

An Roinn Oideachais agus Scileanna
Department of Education and Skills

Subject Inspection in Science and Chemistry

REPORT

Ainm na scoile / School name	Ballincollig Community School
Seoladh na scoile / School address	Innishmore Ballincollig Co. Cork
Uimhir rolla / Roll number	913860

Date of Inspection: 03-04-2019



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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 and Chemistry 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 was given an opportunity to comment in writing on the findings and recommendations of the report; a response was not received from the board.

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	02 and 03-04-2019
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 class periods• Examination of students' work• Feedback to principal and relevant staff

School context

Ballincollig Community School is a co-educational school which operates under the joint patronage of the Diocese of Cork and Ross and the Cork Education and Training Board. It has an enrolment of 788 students. The Junior Cycle programme, a compulsory Transition Year (TY), the established Leaving Certificate and the Leaving Certificate Applied (LCA) programmes are offered to students.

SUMMARY OF MAIN FINDINGS AND RECOMMENDATIONS:

Findings

- Overall, the quality of teaching and learning was good; many examples of very good practice were also observed in lessons.
- Very good use of information and communications technology (ICT) supported students' active engagement in learning and the achievement of learner outcomes.
- There is scope to extend the very good use that was observed of formative assessment, including student peer and self-assessment and the provision of written formative commentary on students' written work.
- Overall, whole-school provision for science subjects is very good; however, students choose their subjects for Leaving Certificate before entering TY which is not consistent with best practice.
- Overall, the quality of planning and preparation is very good; however, the Junior Cycle key skills have not yet been included in the science plan.

Recommendations

- A department wide focus on the effective use of formative assessment strategies and their subsequent implementation should take place.
- The school should review its practice of choosing subjects for Leaving Certificate subjects in advance of TY and introduce a subject sampling system in TY, which would assist students in making informed choices for Leaving Certificate.
- The very good subject planning in Science should be further enhanced by formally planning for the development of the key skills in an integrated manner over the three years of Junior Cycle.

DETAILED FINDINGS AND RECOMMENDATIONS

1. TEACHING, LEARNING, AND ASSESSMENT

- Overall the quality of teaching and learning was good; many examples of very good practice were also observed in lessons.
- Where practice was very good, learning intentions were clearly shared in student-friendly language and used to review learning and lessons were very well structured. Whole-class discussion and questioning were also interspersed with purposeful student activities and tasks were sufficiently challenging to engage students of all abilities. In these instances, student learning was at an optimum.
- In some lessons, teachers were advised to be explicit about sharing the learning that was to take place or to facilitate student use of new scientific terminology in order to consolidate learning. On occasion, it was advised that sufficient time be provided for review of learning.
- Very good use of ICT was observed. For example, videos were well used to introduce topics. On occasion, it was recommended that questions be posed in advance of viewing in order to actively engage students with the content. Where ICT use was at the highest level, the interactive whiteboard was very effectively used to upload students' responses and to clearly demonstrate scientific concepts in real time.
- A differentiated approach to facilitating learning was achieved through the range of questioning techniques used and the variation in teacher support provided as students completed tasks.
- In almost all instances, both lower-order and higher-order questioning was very well used to ascertain learning and to develop lesson content, and teachers supported students to develop their answers as necessary.
- In practical lessons, students worked safely and their skills were developed, appropriate to their year group.
- In some instances, physical resource materials were used very effectively to aid students' understanding of more abstract concepts and support their learning. There were some examples of integrating and reinforcing students' understanding of the scientific method. This is commended.
- In almost all instances, students interacted and collaborated purposefully with their peers and demonstrated a good level of interest and motivation.
- In all lessons, teacher-student rapport was very good.
- There were some examples of very good use of formative assessment, including student peer and self-assessment on one occasion, which is a focus of the school's self-evaluation process. There was provision of written formative commentary on students' written work in other instances. This very good practice should be extended across the department.

2. SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- Overall, whole-school provision for science subjects is very good. Junior Cycle Science is a core subject and Agricultural Science, Biology, Chemistry and Physics are offered as optional subjects in senior cycle. Science is also provided in LCA. The school should review its practice of choosing subjects for Leaving Certificate in advance of TY.
- Deployment of teachers is, overall, very good.

- A very good level of resources support teaching and learning in the science subjects. The school has six, very well-resourced science laboratories, each of which has an appropriate level of safety equipment. The visually stimulating laboratories, some with very good displays of student models and posters, provide very positive learning environments.
- Overall, chemicals are appropriately stored according to safety guidelines. However, in two preparation areas some flammable chemicals are stored outside the flame proof press as it is full. The school should address this matter.
- A good level of co-curricular activities, including fieldwork and participation in quizzes, supports students' learning in the sciences. The school reported that they had encouraged TY students to consider engaging in national science competitions. The school could also consider entering national science competitions. The possibility of broadening the second-year extended experimental investigation could be considered as a starting point for such projects.
- At a whole-school level, the school should continue discussing assessment strategies in Junior Cycle, with a view to avoiding over-assessment and minimising the cumulative burden on students and teachers across the full range of subjects.
- The health and safety statement requires annual review.

3. PLANNING AND PREPARATION

- Overall, the quality of planning and preparation is very good. A very good level of co-operation and teamwork is indicated by, for example, the collaborative development of the science plan, which was facilitated through the unpacking of learning outcomes outlined in the science specification, taking particular note of the action verbs used. Learning that is to take place within specific timeframes has also been identified. Commendably, the plan also explicitly and appropriately links the nature of science learning outcomes with those of the contextual strands, thus facilitating an integrated approach to the teaching and learning of these learning outcomes.
- In addition, the department has planned for the use of learning strategies identified through the school's self-evaluation process. This is commended.
- This very good work should be further enhanced by formally planning for the development of the key skills in an integrated manner over the three years of Junior Cycle.
- It is very positive that common summative assessments are used for each year group as this facilitates standardisation of learning.
- The science department reported that purposeful collaborative engagement with the Subject Learning and Assessment Review (SLAR) meetings have provided rich opportunities for discussion and developing a collaborative understanding of the features of quality which are used for classroom-based assessments (CBAs). Building on this very good work, the science department should include discussions about pedagogy at science meetings. This would facilitate the formal sharing of good practice.
- Curricular planning for Leaving Certificate Chemistry is very good. Commendably, the TY chemistry plan broadens the learning experiences and outcomes for students by the inclusion of some topics that are not outlined in the examination syllabus or specification. Consideration should be given to extending such experiences.
- Overall, teachers' individual preparation for lessons was very good.

- There was scope for development with regard to planning for teaching and learning in one instance; it was recommended that more time be devoted to lesson planning in order that good quality learning take place. A clear lesson structure, in which learning is progressed incrementally through differentiated and appropriately challenging tasks, should be planned.
- A very good range of resources were sourced or prepared to support students' learning.

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 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;