

An Roinn Oideachais agus Scileanna

Department of Education and Skills

**Subject Inspection of Science and Biology
REPORT**

**Coláiste Eoin,
Cappagh Road, Finglas, Dublin 11.
Roll number: 70180A**

Date of inspection: 11 October 2011



**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**

INFORMATION ON THE INSPECTION

Date of inspection	11 October 2011
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

- The teaching and learning observed was of a high quality.
- Teachers displayed great enthusiasm for the subject and instruction was clear and concise.
- Students were motivated by the lesson content and were on task in all instances.
- Students' higher order thinking skills were encouraged by a good range of questioning strategies.
- ICT was incorporated appropriately into all lessons and served to enhance and clarify the material taught.
- The science team is appropriately qualified.

MAIN RECOMMENDATIONS

- The timetabling of double periods across break times should be avoided.
 - Corrosive and flammable chemical substances should be housed appropriately.
 - Programmes of study should be used as working documents.
 - Analysis of State Examination Results should contain comparisons with national norms.
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INTRODUCTION

Coláiste Eoin is a co-educational school under the auspices of City of Dublin Vocational Education Committee (VEC). Programmes offered to the schools' 160 students include the Junior Certificate, Junior Certificate School Programme (JCSP), established Leaving Certificate and the Leaving Certificate Applied (LCA). The school participates in the Department of Education and Skills' action plan for delivering equality of opportunity in schools (DEIS). The school has an Autism unit and has recently been included in the National Behaviour Support Services (NBSS) programme.

TEACHING AND LEARNING

- The quality of teaching and learning observed in all lessons was very good. Instruction was clear and concise. Learning outcomes were discussed with students at the start of the lessons and used to recapitulate at the conclusion. Good use was made of everyday examples and this coupled with the enthusiasm of the teachers for the subject helped to create a stimulating learning environment.
- A good range of methodologies was utilised and there was a good balance between teacher input and student activity. Laboratory work was well organised and managed. Students had opportunities to build upon their existing skills and competencies while new skills were introduced at an appropriate pace. Student practical work was punctuated with teacher demonstration in order to clarify a procedure and promote good practice. Appropriate Health and Safety practices were encouraged and commendably, these were noted on the white board at the beginning of one lesson.
- Questioning strategies served to challenge students to think for themselves and encouraged them to analyse and synthesise previous and new learning material. Questioning and observation were the main forms of assessment used by teachers. In one lesson, students were asked to represent their results diagrammatically while in another the use of an appropriately designed worksheet allowed students to record their results as the lesson progressed. All classroom activities were well monitored by the teachers and directional feedback was provided where appropriate.
- Classroom management was very good. In a junior cycle class the teacher used a 'three second rule' in order to encourage the whole class to listen and this was seen to be very effective. Student behaviour overall was very good. Students participated keenly in the lessons. They were on task and motivated by the lesson content.
- Good use of Information and Communication Technology (ICT) was observed. The data projector was used in all lessons visited and it is noteworthy that music and video clips as well as cloze tests had been downloaded from the Internet to clarify the lesson and promote learning. It is good practice that individual students were given roles and tasks within the lessons and this helped them to take responsibility for their own learning.
- In one lesson, a Special Needs Assistant (SNA) provided assistance to students and ensured they could access all materials required for the lesson.
- A range of methodologies which supported good practice in promoting literacy and numeracy was observed. There was good attention to the correct use of units in calculations of volume, mass and density and students were knowledgeable in their use of the balance and calculator. Teachers encouraged students to use the correct scientific terminology and new words were reinforced both verbally and written on the whiteboard.

A regular 'vocabulary test' has been devised by one teacher in order to promote literacy and there is scope to include this as part of the assessment practices of the science team.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- Science is an optional subject in the junior cycle. There is one class group of Science in each of first, second and third year. In addition, a number of students on the JCSP follow the Science curriculum. Biology is available in the senior cycle and there is one class group in fifth and one class group in sixth year.
- The number of class periods allocated to Science and Biology is appropriate. However, management should try to avoid the timetabling of double periods across break times as this poses problems for practical work.
- The science teachers are appropriately qualified and both hold degrees at Masters level. They have attended Continuing Professional Development (CPD) and most recent whole school CPD has been organised in the areas of Literacy across the Curriculum and Special Educational Needs (SEN) within the Autism spectrum.
- The school has a homework policy and homework is regularly allocated and checked. Students are formally assessed at mid-term, Christmas and summer, in addition to regular end-of-topic tests. Regular contact is maintained with the home via the school reports, parent-teacher meetings and the student journal.
- The school has two laboratories which have good displays of posters, photographs and student-generated work. The science-related murals on the walls help to create a space which is conducive to the study of Science. The laboratories are linked by a common preparation area. There is a need for some reorganisation in this area in order to better facilitate practical work. All chemical substances should be housed in a lockable chemical store in the preparation area which should also contain suitable cabinets for corrosives and flammable chemicals.

PLANNING AND PREPARATION

- The science teachers meet regularly and this is facilitated by management. Minutes of meetings are recorded. However, due to the small size of the science team, many meetings take place on an informal basis.
- Individual planning was very detailed. Lessons were well prepared and classroom resources were used appropriately.
- An outline of topics to be completed in each year has been compiled collaboratively and this is good practice. There is scope to provide students with a copy of this document in order to assist them in planning their study.
- Programmes of study distributed by the science support services were provided. These should be built upon by the science team in order to create collaborative programmes for each year group which can be used by teachers as working documents.
- Students' attainment in the Certificate Examinations is recorded and monitored by the science team. Discussions around students' progress and achievement take place at subject department meetings. This analysis should be made more comprehensive and include comparisons with national norms.

- Teachers keep records of students' attendance, homework and achievement in class tests. This is good practice as it helps build up a student profile.

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 of the school was given an opportunity to comment on the findings and recommendations of the report; the board chose to accept the report without response.