An Roinn Oideachais agus Scileanna

Department of Education and Skills

Subject Inspection of Science and Biology
REPORT

Holy Family Secondary School
Newbridge, Co. Kildare
Roll number: 61682A

Date of inspection: 28 January 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>27 &amp; 28 January 2011</th>
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<td><strong>Inspection activities undertaken</strong></td>
<td><strong>Activities undertaken</strong></td>
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<td>• Discussion with principal</td>
<td>• Examination of students’ laboratory notebooks and copybooks</td>
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<td>• Discussions with science and biology teachers</td>
<td>• Observation of teaching and learning in ten class periods</td>
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<td>• Review of teachers’ notes, plans and records</td>
<td>• Feedback to science and biology teachers and principal</td>
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MAIN FINDINGS

- Teaching and learning across the lessons observed was of a uniformly high standard and, in a number of instances, was of a very high standard.
- Lessons were well balanced with student-focussed teaching and active learning was very much in evidence.
- Classroom routines were strong and teachers had high expectations regarding the quality of students’ work.
- Formal and informal assessment of students’ progress and consequent reporting to parents is appropriately managed.
- The allocation of lesson time is in keeping with syllabus recommendations.
- A comprehensive science planning folder has been compiled, including a scheme of work for each year of each course.

MAIN RECOMMENDATIONS

- Greater emphasis on students learning, understanding and using subject-specific vocabulary should be adopted across the science department.
- 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 role of the science department co-ordinator be clarified and that specific functions be assigned to individual teachers.
INTRODUCTION

Holy Family Secondary School is a voluntary secondary school which offers Science as a core subject in junior cycle. Biology, Chemistry and Physics are offered as optional subjects in senior cycle and are also on the curriculum of the school’s optional Transition Year. The school has a current enrolment of 710 girls and serves Newbridge and the surrounding areas. Students come from a wide variety of social and cultural backgrounds. The board of management of the school 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.

TEACHING AND LEARNING

- The quality of teaching and learning was uniformly good across the lessons observed, and very good in a number of instances. All lessons observed were well planned. Teachers employed a variety of appropriate methodologies to engage and stimulate students.
- Very good use of visuals was observed in a significant number of lessons, and these contributed to making lessons interesting and informative.
- Questioning was well used in most lessons, with an appropriate balance between lower-order and higher-order questions. It is recommended that more use be made of directed questions in a few instances, and that care be taken to include all students in the questioning process.
- Students’ contributions were sought and valued in the majority of lessons. The classroom board was used, by some teachers, to record students’ input, giving students ownership of the developing material. Teachers were very affirming of students’ efforts, resulting in a positive learning environment in the classrooms.
- Subject-specific vocabulary was prioritised in one lesson, with students being encouraged to write down new terms and their meanings. It is recommended that a similar approach to highlighting new words be adopted across the science department.
- Lesson structure was well developed where learning objectives were shared with students at the beginning and reviewed at the close of lessons. It is recommended that this structure be adopted as standard practice across the science department.
- There was a good balance between teacher-centred and student-centred phases of lessons and active learning was very much in evidence. An investigative approach was adopted to practical work, which was well managed and carried out safely and efficiently.
- Teachers were conscious of the range of students’ abilities and needs. They circulated well throughout the classrooms, monitoring and assisting students. Opportunities were availed of to implement a differentiated approach.
- Classroom routines were strong and high expectations were apparent regarding students’ behaviour and the quality of their work. Students responded positively in order to meet teachers’ expectations and engaged very well in the learning process.
- Students’ laboratory notebooks were of a high standard where there was good monitoring of these. It is recommended that teachers monitor students’ written work and provide supportive feedback, to an agreed common standard.
**SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT**

- Science is a core subject for junior cycle students and time allocated meets syllabus recommendations. The uptake of Biology in senior cycle is very strong and appropriate time is allocated.
- Support for the provision of extracurricular activities is good. Activities include entry to the Young Scientist exhibition, poster competitions and science quizzes during Science Week.
- An appropriate system of formal and informal assessment of students’ progress and of reporting to parents is in place and reports are issued twice each year. Formal parent-teacher meetings are held once each year for every year group and additional contact with parents is as required.
- The laboratories are in good condition, well stocked, well organised and fit for purpose. Appropriate displays of posters and charts, including students’ work, are evident on the laboratory walls. The storage of chemicals is properly managed.
- The information and communication technology (ICT) infrastructure is good with data projectors and broadband access available in all laboratories.
- Teachers are appropriately qualified and deployed. They have a wide range of expertise which is well used to support students’ learning.
- In-class support is provided for students with additional educational needs by a science-qualified resource teacher. This provision is highly commended.
- Continuing professional development is well supported and it is commendable that the school supports membership of the Irish Science Teachers Association for all of the science teachers.
- Health and safety issues are given due priority. To enhance provision, it is recommended that short safety notices be prominently displayed at various locations in the laboratories.

**PLANNING AND PREPARATION**

- Formal subject planning is thorough and a comprehensive planning folder has been compiled. A scheme of work for each year of each course has been documented. Individual teachers have developed term-level schedules for course delivery. These should be included in the planning folder.
- School management facilitates science department meetings through appropriate provision of time each term and ongoing informal meetings occur.
- The science department members co-operate well and are very supportive of each other. In order to enhance this collegiality, it is recommended that the role of the science department co-ordinator be clarified and that specific functions, for example planning and stock control, be devolved to individual teachers.
- In view of improvements in the ICT infrastructure, it is recommended that a member of the science department examine available software packages, research how best to make use of ICT facilities in teaching and learning, and report back to the department.
- School management carries out an annual analysis of state examination outcomes. It is recommended that this function be devolved to the science department, that the department reports to senior management and that action planning for improvement follows.
- Record keeping by individual teachers is good and sufficient information is recorded to provide a profile of each student and to support the provision of advice to students.
CONCLUSION

A summary of the draft findings and recommendations arising out of this evaluation was presented to the principal and subject teachers at the conclusion of the evaluation. These were discussed with the inspector.

Published, October 2011
Appendix

School response to the report

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

The Science Department is very pleased with this very positive report and feels that it accurately reflects the hard work and commitment of the Science staff.

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 Department undertakes to implement the findings and recommendations of the inspection.