

**An Roinn Oideachais agus Scileanna**

**Department of Education and Skills**

**Subject Inspection of Science and Physics  
REPORT**

**St Augustine's College  
Abbeyside, Dungarvan, County Waterford  
Roll number: 64890W**

**Date of inspection: 2 December 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 PHYSICS**

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**INFORMATION ON THE INSPECTION**

<b>Date(s) of inspection</b>	2 December 2011
<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 five class periods</li><li>• Examination of students' work</li><li>• Feedback to principal and teachers</li></ul>

**MAIN FINDINGS**

- Lessons were well structured and learning outcomes were shared with students though this was not consistent across all lessons observed.
- Students were encouraged to think deeply about questions, were challenged appropriately and developed many key skills including good observation and critical thinking skills during lessons.
- Student learning was supported through various modes of assessment, well developed links with prior learning and effectively planned revision strategies.
- Teaching methods were appropriate to students' abilities, needs and interests though some further development of information and communication technology (ICT) as a teaching strategy is needed.
- Students were facilitated to be active in their learning and this together with the very positive classroom atmosphere supported high levels of student participation and motivation.
- Formative assessment strategies had a positive impact on student learning though some development is needed.

**MAIN RECOMMENDATIONS**

- The current timetabling arrangement of blocking junior science lessons for each year group should be re-examined by school management with a view to improving access to laboratories for double lesson periods.
  - Subject planning should be developed by setting long-term targets and by developing the agreed schemes of work to place more focus on learning outcomes, methodologies, assessment strategies and resources for each section of the course.
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## **INTRODUCTION**

St Augustine's College is a co-educational voluntary secondary school with an enrolment of 662 students and it serves an urban and rural catchment area. Science is offered as a core subject at junior cycle and Physics, Chemistry, Biology and Agricultural Science are options at senior cycle. Modules in senior science subjects form part of the optional Transition Year (TY) programme.

## **TEACHING AND LEARNING**

- The majority of lessons were well structured. In most cases lesson objectives were shared with students at the outset, a good practice that should be extended. In addition lessons were appropriately summarised in advance of setting homework assignments.
- Students were encouraged to think deeply about questions. Questioning strategies were very effective in helping to ensure good levels of students' understanding and in helping to ensure that appropriate levels of challenge were an integral part of lessons.
- Student skills' development was a key feature of all lessons. For example, student observation skills were well developed during a lesson on the testing of acids and bases while critical thinking and analytical skills formed a key part of a lesson on simple harmonic motion.
- Scientific literacy and numeracy development was well integrated into each lesson. This worked particularly well when key words were placed on the board and when teachers circulated the classroom providing individual support to students with their assignments.
- Very good links were established with prior learning at the outset of lessons. This approach supported continuity, integration of new material and seamless lesson development. In addition, revision strategies consolidated learning and students' sense of preparedness for examinations.
- Classroom management was very good overall. The effective classroom organisation facilitated learning. While working on practical activities in some lessons, the size of student groups should be reduced so that active learning is maximised.
- All students were well supported in their learning through effective differentiation strategies. Teachers had high expectations of students commensurate with their abilities and learning styles.
- The board was effectively utilised for recording key words, concepts and diagrams. The use of ICT was appropriate to students' abilities, needs and interests in the majority of lessons. ICT worked best when pre-prepared slides did not contain excessive text and when short video clips were integrated into the lesson as a means of consolidating key lesson material. The setting of student research tasks in advance of any presentation would further support student involvement and ownership of the lesson material.
- Student learning was enhanced through the excellent rapport, very good atmosphere, high expectations and affirmation of student effort evident in all lessons. Students were facilitated to be active in their learning and this together with the very positive classroom atmosphere supported high levels of student participation and motivation.
- Formative assessment strategies were very well employed in the majority of lessons. The positive comments and annotation of students' copybooks, class tests and practical notebooks are having a positive impact on student learning in the majority of lessons. This good practice should be extended.
- Examination results are analysed and academic student achievement is monitored. It is praiseworthy that this data informs teaching and learning and supports the school's modes of assessment.

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

- The uptake of Physics and the other senior science subjects at senior cycle is very good. The inclusion of compulsory science modules in TY is effective as it improves scientific literacy, enhances skills development and supports students in making an informed choice of science subjects for Leaving Certificate.
- Time provision for all science subjects is in line with syllabus recommendations. The current timetabling arrangement of blocking junior science lessons for each year group should be re-examined by school management with a view to improving access to laboratories for double lesson periods.
- The school's three science laboratories, chemical storage and preparation areas are well organised. The provision of a flame-proof cabinet, as resources permit, will further support laboratory health and safety. The recent audit of health and safety facilities in the school and substantial input to the revised health and safety policy from the science department show good practice on behalf of school management.
- Strong links have been forged between the science and learning support departments. Teachers are aware of students' individual needs and there is good dissemination of information regarding support of students with special needs, those who require English language support and for gifted students.
- Relevant continuing professional development (CPD) courses, further study and membership of a professional association are supported by senior management and the board of management for all science teachers.
- The commitment of teachers to encouraging students to partake in a range of science-related co-curricular and extra-curricular activities is good.
- Modes of assessment include formal examinations, continuous assessment and regular monitored homework in line with the school's homework policy. A parent-teacher meeting is held annually for each year group and reports are sent to parents during the year.

## **PLANNING AND PREPARATION**

- Collaborative planning for Science is very good overall. Teachers' individual planning was very effective in helping to ensure quality in delivery of lessons and in supporting students in their work. Lesson resources including worksheets, practical and ICT equipment were set up and ready to use.
  - Subject planning should be developed by setting long-term targets for the development of Science and Physics and by developing the agreed schemes of work to place more focus on learning outcomes, methodologies, assessment strategies and resources for each section of the course.
  - TY planning is very good overall. The content of some courses should be reviewed to include more focus on skills development rather than on academic content. The transition unit template was used to draw up the physics TY plan. This practice should be extended to other TY science subjects.
  - Science department planning meetings are regularly convened by the co-ordinators and minutes reflect the wide range of relevant topics discussed.
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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. 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.

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