

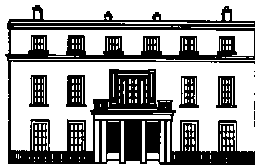
An Roinn Oideachais agus Scileanna

Department of Education and Skills

**Subject Inspection of Science and Physics
REPORT**

**Newpark Comprehensive School
Newtown Park Avenue, Blackrock, County Dublin
Roll number: 81001I**

Date of inspection: 25 November 2011



**AN ROINN | DEPARTMENT OF
OIDEACHAIS | EDUCATION
AGUS SCILEANNA | AND SKILLS**

REPORT
ON
THE QUALITY OF LEARNING AND TEACHING IN SCIENCE AND PHYSICS

INFORMATION ON THE INSPECTION

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| Date(s) of inspection | 24 and 25 November 2011 |
| Inspection activities undertaken <ul style="list-style-type: none">• Review of relevant documents• Discussion with principal, deputy 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, deputy principal and teachers |

MAIN FINDINGS

- All lessons were well structured, learning outcomes were shared with students and there was good continuity with prior learning.
- Students were encouraged to think clearly, were active in their own learning, developed key skills and were engaged and appropriately challenged by classroom activities.
- Teachers had high expectations of students commensurate with their abilities and learning styles.
- Teaching methods, including the use of information and communication technology (ICT) were effective although some further development of methodologies is needed.
- Formative assessment had a positive impact on student learning although some aspects of assessment require further development.
- Comprehensive and collaborate plans and schemes of work are available for Science and Physics.

MAIN RECOMMENDATIONS

- Students should be afforded the opportunity to participate more fully in some lessons by limiting teacher direction and by further discussion during classroom activities.
 - Modes of assessment should be developed to include the increased use of formative written feedback to students and the further use of worksheets on the theme of individual lessons.
 - The timetabling of Science should ensure that lessons are well distributed throughout the week.
 - Science and Physics plans should be developed to include long-term targets for the development of the subjects and the formulation of Transition Year (TY) planning for Science in line with Department guidelines.
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INTRODUCTION

Newpark Comprehensive School serves a largely urban catchment area, caters for boys and girls and has a current enrolment of 828 students. The school offers a range of programmes including the Leaving Certificate Vocational Programme (LCVP) and Leaving Certificate Applied (LCA) programme and a compulsory TY programme. Junior science is a core subject.

TEACHING AND LEARNING

- Lessons were well structured, had clear aims and learning outcomes were shared with students at the outset. There was very good continuity with prior learning and lessons were consistent with the planned programme of work.
- Affirmation of student effort was a positive feature of many lessons. Teachers used differentiation appropriately to support students in their learning. Lessons were particularly effective when teachers delivered short clear inputs at suitable intervals and when teachers circulated the classroom helping to ensure that all students were supported in their work.
- The positive classroom atmosphere created a supportive learning environment. Overall, very good efforts were made to get students involved in lessons. However, students should be afforded the opportunity to participate more fully in some lessons by limiting extensive teacher direction and by further discussion during classroom activities. For example, lessons should be planned so that students can be afforded the opportunity to interact and give their input at suitable intervals. In this way, students can make a more meaningful contribution to some lessons while consolidating their learning.
- Group work was well organised but was somewhat restricted by the physical infrastructure of the laboratories. In some lessons, students should be reminded to adhere to discrete groups for the duration of the practical investigation to enable group work efficiency to improve.
- Students were encouraged to think clearly, were active in their own learning, developed key skills and were motivated, engaged and appropriately challenged by classroom activities.
- Teachers had high expectations of students commensurate with their abilities and learning styles. Some teachers paid particular attention to the spelling of key words thus supporting literacy and in particular scientific literacy.
- Teaching methods, including the use of ICT were effective in many lessons. Presentations were relevant and well designed and there was effective use made of animations and applets. However, in some instances, rather than presenting material for an extended time, teachers should consider inviting further student participation, especially when resources utilised are designed to be interactive.
- Formative assessment had a beneficial impact on student learning, particularly through positive comments and annotation of students' copybooks. This practice should be extended. Some aspects of assessment require further development. Modes of assessment should be developed to include the increased use of formative written feedback to students and the further use of worksheets on the theme of the individual lesson.
- There was effective use of appropriate and challenging questioning in all lessons observed. Students responded confidently to questions on their work. Leaving Certificate examination results are analysed and academic student achievement is monitored. This is good practice.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- Science is provided as a core subject at junior cycle. Physics, Chemistry and Biology are offered at senior cycle and elective Science forms part of the LCA curriculum. Practical science modules are offered to TY students. The level of support provided to students in making an informed choice of subjects for Leaving Certificate is very good.
- Time allocation to the range of science subjects is appropriate. Some class groups are timetabled for double periods of Science on consecutive days. The timetabling of Science should ensure that lessons are well distributed throughout the week. This approach will support learning and support more effective homework provision.
- The level of support for students with special educational needs is very good. Teachers are aware of students' individual needs and students are well supported in this regard.
- The school's five teacher-based laboratories and preparation areas are well organised. While basic facilities are available, the laboratories are in need of further upgrading to support the delivery of effective investigative practical work. For example, some laboratories operate with just four student sinks while others have gas taps in need of maintenance.
- The school's health and safety statement should be updated to include a section on Science provision following an audit of science facilities and chemical storage.
- The profile of Science is promoted in many ways including Science Week activities, cross-curricular collaboration and participation in the BT Young Scientist and Technology competition. The commitment of teachers in this regard is very praiseworthy.
- Relevant continuing professional development (CPD) courses are supported by senior management for all science teachers.

PLANNING AND PREPARATION

- Comprehensive and collaborate plans and schemes of work are available for Science and Physics. When these plans are reviewed, identified areas for development should include long-term targets for subject development and the formulation of science TY planning in line with Department guidelines.
- Science department planning meetings are convened each term and minutes reflect the wide range of relevant topics discussed.
- Co-ordination of Science in the school was traditionally a post of responsibility. In the current school year these responsibilities are taken by the principal. Teachers assigned to each laboratory liaise with the principal on department needs. In the present circumstances, the good practice of the creation of a science co-ordinator on a voluntary rotating basis should be considered.
- Teachers maintain good records of completion of student homework, assessments and attendance. There was very effective individual teacher planning and resource planning in evidence in advance of lessons observed.

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.

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