

An Roinn Oideachais agus Scileanna
Department of Education and Skills

Subject Inspection of Science and Biology
REPORT

Ashbourne Community School
Deerpark, County Meath
Roll number: 91495T

Date of inspection: 24 February 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**

INFORMATION ON THE INSPECTION

Dates of inspection	22 and 24 February 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 eleven class periods• Examination of students' work• Feedback to principal and teachers

MAIN FINDINGS

- The quality of teaching and learning ranged from good to very good with some instances of excellent practices.
- In all of the lessons, students worked purposefully and were actively engaged in the learning process.
- Excellent practices included an investigative approach to practical work as well as the development of higher-order skills such as the application, analysis, synthesis and evaluation of information.
- A good range of well-chosen resources was utilised.
- Classroom management was very good and lessons proceeded in a caring and respectful atmosphere.
- The five laboratories are maintained to a very high standard and teachers had created a stimulating learning environment in the rooms visited.

MAIN RECOMMENDATIONS

- It is now timely for all members of the science team to consider how their very good and excellent practices can be shared and utilised across the science department.
 - Action planning should be progressed to include specific targets, personnel involved as well as success criteria and the timeframe involved.
 - Programmes of study should be further developed.
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INTRODUCTION

Ashbourne Community School is a co-educational school with a current enrolment of 1038 students. In addition to the Junior Certificate and Leaving Certificate programmes, the school offers an optional Transition Year programme (TY) and the Leaving Certificate Vocational Programme (LCVP).

TEACHING AND LEARNING

- The quality of teaching and learning ranged from good to very good with some instances of excellent practices. There was a strong focus on teaching for understanding and learning in all lessons observed.
- The science teachers had planned meticulously for the lessons. This attention to detail resulted in lessons that were focused, well structured and appropriately pitched. Learning outcomes were discussed with students at the beginning of lessons. This good practice was most effective when they were revisited during the lesson and used to summarise at the end.
- Teacher instruction was very clear and accurate, key concepts were emphasised and, where relevant, lesson content was informed by up-to-date information and everyday examples. In all of the lessons, students worked purposefully and were actively engaged in the learning process.
- The enthusiastic approach of the teachers was also effective in maintaining students' interest in the lesson activities. The teachers set high expectations for the students and the students responded accordingly.
- Students were given opportunities to work independently, in pairs and as a whole class. The lessons included well-chosen resources, some researched from the internet and others were teacher-developed. There were carefully planned opportunities for the development of higher-order skills such as the application, analysis, synthesis and evaluation of information. This is excellent practice.
- There was a good emphasis on the development of students' literacy and numeracy skills with frequent emphasis on pronunciation and spelling of key words, use of mnemonics and the use of units and graphical display in numeracy.
- In all lessons observed classroom management was very good. Teachers created a pleasant and supportive learning environment. Teaching and learning proceeded in a caring and respectful atmosphere. Interaction with students and observation of classroom activities indicated their enthusiasm and enjoyment for the subject.
- Questioning was used in all classes to check on previous knowledge, learning and understanding. Students' responses to questions indicated a very good level of knowledge and understanding. Some excellent questioning strategies involving higher-order thinking skills were noted. In such cases, the questions were well spread amongst the class members and there was evidence of differentiation within question types.
- Practical lessons were well organised and well monitored, students displayed good routines for setting up and clearing away apparatus. Excellent practices were noted where practical work was investigative and students were encouraged to predict results and fair-testing was considered.
- In many of the lessons observed, assessment featured as an integral part of the teaching and learning process. Many teachers regularly and systematically record assessment results which builds a profile of students' progress and achievement in the subject over time. More widespread use of this practice is recommended.
- A review of a wide range of students' copybooks, folders, tests and coursework notebooks provided evidence of very good progress in their work. Many folders were

well organised and well maintained and teachers should encourage this practice in every lesson.

- Homework is assigned regularly and there was evidence that homework is monitored. There were some excellent examples of the provision of constructive feedback to students on both their written work and practical coursework. It is now timely for all members of the team to consider how these practices could support the assessment tools that they already use. As part of ongoing academic monitoring, a post-assessment analysis has been introduced. This detailed analysis also includes feedback from parents and is good practice.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- Science is an optional subject in the junior cycle and uptake is good. While all of the sciences are provided at senior cycle, Biology is the most popular. In transition year all students study a module of Biology.
- There is very good provision and whole-school support for Science and Biology. Timetabling of the subjects is very satisfactory; however management should review the spread of lesson periods throughout the week.
- Senior management is very supportive of and facilitates the continuing professional development (CPD) of teachers at whole-staff level and at subject department level.
- There are five laboratories in the school. The facilities are maintained to a very high standard and teachers have created a stimulating learning environment in the classrooms. There is very good provision of and access to information and communications technology (ICT) equipment for Science.

PLANNING AND PREPARATION

- There is a dedicated science department in this school with evidence of good collaboration and co-ordination. Currently the role of subject co-ordinator rotates amongst the science teachers and this is good practice.
 - Minutes of subject department meetings indicate that there is a proactive and organised approach to subject planning for Science. A comprehensive subject department plan has been developed.
 - The Junior Certificate Science programmes provide details of learning outcomes within appropriate timeframes and would be enhanced by the inclusion of resources and assessment modes for each topic. Similarly, the programme of work for Biology should be syllabus-based, include learning outcomes for students as well as appropriate resources and modes of assessment.
 - Planning for the science modules offered in TY is in line with the key principles of the transition year programme and a broad and varied programme is provided.
 - Teachers' individual planning is of a good quality and there is evidence that a good level of collaboration takes place between the special educational needs department and the science department.
 - It is positive that the science department has adopted a reflective approach to subject planning and this is evident in the SCOT analysis as well as some action planning. This process should be expanded to include specific targets, personnel involved as well as success criteria and the timeframe involved.
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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.