Subject Inspection of Science and Biology
REPORT

Tallaght Community School
Tallaght, Dublin 24
Roll number: 91335U

Date of inspection: 20 September 2011
REPORT
ON
THE QUALITY OF LEARNING AND TEACHING IN SCIENCE AND BIOLOGY

INFORMATION ON THE INSPECTION

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<th>Date(s) of inspection</th>
<th>19 &amp; 20 September 2011</th>
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| **Inspection activities undertaken** | • Examination of students’ laboratory notebooks and copybooks  
• Observation of teaching and learning in eight class periods  
• Feedback to science and biology teachers, principal and deputy principal |
| • Discussion with principal  
• Discussions with science and biology teachers  
• Review of teachers’ notes, plans and records  
• Interaction with students | |

MAIN FINDINGS

- The quality of teaching was of a high standard in the lessons observed and, in a number of instances, was of a very high standard, with examples of very good practice evident in all lessons observed.
- In a number of lessons, a commendable emphasis was placed on students’ understanding and use of subject-specific vocabulary.
- Practical work was well managed and carried out in an efficient and safe manner.
- Classroom routines were strong and teachers had high expectations regarding the quality of students’ work.
- Students were well challenged by their teachers and were well supported to respond to the challenges. They engaged very well in the learning process, worked hard and their behaviour was exemplary in all lessons.
- Curricular planning is basic and in need of further attention.

MAIN RECOMMENDATIONS

- It is recommended that sharing lesson objectives with students at the beginning and reviewing them at the close of lessons becomes standard practice across the science department.
- Teachers should agree and implement common standards for monitoring students’ written work and for providing formative feedback to students.
- It is recommended that the members of the science department review how the department is managed.
- It is recommended that course-delivery schedules are adapted to define termly increments of work and that they are written in terms of learning outcomes.
INTRODUCTION

Tallaght Community School offers Science as a core subject in first year. Biology, Chemistry and Physics are offered as optional subjects in senior cycle. Modules in the sciences are provided in the compulsory Transition Year (TY). Leaving Certificate Applied students follow the science elective. The school, which participates in the Delivering Equality of Opportunity in Schools initiative, has a current enrolment of 680 students.

TEACHING AND LEARNING

- All lessons observed were well prepared and were characterised by high quality teacher-student interactions. Teacher-student relationships were very good and a positive, pleasant, working atmosphere prevailed. A good level of student learning was evident in each lesson.
- Lessons were appropriately paced and well structured, with a clear introductory phase followed by the exposition of new material through the use of appropriate and stimulating methodologies. Students were then provided with opportunities to put their learning into practice and new learning was reviewed at the close of lessons. In order to enhance lesson structure and to further inform and motivate students, it is recommended that lesson objectives are shared with students at the beginning of each lesson and that closing reviews are carried out in relation to these objectives.
- In a number of instances, there was a commendable focus on both scientific and general literacy, with an emphasis on key terminology and ensuring students could spell, understand and use newly introduced key words. It is recommended that the members of the science department agree and implement a common approach to supporting students’ literacy development.
- In general, questioning was well used as a classroom technique. However, an occasional tendency to name the respondent before asking a question should be guarded against.
- Appropriate use of information and communication technology (ICT) was noted in all classrooms visited.
- Practical work was safely and effectively managed in all lessons where it was observed. Students were well prepared in advance and were afforded opportunities to examine their results and draw appropriate conclusions when the practical work was completed, thus reinforcing their learning.
- Classroom management was very good. Students were well challenged by their teachers and were well supported to respond to the challenges. They engaged very well in the learning process, worked hard and their behaviour was exemplary in all lessons.
- Students were well affirmed for their in-class work and effort; in some lessons, this affirmation extended to their written work, with positive feedback pointing the way to improvement. It is recommended that the science teachers agree and implement common standards for correcting students’ work and providing developmental feedback to students.
- Students’ progress and competence is monitored and assessed effectively by a range of assessment modes, for example oral questioning, regular class assessments, homework assignments and examination questions.
SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- Curricular provision in the sciences is good. Science is a core subject for first-year students and is optional in second and third year, with a good level of uptake. The compulsory TY science modules are a good support for those students who did not take Science in the Junior Certificate examination but who wish to take a science subject to Leaving Certificate level.

- Time allocation to the sciences is good at all levels.

- All students have weekly access to one of the four school laboratories, which are well maintained and well stocked. The laboratories have a well-developed ICT infrastructure. Storage and preparation areas are well ordered.

- It is recommended that more student-developed posters, charts and project work be displayed on the laboratory walls. It is further recommended that the corridor outside the laboratories be used to highlight and promote the sciences, relevant careers and events and create a positive science-based atmosphere in the vicinity of the laboratories.

- The science department, with management support, actively encourages involvement by students in a variety of co-curricular and extracurricular activities.

- An appropriate system of formal and informal assessment of students’ progress is in place. It is recommended that common examinations be administered at both junior and senior cycle where possible. Progress reports are issued twice each year. Formal parent-teacher meetings are held once each year for each year group and additional contact with parents is as required.

- Teachers are appropriately qualified and deployed. A wide range of expertise is available to the science department to support students’ learning. Continuing professional development is well supported by school management and availed of by teachers.

PLANNING AND PREPARATION

- Although the science department is well co-ordinated and managed, as part of a post of responsibility, a review of the role of the science department co-ordinator and the management of the work of the science department is recommended in order to enhance the existing level of collegiality, to provide leadership opportunities for each department member and to promote a greater degree of shared responsibility.

- Schedules for the delivery of all courses have been prepared, on a full-year basis, and are being implemented. It is recommended that these schedules are adapted to define termly increments of work and that they are written in terms of learning outcomes to assist in more detailed planning of assessments. This will facilitate the possible movement of students between classes, the provision of common examinations, changes in staffing and closer monitoring of curricular progress.

- The TY plan for the sciences comprises lists of topics in Biology, Chemistry and Physics. It is recommended that this plan be reviewed and that clearly defined common objectives are developed.

- It is recommended that the science department members make use of the commendable detailed analysis of state examination outcomes to set targets for improvement, on an ongoing basis. Concrete steps to attain these targets should be documented, implemented and reviewed each year.
The draft findings and recommendations arising out of this evaluation were discussed with the principal, deputy principal and the 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.