

An Roinn Oideachais agus Scileanna
Department of Education and Skills

Subject Inspection in Science & Chemistry

REPORT

Ainm na scoile / School name	Castleisland Community College
Seoladh na scoile / School address	Tonbwee Castleisland Co. Kerry
Uimhir rolla / Roll number	70520V

Date of Inspection: 14-12-2016



WHAT IS A 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 & Chemistry](#) under the following headings:

1. Learning, teaching 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.

Subject Inspection of Science and Chemistry

INSPECTION ACTIVITIES DURING THIS INSPECTION

Date of inspection	14 December 2016
Inspection activities undertaken <ul style="list-style-type: none">• Review of relevant documents• Discussion with principal and teachers• 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, deputy principal and teachers

SCHOOL CONTEXT

Castleisland Community College is a co-educational post-primary school, providing education to the students of Castleisland and its hinterland. The school operates under the patronage of Kerry Education and Training Board (ETB). The programmes on offer are as follows: Junior Certificate, Transition Year (TY), Leaving Certificate and Leaving Certificate Vocational Programme (LCVP).

SUMMARY OF MAIN FINDINGS AND RECOMMENDATIONS:

FINDINGS

- The standard of teaching and learning in Science and Chemistry was very good, with some exemplary practice observed.
- Students were motivated to learn by the consistent use of student-centred approaches that was observed in all lessons.
- A co-operative, affirming and productive learning environment was evident in all lessons.
- Whole-school support for the sciences is very good; Chemistry, Biology and Agricultural Science are offered as optional subjects for Leaving Certificate.
- The science department has engaged in a high level of collaborative planning, which includes discussions relating to teaching and learning practices.
- Department planning has involved considerable discussion around the teaching, learning and implementation of the new junior cycle science specification.

RECOMMENDATIONS

- There are no main recommendations to make in this report.

DETAILED FINDINGS AND RECOMMENDATIONS

1. TEACHING AND LEARNING

- The standard of teaching and learning in Science and Chemistry was very good, with some exemplary practice observed.
- Lessons were very well prepared and structured, were pitched and paced appropriately, and included teaching that was supportive of all students. As a result, there was a seamless transition from one part of the lesson to the next.
- Students were motivated to learn through having a clear sense of what was to be learned in the lessons observed. The learning intentions were differentiated into those which were attainable and those which were challenging. Review of learning incorporated discussion around achievement of the learning intentions. This is excellent practice.
- Very good examples of student-centred approaches were observed in all lessons. Active learning methodologies were central to these very structured lessons. Commendably, students had opportunities to work both independently and collaboratively and did so in a very purposeful and productive manner.
- Strategies such as think, pair, share, placemat and snowball were very effectively used to enhance students' engagement and interest in learning. In addition, these activities were valuable in developing key skills such as communicating and working with others.
- The quality of questioning observed was very good. In many cases, higher-order questions were used to extend learning and teachers supported students as they developed their answers.
- Learning was consolidated through clear linking with previous knowledge and understanding, and using everyday life experiences to illustrate difficult concepts. This is very good.
- Teachers used both the whiteboard and information and communication technology (ICT) effectively to visually reinforce important concepts. Some very good use of visual stimuli and film clips was observed.
- Students' enjoyment in learning was evident in lessons observed and was enhanced by a sense of achievement.
- Interactions among students and between students and teachers were very respectful and positive and this resulted in a co-operative, affirming and productive learning environment. Students' contributions were encouraged and affirmed and they were very comfortable asking questions.
- In all lessons, there was a very good focus on developing students' subject specific vocabulary. Students were encouraged to use scientific terms appropriately, both orally and in writing.
- Commendably, there were some examples of effective development of students' numeracy skills. This development was integrated into learning scientific and chemical content through students' explaining their reasons for answers.
- Overall, students demonstrated a good or very good level of learning and they perform well in certificate examinations.
- Students' progress is monitored through questioning, written work and summative assessments. It is good to note that formative commentary was observed in students' copybooks.

2. SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- Strong support for the sciences across the school is evidenced by; the subject being core in both junior cycle and TY; and Biology, Chemistry and Agricultural Science being part of an open subject choice for Leaving Certificate.
- Time allocation is good, with a good spread of lessons across the week.
- Student uptake of Chemistry is good.
- Currently, the school has one well-resourced laboratory and a demonstration room. The school's commitment to enhancing students' learning experiences in the sciences is evident by its proactive approach to the refurbishment of the demonstration room. This is important given the increased focus on using an investigative approach to teaching in the new science specification.
- The focus on health and safety procedures in the science department is very good. The department has an appropriate level of safety equipment and chemicals are segregated according to best practice guidelines.
- Terminal assessments at Christmas and summer, and the pre-examinations in the spring are complemented by in-class assessments. In the context of the suggested use of a greater range of approaches to assessment in the new science specification, consideration should be given to employing an additional range of assessments in junior cycle Science. These could include practical assessment of an investigation, research and the preparation and delivery of presentations by students.
- Teachers have actively participated in continuing professional development both in relation to the new science specification and in other science subjects. One teacher is a member of the school's teaching and learning committee, and methodologies researched and agreed by committee members are shared within the science department. This is excellent practice. Teachers' ongoing commitment to developing their own skills was observed to have a positive impact in the classroom. This is excellent.

3. PLANNING AND PREPARATION

- The science department has engaged in a high level of planning. Extensive planning documentation has been developed, including a programme of work for the new science specification at junior cycle. It is good to note that the statements of learning and key skills are included in this documentation.
- The science department is well placed to further develop its programme of work for the new science specification. First-year students have both a visual graphic and a written explanation, to which they refer, to support the development of key skills. This is very good practice. Suggestions regarding the development of a planning template which would integrate the nature of science strand and the development of junior cycle key skills with the other learning outcomes in Science were discussed.
- Department meetings enhance the ongoing informal communication and collaboration that takes place within the science department. Commendably, teaching methodologies are regularly discussed. Peer observation in the form of team teaching has taken place and is planned. This is very good practice.

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- 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 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;

The board accepts the report as the final inspection report available for publication and wished to respond formally to the report. The Board agrees that the response submitted will be included as an appendix to the published report. The board's response is submitted below.

Appendix

SCHOOL RESPONSE TO THE REPORT

Submitted by the Board of Management

Area 1 Observations on the content of the inspection report

Castleisland Community College, is delighted that the commitment to Science and Chemistry and the “exemplary practices observed” is very well documented in the recent Science and Chemistry Inspection Report January 2017.

The Science Departments’ “high level of collaborative planning”, is a reflection of the high level of collaboration that exists across all subject areas in the school. Students are at the core of teaching and learning, “motivated to learn, through having a clear sense of what was to be learned in the lessons observed”. “Learning intentions were differentiated into those which were attainable and those which were challenging”. This is a reflection of the ethos and vision of the whole school community. “This is excellent practice”.

Learning being consolidated, formative assessment used and affirming students, was highly commended in the report.

The Teaching and Learning school team which shares instructional strategies across subject departments was very well documented in the report. “This is excellent practice”. Peer observation in the form of Team Teaching has taken place and is planned for future lessons. “This is excellent practice”.

We will continue to consolidate all our efforts, across all subject departments to ensure each and every Inspection Report is as exemplary, as this Science and Chemistry report.