

An Roinn Oideachais agus Scileanna
Department of Education and Skills

Subject Inspection of Science and Biology
REPORT

Drogheda Grammar School
Drogheda, County Louth
Roll number: 63870I

Date of inspection: 5 April 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

Dates of inspection	4 and 5 April 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 five class periods• Examination of students' work• Feedback to principal and teachers

MAIN FINDINGS

- Teaching observed was good and in some instances very good.
- Where practical activities were observed, students displayed good attention to Health and Safety procedures.
- Students engaged well with the classroom activities and when questioned by the inspector, showed good understanding of concepts and facts taught.
- Good use of the scientific method and investigative approach was observed.
- Teachers of Science and Biology are appropriately qualified and have attended a good range of continuing professional development (CPD) activities.
- All recommendations from a previous subject inspection in Science and Biology have been acted upon.

MAIN RECOMMENDATIONS

- Teachers should place greater emphasis on the development of literacy and numeracy skills in each lesson.
 - Science teachers should discuss and share best practice with regard to differentiation, with particular attention to those students at both extremes of the learning spectrum.
 - The analysis of state examination results should be used to inform subject department planning at all levels.
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INTRODUCTION

Drogheda Grammar School is a co-educational fee-paying school with a current enrolment of 263 students. The school offers the Junior Certificate (JC) and Leaving Certificate (LC) programmes and there is a compulsory Transition Year (TY) in the senior cycle. All students take Science in the junior cycle and Biology is an optional subject at Leaving Certificate level.

TEACHING AND LEARNING

- Teaching observed was good and in some instances very good. The content of lessons was linked to prior learning. Teachers integrated topical issues and everyday activities in their discussions with students.
- In most instances, the learning intention was noted on the board at the start of the lesson. This practice should be adopted in all lessons. The learning intention should be revisited during the lesson to reinforce the learning and returned to in a summary at the end.
- Teachers made good use of visual stimuli such as posters, models, diagrams and overhead projector transparencies.
- Effective questioning strategies were used to check student learning and encourage student contributions. Best practice was observed where students were challenged to think for themselves and were given appropriate think-time to respond. Direct recall was the prevalent form of questioning used and this should be balanced with more frequent higher-order questions.
- Where practical activities were observed, students displayed good attention to Health and Safety procedures.
- Good use of the scientific method and investigative approach was observed.
- Greater emphasis should be placed by teachers on the development of literacy and numeracy skills in each lesson. Some good practices observed in this regard included: students reading aloud; using mnemonics to aid recall; emphasis being placed on pronunciation of new words.
- Some examples of differentiated methodologies were observed. Science teachers should discuss and share best practice in this regard with particular attention to those students at both extremes of the learning spectrum.
- Classroom management was very good. Activities were well organised and well managed. Discipline was good. Pre-arranged seating plans are in use in most lessons and students have designated partners for practical work.
- In many lessons students were provided with opportunities for independent work as well as paired and group activities. However, teachers could make greater use of peer tutoring particularly in revision lessons.
- Students engaged well with the classroom activities and when questioned by the inspector showed good understanding of concepts and facts taught.
- Notebooks, folders and copies were generally well maintained. Hardback practical books contained appropriate numbers of write-ups and these were checked and annotated by the teachers. It is good to note that teachers have encouraged students to follow-up on

corrections made. However, all students should be encouraged to maintain clear and organised records of their work which can be retained as useful revision aids.

- Some good examples of assessment for learning practices were observed particularly in the form of formative feedback. However, this is an area for further development in the science department and should be included on the agenda for science department planning meetings.
- A fairly comprehensive analysis of state examination results is carried out by the science department and comparisons are made with national norms. This should be used to inform subject department planning at all levels.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- Subject provision and whole school support is good. Allocation of class periods is appropriate in junior cycle Science and generous in LC Biology. However, the practice of splitting class groups between two teachers should be avoided.
- The two laboratories are clean and tidy with adjacent well-organised preparation areas. A central storage area has been developed for resources.
- A good range of co-curricular activities takes place including a Science Club after school on Mondays. Ecology fieldtrips are carried out on site and there is a good record of achievement in the BT Young Science and Technology Exhibition and Science Olympiads.
- An appropriate number of assessments is held during the school year. A homework policy has been developed and ratified by the board. However, the school does not have a whole-school policy on assessment. In developing a policy on assessment, the area of assessment for learning should be prioritised.
- Teachers of Science and Biology are appropriately qualified and have attended a good range of continuing professional development (CPD) activities.
- An inspection of Science and Biology was held in the past and it is good to note that all recommendations arising from the report have been implemented.

PLANNING AND PREPARATION

- Subject department planning is fairly good. Planning meetings of the science department are held and minutes are recorded. Regular informal meetings also take place.
 - Teachers maintain good records of students' attainment in class tests, end-of-topic and end-of-term assessments.
 - A science co-ordinator has been appointed and, in response to a recommendation from a previous science inspection, the post is rotated among the team on an annual basis.
 - Planning documentation was provided for JC Science, TY Science and LC Biology. All included an overview of topics for the year in an appropriate timeframe.
 - Programmes of work should now be expanded to include learning outcomes linked to appropriate methodologies, resources and modes of assessment.
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The draft findings and recommendations arising out of this evaluation were discussed with the principal and subject teachers at the conclusion of the evaluation.

Published June 2012