Subject Inspection of Science and Biology
REPORT

Dunshaughlin Community College
Dunshaughlin, County Meath
Roll number: 71960I

Date of inspection: 26 October 2011
REPORT
ON
THE QUALITY OF LEARNING AND TEACHING IN SCIENCE AND BIOLOGY

INFORMATION ON THE INSPECTION

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<th>Dates of inspection</th>
<th>25 and 26 October 2011</th>
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<td>Inspection activities undertaken</td>
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<td>• Review of relevant documents</td>
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<td>• Discussion with principal and teachers</td>
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<td>• Interaction with students</td>
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<td>• Observation of teaching and learning during nine class periods</td>
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MAIN FINDINGS

• Teachers made use of a range of methodologies and resources to augment the lesson content.

• Lessons were generally well managed.

• Some students’ notebooks contained some very good examples of formative and directional feedback.

• All classrooms visited have PC, data projector and Internet which permits access to SharePoint learning management software. This allows the sharing of digital resources among subject departments at school and county level.

• Detailed and collaborative plans for Science and Biology contained action plans and staff development proposals for the academic year.

MAIN RECOMMENDATIONS

• In some lessons there as a need for more two-way interaction between students and teachers to consolidate learning.

• The science team should discuss and share best practices in developing students’ literacy and numeracy skills.

• The science department discussed and planned the development of kits for mandatory science experiments at junior cycle level and progress with this is recommended.
INTRODUCTION

Dunshaughlin Community College operates under the auspices of County Meath Vocational Education Committee (VEC). It is a co-educational, multi-denominational college which caters for 907 students. The college offers the Junior Certificate programme in the junior cycle and all programmes in the senior cycle of which Transition Year (TY) is optional.

TEACHING AND LEARNING

- The quality of teaching and learning observed was generally good.
- All lessons began with a roll call followed by correction of homework. Learning outcomes were outlined to students at the outset and generally, these were revisited as part of the lesson summary at the end. This is best practice.
- A range of methodologies and resources was used to augment the content of many lessons visited.
- In the majority of lessons there was a good balance between teacher input and student activity. However, a minority of lessons were overly teacher-led and teachers should be mindful of maintaining this balance.
- During practical work, students worked purposefully with good attention to Health and Safety regulations. Good routines have been established for setting up and clearing away apparatus and this is good practice.
- The atmosphere in lessons was positive and a good rapport was seen to exist between students and their teachers.
- Lessons were generally well managed. However, there were instances where a minority of students were inattentive and off-task at key times of exposition. Best practice with regard to classroom management in Science should be discussed and shared at meetings of the science team.
- In the majority of lessons the teacher regularly checked that learning was taking place. This was done through questioning, observation, written exercises as well as feedback from groups during practical work. In some lessons there was a need for more two-way interaction between teacher and students in order to consolidate learning. Where students answer questions and provide contributions to discussions, these should be clarified and then reinforced by the teacher.
- Students have hardback notebooks for class notes and jotters for homework and exercises. These showed evidence of checking and correction by the teachers. Some notebooks contained some very good examples of formative and directional feedback. Good assessment for learning was also observed where homework copies and test scripts were returned to students. It is good to note that promotion of these practices is on the science department’s action plan and this should be progressed.
- The use of strategies to develop students’ literacy and numeracy skills was observed in some lessons. The science team should discuss and share best practice in this area, incorporate these strategies into their teaching where appropriate and detail them in the programmes of study.
SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- Science is a core subject in the junior cycle and all classes are of mixed ability. The optional TY programme contains modules of Biology, Chemistry and Physics. In addition, Agricultural Science is also offered at Leaving Certificate level. An appropriate number of class periods is allocated to the sciences during the week. Management should, where possible and within the constraints of the timetable, avoid allocating double classes across breaks.

- The school has four laboratories with adjacent preparation and storage areas. The school has an application with the Department of Education and Skills for an extension which will provide one new laboratory and refurbish two of the existing laboratories. However, each storage area should be equipped with cupboards for toxic substances and flammable chemicals. Problems with access to gas have resulted in two laboratories being without gas at the time of the evaluation. Management have put plans in place to remedy this and these should be progressed as soon as possible.

- Currently there are nine teachers on the science team. All are appropriately qualified. A range of continuing professional development (CPD) activities has been attended including Assessment for Learning and Promoting Positive Behaviour in the Classroom.

- All classrooms visited have Internet access and contain a PC and data projector. Science teachers also have access to Clickview and Eureka applications. In one lesson, it is notable that digital resources were shared with students via SharePoint learning management software. This software also allows sharing of digital resources among subject departments at school and county level. This is good practice.

- Minutes of science department meetings indicated that the team has discussed and planned the development of kits for mandatory science experiments at junior cycle level. This good practice is recommended.

PLANNING AND PREPARATION

- Detailed and collaborative plans for Science and Biology have been developed. All contained a list of topics to be completed in each year of the cycle, learning outcomes expected, mandatory practicals involved and resources to be used. These were outlined within an appropriate timeframe. A broad and interesting programme is provided in TY science. It is good to note that the programmes of study are being used as working documents by the science team.

- Individual teacher planning was of a good quality. Plans showed good attention to students with special educational needs. Individual Learning Plans (ILP) were included in all teacher folders.

- Formal meetings of the science team have been facilitated by management, and minutes have been recorded. Co-ordinators have been appointed for both Science and Biology and are rotated on an annual basis.

- It is good practice that ‘action plans’ and staff development plans have been put in place for the academic year.
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.

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Appendix

SCHOOL RESPONSE TO THE REPORT

Submitted by the Board of Management
Area 1: Observations on the content of the inspection report

The Board requests that the Department of Education & Skills provide more detailed information regarding best practices in developing students’ Literacy and Numeracy skills.

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