

**An Roinn Oideachais agus Scileanna
Department of Education and Skills**

Subject Inspection in Science

REPORT

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| Ainm na scoile / School name | Our Lady's College |
| Seoladh na scoile / School address | Presentation Road Galway |
| Uimhir rolla / Roll number | 68285C |

Date of Inspection: 17-October-2018



An Roinn Oideachais
agus Scileanna
Department of
Education and Skills

SUBJECT INSPECTION

Subject Inspections report on the quality of work in individual curriculum areas within a school. They affirm good practice and make recommendations, where appropriate, to aid the further development of the subject in the school.

HOW TO READ THIS REPORT

During this inspection, the inspector evaluated learning and teaching in Science under the following headings:

1. Teaching, learning and assessment
2. Subject provision and whole-school support
3. Planning and preparation

Inspectors describe the quality of each of these areas using the Inspectorate's quality continuum which is shown on the final page of this report. The quality continuum provides examples of the language used by inspectors when evaluating and describing the quality of the school's provision in each area.

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.

CHILD PROTECTION

During the inspection visit, the following checks in relation to the school's child protection procedures were conducted:

1. The name of the DLP and the Child Safeguarding Statement are prominently displayed near the main entrance to the school.
2. The Child Safeguarding Statement has been ratified by the board and includes an annual review and a risk assessment.
3. All teachers visited reported that they have read the Child Safeguarding Statement and that they are aware of their responsibilities as mandated persons.

The school met the requirements in relation to each of the checks above.

SUBJECT INSPECTION

INSPECTION ACTIVITIES

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| Date of inspection | 17-October-2018 |
| Inspection activities undertaken <ul style="list-style-type: none">• Review of relevant documents• Discussion with principal and key staff• Interaction with students | <ul style="list-style-type: none">• Observation of teaching and learning during four class periods• Examination of students' work• Feedback to principal and relevant staff |

School context

Our Lady's College is a girls-only voluntary school and currently has an enrolment of 288 students. It operates under the trusteeship of CEIST – Catholic Education - An Irish Schools' Trust. At the time of the evaluation, the school was operating on two campuses about a kilometre apart. The curriculum includes the junior cycle programme, the Junior Certificate School Programme, an optional Transition Year (TY), the Leaving Certificate, the Leaving Certificate Vocational Programme and the Quality and Qualifications Ireland (QQI) Level 4 programme.

SUMMARY OF MAIN FINDINGS AND RECOMMENDATIONS:

Findings

- The quality of teaching in the lessons observed was good.
- The science teachers have engaged meaningfully with the new Science specification in terms of planning and preparation, though some of the investigations observed needed to be less teacher-led.
- The quality of learning was good, though there is a need for teachers to spend more time in lessons checking on the intended learning.
- The quality of whole-school support by senior management is very good; Science is a core subject in the school and the time allocation for Science is in line with specification guidelines.
- The two campuses have four well-resourced science laboratories in total and student access for practical and investigative work is very good.
- The science department's planning is very good and teachers have developed very detailed schemes of work.

Recommendations

- Teachers should ensure that lessons include sufficient time to check that, as an assessment for learning (AfL) strategy, students are achieving the intended learning.
- The science department should review any investigations that are too teacher-led in order to further develop enquiry-based methodologies and strengthen student autonomy during investigations in line with the new Science specification.

DETAILED FINDINGS AND RECOMMENDATIONS

1. TEACHING, LEARNING, AND ASSESSMENT

- The quality of teaching in Science was good during the evaluation. Teachers have availed of continuing professional development (CPD) and planning documentation showed that significant progress has been made in engaging with the new Science specification.
- Preparation for lessons was good. Learning intentions were shared with or made clear to students in all cases. However, teachers should make use the learning intentions during lessons to check if the intended learning is taking place. Sufficient time should also be provided to consolidate learning at the end of lessons. These AfL strategies will assist teachers in gauging the pace required for each class group as it was an issue in some cases.
- Effective methodologies were used by teachers and students during lessons. Teachers provided clear instructions to students and good use was made of information and communications technology (ICT). Students worked well independently and in groups, though, in some cases, the provision of timeframes, greater clarity in terms of defined roles, and better feedback processes would have strengthened the group tasks undertaken. All lessons observed had a good balance between the time spent on teacher instruction and student activity. Enquiry-based methodologies were used well during investigations. The science department should review any investigations that are too teacher-led in order to further develop enquiry-based methodologies and strengthen student autonomy during investigations.
- The quality of learning was good. Students were engaged, motivated, showed good levels of understanding and used scientific terminology effectively. There was some reflection by students in assessing their progress. However greater use of these strategies, including sharing of success criteria, should be undertaken, and all students should be encouraged to use the learning intentions to reflect on their own learning.
- Classroom management was very good. Student-teacher interactions were very good and student behaviour was exemplary. The laboratories had suitable scientific charts, posters and samples of students' work on display.
- All classes were of mixed ability and differentiation strategies were very good in lessons. Teachers provided additional support to students where it was required and more able students were given extension exercises to provide them with suitably challenging material when they completed tasks early.
- The quality of assessment was good. Questioning was generally good throughout the evaluation and students provided good responses. In some cases, there was an over-reliance on global questioning and as a result not all students were motivated to respond. Distributing questions across the whole cohort of students and other AfL strategies should be used to check that learning intentions have been attained successfully by students.
- Homework is assigned and corrected regularly and is suitably varied. Good levels of formative feedback are provided to students about how they can improve their work. Students should be encouraged to record and act on any oral or written feedback provided.
- Literacy and numeracy were features of all lessons. Prefixes were used to help break down scientific terminology and difficult or new words were explained to students. Skills of prediction, estimation and accuracy of data were incorporated into lessons. An importance was placed on units when they were required, and best practice in relation to graph work was in evidence.

2. SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- The quality of whole-school support and subject provision by senior management is very good. Science is a core subject in the school and students are offered Physics, Chemistry and Biology at senior cycle.
- The time allocation for Science is in line with specification guidelines. All junior-cycle year groups have at least one double period of Science for practical work.
- There are four well-resourced laboratories between the two campuses. All science lessons take place in these rooms. Health and safety equipment, including first-aid kits and fire extinguishers, are located in the laboratories. Chemicals are appropriately stored in the preparation room. Teachers undertake risk assessment of their rooms and the school has a good health and safety policy. The board of management should ensure that the health and safety policy is ratified on an annual basis.
- The science teachers are members of the Irish Science Teachers' Association and senior management supports teachers' participation in attending CPD and other professional networks. Students have been encouraged to participate with a number of co-curricular and extra-curricular activities such as the BT Young Scientist and Technology Exhibition, SciFest, Science Week, Future Wize, Junior Achievement, and various outreach opportunities with the National University of Ireland, Galway.

3. PLANNING AND PREPARATION

- The quality of the science department's planning is very good. A co-ordinator is appointed and this role is rotated amongst the teachers periodically. The teachers use formal meetings and planning time to reflect on their work for the new specification. The teachers worked hard collectively to put the very good planning structures into place. Minutes of meetings are maintained and are used as a communication channel to senior management. The CPD undertaken by the teachers is kept on file and records of strengths and challenges for the department are documented.
- The practice of sharing and trying to implement recommendations from previous subject inspections in Our Lady's College was evident. The science department analyses state certificate examination results against national averages. Drawing on the context provided in these results, they should be used to set targets and devise strategies for year-on-year improvement. Any targets and strategies decided upon should be discussed at meetings and recorded in minutes.
- The schemes of work are very detailed and provide strong evidence that the teachers are drawing on learning from CPD and their own upskilling in relation to best practice in planning. Units of work have been devised which link learning intentions to specific teaching methodologies and assessment modes. Most units of work are centred on one of the four main strands of the Science specification. In future schemes of work, the science department should look to make more links between the strands, where appropriate.

The draft findings and recommendations arising out of this evaluation were discussed with the principal and subject teachers at the conclusion of the evaluation.

Appendix

SCHOOL RESPONSE TO THE REPORT

Submitted by the Board of Management

Part A Observations on the content of the inspection report

The Board is satisfied that the recommendations made in the report are already being planned for and implemented by the Science Department.

- The Board of Management was very satisfied that the quality of teaching, learning, assessment and lesson preparation were deemed to be good, that the quality of classroom management and the quality of the department's planning and use of differentiation strategies were deemed to be very good.

Part B 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 has begun to reassess its AfL Strategies and is trying to ensure that enough time is given to evaluate the student learning at the end of lessons.
- The Science Department will continue to evaluate the balance of time given to the teacher-led Investigations and continues to encourage autonomy among the students to develop their skills in leading the enquiry-based investigations in line with the new Science specifications.
- The Science Department will further engage with the best practices in relation to sharing of success criteria with the students and students engaging in Reflective Practice.

THE INSPECTORATE'S QUALITY CONTINUUM

Inspectors describe the quality of provision in the school using the Inspectorate's quality continuum which is shown below. The quality continuum provides examples of the language used by inspectors when evaluating and describing the of quality the school's provision of each area.

| Level | Description | Example of descriptive terms |
|---------------------|---|---|
| Very Good | Very good applies where the quality of the areas evaluated is of a very high standard. The very few areas for improvement that exist do not significantly impact on the overall quality of provision. For some schools in this category the quality of what is evaluated is outstanding and provides an example for other schools of exceptionally high standards of provision. | Very good; of a very high quality; very effective practice; highly commendable; very successful; few areas for improvement; notable; of a very high standard. Excellent; outstanding; exceptionally high standard, with very significant strengths; exemplary |
| Good | Good applies where the strengths in the areas evaluated clearly outweigh the areas in need of improvement. The areas requiring improvement impact on the quality of pupils' learning. The school needs to build on its strengths and take action to address the areas identified as requiring improvement in order to achieve a <i>very good</i> standard. | Good; good quality; valuable; effective practice; competent; useful; commendable; good standard; some areas for improvement |
| Satisfactory | Satisfactory applies where the quality of provision is adequate. The strengths in what is being evaluated just outweigh the shortcomings. While the shortcomings do not have a significant negative impact they constrain the quality of the learning experiences and should be addressed in order to achieve a better standard. | Satisfactory; adequate; appropriate provision although some possibilities for improvement exist; acceptable level of quality; improvement needed in some areas |
| Fair | Fair applies where, although there are some strengths in the areas evaluated, deficiencies or shortcomings that outweigh those strengths also exist. The school will have to address certain deficiencies without delay in order to ensure that provision is satisfactory or better. | Fair; evident weaknesses that are impacting on pupils' learning; less than satisfactory; experiencing difficulty; must improve in specified areas; action required to improve |
| Weak | Weak applies where there are serious deficiencies in the areas evaluated. Immediate and coordinated whole-school action is required to address the areas of concern. In some cases, the intervention of other agencies may be required to support improvements. | Weak; unsatisfactory; insufficient; ineffective; poor; requiring significant change, development or improvement; experiencing significant difficulties; |