Subject Inspection of Science and Chemistry
REPORT

Moyle Park College
Clondalkin, Dublin 22
Roll number: 60121B

Date of inspection: 29 September 2011
REPORT
ON
THE QUALITY OF LEARNING AND TEACHING IN SCIENCE AND CHEMISTRY

INFORMATION ON THE INSPECTION

<table>
<thead>
<tr>
<th>Date(s) of inspection</th>
<th>27 and 29 September 2011</th>
</tr>
</thead>
</table>
| Inspection activities undertaken | • Observation of teaching and learning during seven class periods
• Discussion with principal and teachers
• Interaction with students
• Examination of students’ work
• Feedback to principal and teachers |

MAIN FINDINGS

• The quality of teaching and learning in the majority of lessons was either good or very good and features of good practice were observed in all lessons.

• Teaching and learning was most successful where the pace and structure of the lesson created a purposeful atmosphere in which students were kept on task throughout the lesson.

• In some lessons, students were not kept on task or their progress was not sufficiently assessed to determine whether or not they had taken new material on board.

• There is very good whole-school support for the provision of science subjects.

• The science teachers work in a collaborative and professional manner to provide high quality planning for the provision of science.

• An openness to ongoing review, improvement and innovation is evident in the work of the science department.

MAIN RECOMMENDATIONS

• In order to ensure that lessons are as productive as possible, planning of lessons should be based on the development of clear explicit learning outcomes and such outcomes should be used to assess students’ progress during and at the end of lessons.

• Students’ records of practical activities should be corrected on a regular basis.

• Analysis of data on student outcomes in state examinations, uptake of higher and ordinary levels and uptake of Leaving Certificate science subjects should be used to further support planning for the provision of science.
INTRODUCTION
Moyle Park College is a boys-only voluntary secondary school. The school serves a suburban catchment area, with students drawn from a variety of social and cultural backgrounds. The current enrolment is 641 students. Science is a core subject in junior cycle and in the school’s optional Transition Year. Physics, Chemistry and Biology are provided as optional subjects in senior cycle. Science is also provided as an elective in the school’s Leaving Certificate Applied programme.

TEACHING AND LEARNING
• Teaching and learning was good or very good in the majority of lessons observed. Features of good practice were observed in all lessons.
• The majority of lessons were well managed and lesson content was communicated clearly. A positive and supportive atmosphere was evident in most lessons.
• Good teaching resources such as worksheets and notes were used to facilitate students’ learning. In particular, very good use was made of information and communication technology (ICT) resources to illustrate and explain lesson content.
• Appropriate methodologies were used throughout the observed lessons. Further learning was facilitated by the creation of links with prior learning or students’ everyday experiences.
• The pace and structure of most lessons created a purposeful atmosphere that ensured that students were focused on the work in hand. In some lessons, the good practice of sharing the desired learning outcomes with students at the start of the lesson assisted in the creation of this purposeful atmosphere.
• In one case, the progress of the lesson was interrupted by the poor behaviour of a minority of students. In order to maintain the direction and progress of the lesson in such cases, it is recommended that clear student learning outcomes are developed for each lesson and that these are used to plan the pace and structure of the lesson. These learning outcomes should be shared with students at the start of all lessons.
• Students’ progress in most lessons was well monitored through the questioning of individual students and the use of higher-order questions which required students to show their understanding of the content and concepts being taught. In some cases, students’ progress was not assessed sufficiently and it was unclear whether or not students had understood the material covered. It is recommended that students’ success in achieving the planned learning outcomes should be established at the end of all lessons.
• Homework was assigned and corrected in all lessons. However, in most cases, students’ reports on practical activities were not corrected. In order to ensure that student learning with respect to report writing is consolidated, it is recommended that students’ records of practical activities should be corrected on a regular basis.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT
• There is very good whole-school support for the provision of science subjects in Moyle Park College. All students study Science in junior cycle and a wide range of science subjects is available to students in senior cycle.
• Timetabling arrangements, such as the number of lessons per week and the distribution of lessons across the week, support the teaching and learning of science subjects. Science is timetabled concurrently in junior cycle to allow the creation of smaller class groups.

• The school is well equipped with the necessary resources for the teaching and learning of science subjects. There are four science laboratories and each one has been equipped with an interactive whiteboard and data projector. Laboratory access is arranged collaboratively by teachers.

• The school is very supportive of the continuing professional development of teachers and provides financial assistance to teachers to join their subject associations and to undertake further studies.

• The school has a health and safety policy which is currently under review. The science department has developed subject-specific guidelines regarding health and safety in science. It is suggested that these guidelines should be reviewed in conjunction with the overall review of the school’s health and safety policy.

• The school and teaching staff are committed to promoting science through the provision of extracurricular activities. For example, the Science Club provides an opportunity for students to experience science in an out-of-class setting.

PLANNING AND PREPARATION

• The science department is very well organised and there is a strong commitment to collaborative and on-going planning for the provision of science. The setting of clear planning priorities for the current year, such as promoting the use of ICT in science, is good practice.

• Responsibility for coordinating the work of the science department is taken on a rotating basis by one member of the department. Very good records are kept of the work of the department and it was evident from the records that all aspects of the work of the department are reviewed on a regular basis.

• Subject department planning is focused on developing and continuing improvement in the teaching of science subjects. For example, science teachers are using the school’s ICT resources to enhance the development and sharing of teaching resources and an email facility allows the online sharing of such materials with students as appropriate.

• A good level of preparation for the lessons observed was evident in the advance preparation of various resources.

• Teachers keep good records of students’ attendance and performance throughout the school year. Some analysis of student outcomes in state examinations in terms of grade profiles and uptake of higher and ordinary level has been completed. It is recommended that this data is further analysed with a view to identifying areas for improvement and supporting planning for the provision of science into the future.
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, and the response of the board will be found in the appendix of this report.

Published 27 March 2012
Appendix

SCHOOL RESPONSE TO THE REPORT

Submitted by the Board of Management

Area 1: Observations on the content of the inspection report.

The Board of Management of Moyle Park College is pleased that the report acknowledges the hard work and achievements of the Science and Chemistry teachers. It is delighted to read that their collaborative and professional approach to provide high quality planning for the provision of science is also recognised. Their openness to innovation and ongoing improvement and their organisation of extra-curricular activities such as the Science Club and Science Week gives confidence for the future, as does the very good whole-school support for the science subjects.

Area 2: Follow-up actions planned or undertaken since the completion of the inspection activity to implement the findings and recommendations of the inspection

The Science teachers have welcomed the recommendations outlined in the report and to that affect, we have:

- Incorporated the practice of giving clear explicit learning outcomes at the beginning of lessons. These outcomes are then referred to during the lesson and reassessed at the end of the lesson so as to evaluate the students’ progress. The use of Assessment for Learning (AFL) strategies are also used to ensure that student learning is progressive and consolidated.

- Ensured that students’ records of practical activities are corrected on a regular basis with effective teacher annotation and comment.

- Reviewed our analysis of data on student outcomes in state examinations and the uptake of Leaving Certificate science subjects. We are actively promoting third year and transition year students to choose at least one science subject for their Leaving Certificate.