Subject Inspection of Science and Biology
REPORT

St Aidan’s Comprehensive School
Cootehill, County Cavan
Roll number: 81005Q

Date of inspection: 2 March 2012
REPORT
ON
THE QUALITY OF LEARNING AND TEACHING IN SCIENCE AND BIOLOGY

INFORMATION ON THE INSPECTION

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<th>1 and 2 March 2012</th>
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<td><strong>Observation of teaching and learning during six class periods</strong></td>
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<td>• Discussion with principal and teachers</td>
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MAIN FINDINGS

- The quality of teaching and learning in lessons visited was very good overall.

- The science teachers had planned meticulously for the lessons, instruction was clear and the lesson content was informed by up-to-date information and everyday examples.

- Lessons included well-chosen resources and good use of Information and Communications Technology (ICT).

- Classroom management was very good and teachers created a pleasant and supportive learning environment.

- The three recently refurbished laboratories are maintained to a very high standard and each is equipped with an interactive white board.

- There is a proactive and organised approach to subject planning for Science.

MAIN RECOMMENDATIONS

- Best practices in differentiated methodologies should be discussed and shared among the science team.

- Programmes of study would be further enhanced by the inclusion of learning outcomes for students and development of the sections on resources and assessment modes where necessary.

- Action planning should be expanded to include specific targets, personnel involved as well as success criteria and the timeframe involved.
INTRODUCTION

St Aidan’s Comprehensive School is a co-educational school with a current enrolment of 490 students. In addition to the Junior Certificate and Leaving Certificate programmes, the school offers an optional Transition Year programme (TY) and the Leaving Certificate Applied programme (LCA).

TEACHING AND LEARNING

- The quality of teaching and learning was very good overall.
- The science teachers had planned meticulously for the lessons. Learning outcomes were shared with students at the beginning of lessons. This good practice was most effective when they were revisited during the lesson and used to summarise at the end.
- Teacher instruction was very clear and accurate and the lesson content was informed by up-to-date information and everyday examples.
- Good practices were observed where students were given opportunities to work in pairs and provide feedback to the entire class. Teachers made good use of these opportunities to discuss feedback and to consolidate learning either verbally or on the white board.
- The lessons included well-chosen resources, some researched from the internet and others were teacher-developed. Good use was made of websites, animations, diagrams, pictures, worksheets and handouts. Some worksheets followed a format of ‘predict, observe and explain’ which is good practice. PowerPoint presentations were clear and appropriately pitched. Best practice was observed where they were supplemented by worksheets or prompted student activities.
- Students’ literacy and numeracy skills were developed through the use of key words, subject-specific terminology and the use of units, fractions and calculations.
- In all lessons observed classroom management was very good. Teachers created a pleasant and supportive learning environment. Teaching and learning proceeded in a caring and respectful atmosphere.
- A range of questioning strategies was used and these varied from direct recall to those which promoted higher-order thinking skills. Questioning was also used to encourage students’ contributions to discussions and check on previous knowledge. Best practice was evident where the questions were well spread amongst the class members and there was evidence of differentiation within question types. Some lessons were differentiated as to content and outcome which are good practices. These good practices should be shared among the science team.
- A review of a wide range of students’ copybooks, folders, tests and coursework notebooks provided evidence of very good progress in their work. Many folders were well organised and well maintained and teachers should encourage this practice in every lesson.
- Homework is assigned and monitored regularly. There were some very good examples of the provision of constructive feedback to students on both their written work and practical coursework. It is now timely for all members of the team to consider how these practices could support the assessment tools that they already use.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- Science is an optional subject in the junior cycle and uptake is good. Biology, Chemistry and Physics are offered at senior cycle with Biology being the most popular. The optional transition year provides a ten-week module of each of the three sciences.
There is very good provision and whole-school support for Science and Biology. Timetabling of the subjects is very satisfactory with a good spread of lesson periods throughout the week.

Senior management is very supportive of and facilitates the continuing professional development (CPD) of teachers at whole staff level and at subject department level.

There are three recently refurbished laboratories in the school. They are maintained to a very high standard and each is equipped with an interactive white board. All three have preparation areas and chemical stores which are tidy and well organised.

Recently reviewed homework and assessment policies are in place and a review of the Health and Safety policy is currently underway.

PLANNING AND PREPARATION

- The science department is well co-ordinated and there is a good level of collaboration among the science team. Currently the role of subject co-ordinator rotates amongst the science teachers every two years and this is good practice.
- Minutes of subject department meetings indicate that there is a proactive and organised approach to subject planning for Science. Comprehensive subject department planning documentation was provided.
- Programmes of study comprise a substantial amount of the subject department plans. The Junior Certificate Science programmes are syllabus-based and provide details of the topics to be covered within appropriate timeframes. These plans would be enhanced by the inclusion of learning outcomes for students and development of the sections on resources and assessment modes for each topic. The programme of work for Biology states learning outcomes for students as well as appropriate methodologies and timeframes. However, the section on resources should be further developed.
- Planning for the Science modules offered in TY is in line with the key principles of the transition year programme and a broad and varied programme is provided.
- Teachers’ individual planning is of a high quality and there is evidence that a good level of collaboration takes place between the Special Educational Needs department and the science teachers. Best practices were observed where individual teacher plans included a class profile and student achievement in assessments.
- It is positive that the science department has adopted a reflective approach to subject planning and this is evident in the action planning provided in the plans. It is noteworthy that the most recent analysis of student achievement in certificate examinations outlines the areas for development and actions to be taken. This process should be expanded to include specific targets, personnel involved as well as success criteria and the timeframe involved.

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 of Management of St Aidan's Comprehensive School welcomes this report by the Inspectorate commending the excellence of the Science and Biology department.

We are particularly pleased with the acknowledgement by the Inspector of the high quality of teaching and learning within the Science and Biology Department. The report recognises the commitment of the school and the Science and Biology Department to the provision of a caring and supportive learning environment. The commendation of the high level and quality of planning within the Science and Biology Department gives justifiable recognition to the huge amount of time, effort and professional input by the Science and Biology teachers.

Finally, the Board of Management places on record, our unanimous appreciation for the professionalism and courtesy of the visiting inspector and the collaborative and positive manner in which this inspection was carried out.

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 and Biology Department and the Management of St Aidan's are fully committed to the continuing development of teaching and learning generally, and specifically the development of Science and Biology within St Aidan's.

Following a review of the Inspectors report the school management and Science and Biology department consider the recommendation as a means of building on our strengths and an opportunity to address areas for further development.

We have been assured by the affirmations given by the Inspectors Report and will continue to ensure the provision of a high quality learning and engaging Science and Biology subject department in St Aidan's.