

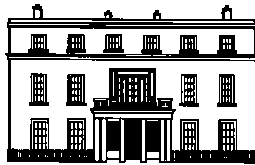
**An Roinn Oideachais agus Scileanna**

**Department of Education and Skills**

**Subject Inspection of Science and Chemistry  
REPORT**

**Coláiste Chraobh Abhann,  
Creowen, Kilcoole, County Wicklow  
Roll number: 76076M**

**Date of inspection: 2 October 2014**



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

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

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**INFORMATION ON THE INSPECTION**

<b>Dates of inspection</b>	30 September and 2 October 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 six class periods</li><li>• Examination of students' work</li><li>• Feedback to principal and teachers</li></ul>

**MAIN FINDINGS**

- Teaching and learning ranged from good to very good in lessons observed.
- Students were actively engaged in their learning especially through the effective opportunities provided for practical work.
- Information and communication technology (ICT) was used effectively to stimulate and enhance students' interest and learning.
- Lessons were characterised by very good rapport between teachers and students and due consideration was given to differentiation.
- There is very good subject provision and whole school support for Science and Chemistry.
- Subject planning is well established and significant progress has been achieved in the development of the subject plan.

**MAIN RECOMMENDATIONS**

- The further integration of assessment for learning (AfL) strategies into teaching and learning should be progressed by teachers with a focus on developing students' self and peer assessment skills.
  - The subject department should further progress and develop its strategic approach to subject planning, the establishment of common schemes of work as an integrated framework and the development of its assessment policy.
  - The Transition Year Chemistry module should be reviewed to bring it further in line with the Department of Education and Skills *Transition Year Guidelines*.
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## **INTRODUCTION**

Coláiste Chraobh Abhann is a co-educational multid denominational community college under the auspices of the Kildare and Wicklow Education and Training Board. It has a current enrolment of 645 students. It provides the Junior Certificate, an optional Transition Year (TY), the Leaving Certificate Applied (LCA), the Leaving Certificate Vocational Programme (LCVP) and the established Leaving Certificate.

## **TEACHING AND LEARNING**

- The quality of teaching and learning ranged from good to very good in lessons observed. Many aspects of teaching and learning were of a high standard and there were some areas that could be further strengthened.
- A good variety of teaching strategies was used which included pair and group work and opportunities for independent learning. Continuity with previous lessons and building on prior learning was facilitated. Greater provision of opportunities for pair work and for creative student-led activities is recommended.
- The lesson objective or topic was shared with the students in all lessons. In some cases, these were framed as learning outcomes which identified what the students would know and be able to do by the end of the lesson. These were then revisited to facilitate assessment of the learning achieved. This very good practice which worked best with the active involvement of students should be extended to all lessons.
- A purposeful focused learning environment was evident in all lessons. Very effective classroom management was facilitated with very clear instructions being given for activities including practical work. A positive supportive and affirming atmosphere was evident at all times.
- Very good differentiation was observed, supported by clear explanations with teachers monitoring work and providing individual support to students. Respectful interactions between students and teachers were noted in all lessons.
- A range of teaching resources was used which included the effective use of ICT to stimulate and enhance students' interest and learning.
- Students were actively engaged by the lesson activities, with high levels of motivation evident. Very good opportunities were provided for practical work which incorporated an inquiry based approach though this could be further strengthened in some lessons. In some instances, students took the lead in asking questions which generated a lively dynamic atmosphere and this should be encouraged in all lessons. Teachers' demonstrations were highly effective in stimulating students' interest and curiosity.
- Good attention was given to health and safety. Opportunities should be provided for students to be actively involved in the assessment of the risk in the practical work being undertaken.
- Good attention was given to the use of subject specific terminology, however, a stronger explicit focus on subject specific and general literacy in lessons is recommended.
- Teachers assessed students' understanding and knowledge through the effective use of both lower order and higher-order questions, orally and through worksheets. The greater use of higher-order questions is recommended to develop students' critical thinking skills. Students' self and peer assessment skills should be further developed to enable students to

take responsibility for their own learning. Good oral formative feedback was given to students. However, there was varying practice with regard to the provision of written formative feedback. A common approach to the provision of written formative comments on significant written assignments should be implemented by all teachers.

- Homework is given, monitored and corrected. Summative assessment included end of topic tests and common examinations. A mark for practical work is incorporated into the end of year assessments which is commended. Certificate examination results are analysed, compared to national norms and trends are identified. Trends need to be analysed in greater detail and together with the monitoring of students' progress could be used to inform teaching and learning.
- A high expectation of student achievement is maintained and students are encouraged to take certificate examinations at higher level.

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

- There is very good provision for the science subjects in the curriculum. Science is mandatory for all first-year students, however, it is not core at junior cycle though most students opt to study it through to third year. Chemistry, Physics, Biology and Agricultural Science are provided at senior cycle.
- The time allocated to Science and Chemistry is in line with the syllabus recommendations. The provision of two double periods per week for third-year students should be kept under review.
- Very good practice was noted in the detailed risk assessments undertaken in the science area using the templates provided in the 2010 Department of Education and Skills, Health and Safety Authority, State Claims Agency, and School Department Planning Initiative '*Guidelines on Managing Safety and Health in Post-Primary Schools*'
- Teachers' continuing professional development (CPD) is well supported by school management and a good range of whole school in-service is being provided. Teachers should access the resources provided by the Irish Science Teachers Association.
- School management is very supportive of the science subjects and resourcing is very good. The laboratory provision is very adequate with three laboratories and a spacious preparation room. Some laboratories provide a stimulating visual environment through posters and displays of work. Due to increasing enrolments in recent years, school management has applied for an extension to include additional provision of laboratories.
- A range of co-curricular and extra-curricular activities promote Science at whole school level including an in-school Science week and opportunities for students to undertake science projects.

#### **PLANNING AND PREPARATION**

- Good structures and practices are in place for subject planning, including coordination. Regular formal minuted meetings are underpinned by informal communication. Teaching and learning should now be included as a standing item on meeting agendas. A strategic focus to planning should be further developed through undertaking an end of year review including a SWOT analysis, and identifying three to four priorities to be implemented through a 'SMART' action plan.

- Common schemes of work should be reviewed and developed as an integrated framework to include literacy and numeracy strategies, explicit cross curricular links, and assessment strategies linked to the specified learning outcomes.
- The subject department should progress its assessment policy through providing greater detail as to its assessment practice and including an agreed approach to the provision of written formative comment on significant assignments.
- The scheme of work for TY Chemistry should be reviewed to further update it and, building further on cross-curriculum links, bring it in line with the *TY Guidelines*.
- All lessons including practical work were well planned, well prepared, in some instances to a very high standard, with a variety of effectively sequenced activities.

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The draft findings and recommendations arising out of this evaluation were discussed with the principal and the 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.

# **Appendix**

**SCHOOL RESPONSE TO THE REPORT**

**Submitted by the Board of Management**

### **Area 1: Observations on the content of the inspection report**

The Board of Management at Coláiste Chraobh Abhann is very satisfied with the report on the Quality of Learning and Teaching in Science and Chemistry at the school issued by the Department of Education and Skills Inspectorate as a result of a subject inspection held on 2<sup>nd</sup> October 2014.

In particular, the Board acknowledges the very positive comments made by the Inspector in the main findings and throughout the report. Teachers found the inspection process and subsequent report an acknowledgement of their enthusiasm, commitment and dedication to the teaching of Science and Chemistry.

All relevant partners have had an opportunity to discuss and evaluate this report.

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

A full and thorough review of the recommendations has taken place and a progressive course of action has commenced. The collaborative work of members of the Science Department will be central to the implementation and success of this plan. The ultimate aim of the plan is to progress and further improve the quality of learning and teaching of Science and Chemistry at the school.