An Roinn Oideachais agus Scileanna

Department of Education and Skills

Subject Inspection of Science and Biology
REPORT

Boyne Community School
Trim, County Meath
Roll number: 91508C

Date of inspection: 25 March 2011
REPORT
ON
THE QUALITY OF LEARNING AND TEACHING IN SCIENCE AND BIOLOGY

INFORMATION ON THE INSPECTION

<table>
<thead>
<tr>
<th>Date(s) of inspection:</th>
<th>24 and 25 March 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Inspection activities undertaken</strong></td>
<td><strong>Observation of teaching and learning during six class periods</strong></td>
</tr>
<tr>
<td>• Review of relevant documents</td>
<td>• Examination of students’ work</td>
</tr>
<tr>
<td>• Discussion with principal and teachers</td>
<td>• Feedback to principal and teachers</td>
</tr>
<tr>
<td>• Interaction with students</td>
<td></td>
</tr>
</tbody>
</table>

MAIN FINDINGS

- In all the lessons visited, the quality of teaching and learning ranged from good to very good.
- The effective use of a range of visual aids was used by teachers to enhance the lesson content and promote learning.
- The science team is appropriately qualified and has availed of continuing professional development (CPD) on an ongoing basis.
- There was a good emphasis on the promotion of literacy and numeracy in the lessons observed.
- Students displayed appropriate skills and worked with good regard for health and safety issues during their experimental work.
- Planning for Science is collaborative and meetings of the science team take place on a regular basis.

MAIN RECOMMENDATIONS

- The science team should discuss and share best practice with regard to assessment at subject department meetings with a view to developing a policy on assessment for the Science department.
- There is no gas in one laboratory and, given the practical content of both the Junior Certificate Science and Leaving Certificate Biology syllabus, it is recommended that this be remedied as soon as possible.
INTRODUCTION

Boyne Community School was founded in 2001 as the result of an amalgamation of St Michael’s Diocesan school and Trim Vocational School. Current enrolment is 675 students who have all senior cycle curricular programmes available to them. The Transition Year (TY) programme is optional. The school is included in the Department of Education and Skills action plan for educational inclusion, Delivering Equality of Opportunity in Schools (DEIS). The school also offers Post-Leaving Certificate and adult education programmes.

TEACHING AND LEARNING

• The teaching and learning in all classes visited ranged from good to very good. Learning outcomes were shared with students at the outset of the lessons. Best practice was observed where these were also noted on the white board and referred to during the lesson as well as used to summarise the lesson at the end. This good practice should be extended to all lessons.

• Good use was made of a range of question types to encourage student engagement as well as check learning and understanding.

• A range of visual aids was used effectively to enhance the lesson content and promote learning. These included the use of overhead projector, data projector, posters, diagrams and worksheets.

• Instruction was clear and concise. Teachers encouraged the use of subject-specific language and there was a good emphasis on correct pronunciation of new terminology.

• There was a good emphasis on the promotion of literacy and numeracy in the lessons observed. This was achieved through the use of tables, graphs, labelling axes, the use of formulae and an emphasis on key words. Students read short sections of text aloud and this also supported literacy.

• There was a good balance between teacher input and student activity in all lessons.

• Where practical work was observed, students displayed appropriate skills and worked with good regard for health and safety issues. Teachers adopted an investigative approach to the planning and procedures of experimental work and this is good practice.

• The atmosphere in all lessons was positive and conducive to work. All classroom activities were well managed and discipline was good.

• Regular end-of-unit assessments take place and are used to build up a profile on students’ achievement. An analysis of achievement in the state examinations is carried out and comparisons are made with national averages with regard to uptake of higher-level papers and the percentage of students achieving grades A and B. This analysis should be expanded to include the lower end of the achievement spectrum.

• Students engaged well with the lesson content. They were attentive, asked appropriate questions and showed a good understanding of the concepts and facts taught.

• Homework is regularly set and corrected. Some exercise books are regularly monitored. There were some instances where instructional and directional feedback was provided making good use of Assessment for Learning practices. However, there is scope to extend
this across the science team. The good practices in assessment for learning should be discussed at subject department meetings and shared among teachers.

- Overall, the area of assessment is one in need of development. The science team should discuss and share best practice with regard to assessment at subject department meetings with a view to developing a policy on assessment for the Science department. This should include assessment for learning and ongoing monitoring of individual student’s progress to gauge effectiveness of teaching and learning. This could then feed into the overall school assessment policy.

**SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT**

- Science is a core subject in the junior cycle. Biology is an optional subject at Leaving Certificate level and forms a module in the TY programme.
- The science team consists of six teachers who are appropriately qualified.
- Management is supportive of continuing professional development (CPD) and a range of courses has been attended. Most recent courses have included the good practices of team teaching and co-operative learning.
- There are four laboratories and one demonstration room with adjacent preparation areas. All are tidy and well maintained. Chemicals are stored appropriately.
- All laboratories are equipped with PC and data projectors and all are internet enabled.
- There is no gas in one laboratory and, given the practical content of both the Junior Certificate Science and Leaving Certificate Biology syllabus, it is recommended that this be remedied as soon as possible.

**PLANNING AND PREPARATION**

- The science department takes a collaborative approach to planning for the subject in the school.
- A subject co-ordinator has been appointed. In keeping with recommended practice, this role rotates among members of the team.
- The science team has formal meetings, which are facilitated by management. Minutes are taken and retained and additional meetings, when required, are held. The team also holds informal meetings, which contribute to the smooth running of the department.
- A subject plan is in place for Junior Certificate Science and Leaving Certificate Biology. It outlines the common agreed teaching programme for all year groups and an appropriate timeframe. These should now be revised to include the learning outcomes based on the relevant syllabus. The resources to be used and the main forms of assessment should also be documented. It is recommended that the science team develop a common template for their programmes of work which can be adapted for all year groups.
- Planning documentation for TY included a range of appropriate topics. The programme of work should include modes of assessment to be utilised, their assessment criteria and performance indicators for the activities as necessary. These criteria should be shared
with students and form the basis of the marks awarded and feedback provided. The template for the programmes of work recommended earlier should be adapted and used in planning the TY science programme.

- Minutes from previous science team meetings indicate that the science team engaged in the process of self-evaluation and review. This good practice should now be revisited.

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, and the response of the board will be found in the appendix of this report.

*Published December 2011*
Appendix

SCHOOL RESPONSE TO THE REPORT

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

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

There is now gas in all the Science Laboratories; the gas problem was rectified during the summer 2011.