

An Roinn Oideachais agus Scileanna
Department of Education and Skills

Subject Inspection in Science & Biology

REPORT

Ainm na scoile / School name	Our Lady's Bower
Seoladh na scoile / School address	Retreat Rd. Athlone Co Westmeath
Uimhir rolla / Roll number	63210P

Date of Inspection: 15-10-2019



**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 & Biology 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.

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

Dates of inspection	14 & 15 October 2019
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 six lessons• Examination of students' work• Feedback to principal and relevant staff

School context

Our Lady's Bower is a voluntary secondary school for girls with a current enrolment of 708 students. The school is situated in Athlone, Co. Westmeath and draws students from a large catchment area. Science is compulsory at junior cycle with a large uptake of Biology at senior cycle. The school offers an optional Transition Year programme.

SUMMARY OF MAIN FINDINGS AND RECOMMENDATIONS:

Findings

- The quality of teaching and learning in lessons was good overall.
- Lessons were well planned and, in the majority of cases, such planning supported very high levels of attainment; there is scope to further integrate more active methodologies.
- A variety of assessment for learning (AfL) strategies supported valuable student input in a significant minority of lessons.
- Whole-school provision for Science and Biology is very good.
- Substantial work has occurred recently in planning for the implementation of the junior cycle science specification.
- Extensive provision and participation in co-curricular and extra-curricular activities are a significant strength in the school.

Recommendations

- Active teaching methodologies should be more frequently employed in order to facilitate more opportunities for students' skills development.
- A more consistent approach to the use of AfL strategies should be adopted both during lessons and with respect to assessment of students' written work.

DETAILED FINDINGS AND RECOMMENDATIONS

1. TEACHING, LEARNING, AND ASSESSMENT

- All lessons had a clear opening phase when learning intentions were appropriately shared with students. In the majority of lessons, this was followed by a developmental stage where prior knowledge was assessed and new learning was facilitated. Students were given valuable opportunities to put their learning into practice.
- Highly effective learner outcomes resulted when student-centred active methodologies provided opportunities for students to work together and to challenge themselves. In lessons where these methodologies were used, students deepened and assessed their own learning whilst making commendable contributions to lessons.
- Students' knowledge was assessed by their teachers in all lessons. Notably, in a significant minority of lessons inquiry-based activities led to the most valuable learner outcomes and experiences. In these lessons, the challenge level was pitched very successfully through scaffolding questions and collaborative activities that expertly guided students towards their own learning outcomes. Provision of more opportunities for inquiry-based active learning was an area for development in the majority of lessons.
- Effective lessons were characterised by an appropriate balance between attainment of knowledge and skills. In highly effective lessons, student input was well balanced with teacher-led input. Commendably, in these lessons, student feedback from collaborative activities was also highly valued. Student engagement through peer interactions contributed to their learning and well-being, and supported development of the skills of *Communicating in Science*.
- In the most effective lessons, high levels of student input which enhanced their learning experience were supported through the use of a variety of AfL strategies. In other lessons, there was scope for the use of a wider variety of AfL approaches.
- In all lessons, students' science literacy and numeracy skills were overtly supported through successful exploration, emphasis and by making cross-curricular links that both referenced and applied knowledge to develop reasoning.
- Practical work was observed in two lessons and this was carried out safely and very effectively supported learning.
- Classroom management was very good in all lessons and students' behaviour was of an exceptionally high standard.
- Teachers circulated well throughout the classrooms during lessons, assessing students' progress and providing support to them as necessary. There is scope to enhance differentiation through use of more targeted strategies and activities that take consideration of the broad range of abilities of students.
- Teachers provided students with very good oral feedback on their work during lessons. Homework was monitored, and a few samples of written developmental feedback, were evident in the copies reviewed. There was significant scope to provide more formative feedback to students on their written work.

2. SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- Provision for the sciences is very good: Science is a core subject for junior cycle and for TY students. All the optional science subjects are available to Leaving Certificate students. Time allocation to the sciences is above the syllabus and specification requirements.

- The school's three laboratories and other well designated rooms facilitate practical application of the sciences. The school's support for the sciences is further exemplified by its provision, from its own resources, of a laboratory technician.
- A very high degree of planning and co-operative sharing of facilities commendably maximises the use of laboratory time to deliver practical lessons. All students have weekly access to a laboratory. Practical class planning is highly effective and students reported high levels of enjoyment in their practical lessons.
- Teachers provide very good support for a wide range of science-related extra-curricular activities. It is very positive that STEM-related activities and exhibitions are promoted and attended regularly. The school has annual success at regional and national science related competitions.
- Teachers, with the support of senior management, have availed of extensive and relevant continuous professional development opportunities. Teachers are members of the Irish Science Teachers' Association.
- There are very good systems in place for formal assessment through common termly examinations and the recent introduction of student-centred academic tracking.

3. PLANNING AND PREPARATION

- The quality of planning and preparation as observed was very good. The schools' recent move to the use of an online platform to share templates that facilitate planning, meetings and sharing of resources was seen to be of great benefit.
- Very good subject department planning was seen for Science and Biology. Collegiality amongst the members of the science and biology teams is very good and highly valued. The departments meet regularly and collaborative practice is evident in the sharing of resources and methodologies.
- The departments are well organised, and the role of co-ordinator is rotated every two years providing very good leadership opportunities.
- Minutes of meetings are kept and notably show discussion of teaching and learning, school self-evaluation targets, inspection recommendations and AfL needs.
- Planning documents indicate substantive work has occurred recently to support implementation of the junior cycle specification and included references to the level two learning programme. Further consideration to individualised planning, for students following a level two junior cycle programme, continues to be a focus for the school.
- Planning documents are commendably written in terms of learning outcomes with associated teaching methodologies and assessment strategies. Course schedules enable common assessments.
- The science and biology teachers carry out an annual analysis of outcomes from certificate examinations. It is very positive that these outcomes are reported to the schools' board of management. Commendably this analysis also informs an evidence-based approach to reflection and improvement planning.

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 of the school was given an opportunity to comment on the findings and recommendations of the report; the board chose to accept the report without response.

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 quality the of 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;