommendations.
- Senior Biology is allocated the recommended five lessons weekly. The school has chosen to have two double lessons and one single. This model allows for three contact points in the week. Senior management and the science team should give consideration to having one double and three single lessons weekly, which would increase student contact to four days weekly for the subject.
- There are some instances of double lessons being split over break and lunchtimes. This is done to aid laboratory access, but should be avoided where possible. If necessary, the same group should not be affected.
- The school's five laboratories, associated preparation areas and demonstration room are well maintained. The school has employed a laboratory technician whose role it is to aid in the organisation of practical investigations across the sciences and maintain the preparation room. This situation seems to be operating effectively.
- The school has an assessment policy which provides for the administering of regular class tests, formal in-house examinations at Christmas and summer and pre-certificate examinations. Reports are issued following formal examinations in the school. Records of regular continuous assessment were also observed. Currently, both junior-science students and senior-biology students are awarded a percentage of their marks for practical work completed and written up. This is good practice.
- Both co-curricular and extracurricular activities in the sciences are encouraged. These include participation in science week, involvement in quizzes, science-related study visits, visiting speakers and entry into the Young Scientist competition. The school also runs a "Health Week", in which the science department has a significant involvement.
- The science team have availed of, and participated in, regular professional development activities over a range of topics. This will positively support teachers in the extension of their subject knowledge as well as in the further development and enhancement of their teaching methodologies.

## **PLANNING AND PREPARATION**

- Management facilitates the planning process by the provision of time for science department meetings, of which minutes are recorded. In addition, informal meetings take place on a regular basis, which is positive.
- A subject convenor has been appointed to co-ordinate the science department and this position is rotated among the team, which is very good.

- Significant work has occurred in the development of the current plans. To further this work, the linkage between topic lists, learning outcomes, methodologies and resources should be considered. In addition, the team should see how the development of the investigative and enquiry approach can be progressed and how this will allow for the development of student skills in this area over a defined timeframe.
- Homework was corrected and assigned in all lessons. Students are encouraged to note homework in their journals. This is good practice. In some instances, teachers also checked students' written work and gave feedback for improvement, which was positive.
- There was very effective individual teacher planning and resource preparation in evidence for the lessons observed. The laboratory technician had materials required for practical activities and was available to lend assistance when required, which is very positive.
- Good self-evaluation is evident. To its credit, the department undertakes an annual analysis of what is working well and what is not working and also reflects annually on the outcomes of state examinations, comparing them with national figures and examining trends.

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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.