

An Roinn Oideachais agus Scileanna
Department of Education and Skills

Subject Inspection of Science and Biology
REPORT

Abbey Vocational School, Donegal Town,
County Donegal
Roll number: 71180F

Date of inspection: 31 Jan 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	30 and 31 Jan 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 10 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.
- Laboratories and classrooms visited displayed good Information and Communications Technology (ICT) infrastructure and this was generally used to good effect.
- The atmosphere in lessons was positive and classroom management was very good.
- Best practice was observed in practical lessons which promoted an investigative approach, discussed fair testing and encouraged students to develop hypotheses.
- The appropriately qualified science team has attended a range of continuing professional development (CPD) activities.
- The programme of work for Transition Year (TY) Science includes individual and group projects as part of students' overall achievement.

MAIN RECOMMENDATIONS

- In order to consolidate learning, time should be set aside at the end of the lesson for a comprehensive summary to take place.
 - Good practices in relation to differentiation, peer-tutoring and peer-assessment should be discussed and shared across the science department.
 - The science department should progress their methods of self-evaluation to include action plans which indicate targets, timeframes and success criteria.
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INTRODUCTION

Abbey Vocational School is a co-educational school which operates under the auspices of County Donegal Vocational Education Committee (VEC). The school caters for a total of 722 students of which 359 are male and 363 are female. Curricular programmes on offer include the Junior Certificate, Transition Year (TY) programme, Leaving Certificate, Leaving Certificate Applied (LCA) and Leaving Certificate Vocational Programme (LCVP).

TEACHING AND LEARNING

- The quality of teaching and learning ranged from good to very good. However, some areas for development were noted during the evaluation.
- Instruction was clear and concise. Learning outcomes were discussed with students at the start of most lessons visited and best practice was observed where they were revisited during a summary at the end of the lesson. In some lessons opportunities for consolidation of learning were missed through the lack of a comprehensive summary at the conclusion. Time should be set aside at the end of the class for this activity.
- Laboratory work was well organised and well managed. Students displayed appropriate skills with good attention to Health and Safety precautions. In some lessons practical work was punctuated with teacher demonstration to clarify a procedure. Best practice was observed where an investigative approach was taken to experiments and good attention was paid to fair testing and the development of a hypothesis. These are excellent practices and should be adopted where possible in science experiments.
- Classroom management was very good. Students generally participated well in the lessons and the atmosphere was positive and conducive to work. Good use of ICT was observed in many lessons. Best practice was seen where PowerPoint presentations were used to provide stimuli for discussions, to promote student engagement and provide opportunities for students to see concepts in action in an everyday setting. Teachers should be mindful of maintaining an appropriate balance in the use of PowerPoint and avoid the over-reliance on its use to disseminate notes. It is noteworthy that in some lessons a special needs assistant (SNA) provided support to students and ensured they could access all materials required.
- In a number of lessons, teachers made good use of differentiated teaching methodologies and had developed resources to support individual students' needs. Such good practices should be discussed and shared by the science team at planning meetings in order to make these approaches more widespread across the department.
- Regular end-of-topic tests are set. The results of the Christmas test are derived from continuous assessment throughout the term while a common test is set at the end of first, second and fifth years. It is good practice that the common test included a percentage for the standard of notebooks or the write-up of a practical activity. This system should also be included in the Christmas tests.

- Good practices in relation to peer-tutoring and peer-assessment were noted in a minority of lessons and were recommended by the inspector in others. This activity could be targeted by the science department as part of their forward planning.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- Science is a core subject in the junior cycle and all classes are of mixed ability. Science is available in the school's optional TY programme. In senior-cycle science, the school offers Biology, Chemistry, Physics and Agricultural Science. The number of class periods allocated to the sciences is generally appropriate. However, the allocation of three class periods in first year should be kept under review in order to ensure that the requirements of the curriculum in first year science are met.
- The science team is appropriately qualified and has attended a range of continuing professional development (CPD) activities.
- The school has five laboratories. Good displays of posters, photographs and student-generated work were observed on science notice boards in laboratories, classrooms and on the corridors. Storage areas observed were well organised and chemicals were stored appropriately. It is noteworthy that all laboratories and classrooms visited were equipped with a PC and data projector.

PLANNING AND PREPARATION

- Meetings of the science team take place regularly and are facilitated by management. Minutes are recorded. The position of science co-ordinator is rotated on a bi-annual basis.
- Individual teacher planning observed was of a good quality and teachers had gone to great lengths to prepare for their lessons.
- The science department planning folder is comprehensive. Programmes of work were provided for each year group and the review of these documents is currently a work in progress. Junior Science programmes included syllabus-based learning outcomes, which is good practice. The science department has developed an action plan. The cataloguing of resources was identified as an area for development by the science team and this was under way at the time of the evaluation. In order to focus on how effective subject department planning can impact positively on the outcomes for students, the science department should further develop their process of self-evaluation. Action plans arising from this self-evaluation should indicate targets, timeframes and success criteria.
- The programme of work for TY Science is broad and balanced. It is commendable that individual and group projects are included as part of students' overall achievement in TY Science. It is good practice that the project work promotes research activities and student presentations.

- Planning documentation for Leaving Certificate Biology consisted of an overview of the two-year course, the topics involved and their timeframe. This programme of work should be reviewed to include learning outcomes and appropriate resources.
- The science department has a homework and assessment policy. Homework is regularly set and corrected. Strategies for short-term and long-term assessment in Science are included in the assessment policy. This, however, should be extended to include assessment for learning practices such as formative and directional feedback.
- Student achievements in the area of Science in the certificate examinations over the past four years have been discussed and analysed. Comparisons have been made with national statistics and it is good practice that the uptake of higher and ordinary level papers is also monitored. Details of action planning arising from these discussions and analyses should be included in the science department planning folder.

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.