

An Roinn Oideachais agus Scileanna
Department of Education and Skills

Subject Inspection in Science & Chemistry

REPORT

Ainm na scoile / School name	St Peter's Community School
Seoladh na scoile / School address	Passage West Co Cork
Uimhir rolla / Roll number	91391H

Date of Inspection: 01-12-2016



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

INSPECTION ACTIVITIES DURING THIS INSPECTION

Dates of inspection	30-11-16 and 01-12-2016
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 five class periods• Examination of students' work• Feedback to principal and relevant staff

SCHOOL CONTEXT

St Peter's Community School provides post-primary education to the students of Passage West and its surroundings. The school operates under the joint patronage of Cork Education and Training Board (ETB) and the Sisters of Mercy. It provides the Junior Certificate, a compulsory Transition Year (TY) and the Leaving Certificate programmes. The current enrolment of the school is 353 students.

SUMMARY OF MAIN FINDINGS AND RECOMMENDATIONS:

FINDINGS

- Teaching and learning was primarily of a good standard, with scope for further improvement in some instances.
- A positive learning environment was evident in lessons observed.
- Overall, students demonstrated a positive approach to their work and engaged purposefully in the learning activities.
- The provision for the teaching and learning of the sciences is very good.
- A good level of collaboration exists among science department members.
- The science department has engaged with the new junior cycle specification for Science in subject department planning.

RECOMMENDATIONS

- Differentiated instruction techniques should be explicitly planned for and used in lessons in order to enhance the learning experiences of all students.
- Increased use of the investigative approach to the teaching of Science is recommended.
- It is recommended that the health and safety statement be reviewed in line with the guidelines provided by the Department of Education and Skills and the Health and Safety Authority.

DETAILED FINDINGS AND RECOMMENDATIONS

1. TEACHING AND LEARNING

- Teaching and learning was primarily of a good standard, with scope for further improvement in some instances.
- In some lessons, learning intentions were shared with students. It is recommended that learning intentions be shared with students in all lessons. They should also be used by teachers and students as part of the process of reviewing learning.
- A positive learning environment was evident in lessons observed. The laboratories were visually stimulating.
- Overall, students demonstrated a positive approach to their work and engaged purposefully in the learning activities.
- Student engagement in learning was reduced and more able students were not sufficiently challenged in instances where the lesson pace was slow.
- In these lessons, more consideration should be given to the use of differentiated instruction. This could be facilitated by: ensuring a balance of teacher-directed and student-led activities; differentiating content and task; and allowing students to work at their own pace on individual or group tasks.
- Students collaborated and worked well when engaged in practical activities. However, the practical work of students should become less dependent on teacher direction as they progress through the school.
- Increased use of the investigative approach to the teaching of Science is recommended. The demonstration of investigations in advance, or the delivery of step-by-step directions to students as they complete a practical activity should not occur, as these approaches do not facilitate the development of students' investigative skills.
- In general, questioning was effectively used to review student learning. Building on this good practice, it was suggested that students be encouraged to explain their answers when appropriate.
- Assessing students' practical laboratory notebooks and project work contributes to students' overall grade in the formal Christmas and summer examinations. Alternative modes of assessment are used in TY Chemistry to ascertain progress. This is very good practice.
- Commendably, some use of formative feedback was observed in students' written work. It is recommended that assessment for learning strategies be used to a greater extent. For example, strategies such as peer assessment, occasionally using marking schemes for the certificate examinations, could be used.
- One laboratory in particular provided a rich, literate environment, which included the display of a word wall. Teachers are encouraged to make use of such displays during lessons when appropriate.
- In one lesson, a very good approach was used to develop students' literacy skills. In this instance, the teacher demonstration allowed students to develop an understanding of the relevant terms in real time. The science department should further develop the use of such approaches to enhance students' literacy skills, particularly in the context of teaching the new junior science specification.
- Students' development of some aspects of numeracy skills was well integrated into lesson structure when appropriate. Building on this good practice, teachers should explicitly plan for

the teaching of other aspects of numeracy, such as problem solving using an investigative approach, when designing lessons.

2. SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- The provision for the teaching and learning of the sciences is very good. Science is a core subject in junior cycle. Students study modules of Biology, Chemistry and Physics in TY. These subjects are offered as optional subjects for Leaving Certificate.
- The uptake of Biology, Chemistry and Physics for Leaving Certificate varies. The science department should monitor these trends and put strategies in place to maintain or increase uptake.
- Classes have a good spread of lessons across the week. First-year and second-year classes are of mixed ability. Third-year science classes are organised into higher level and ordinary level. A small ordinary level group of students, deemed to require additional support, has been put in place in third year. It is important that the school reviews the effectiveness of putting such a class group in place in order to ensure that such an approach does not lead to the generation of lower expectations among the student cohort.
- Resources and facilities for the sciences are very good. There is a good level of scientific resources and equipment, including information and communication technology, available to support teaching and learning in the sciences. The school has two, well-resourced laboratories and a classroom, with appropriate storage and preparation areas adjoining the two laboratories.
- The science department has the appropriate health and safety equipment. Chemicals have been colour coded. The science department should ensure that all chemicals are segregated in accordance with Departmental guidelines.
- It is recommended that the health and safety statement be reviewed in line with guidelines provided by the Department of Education and Skills and the Health and Safety Authority. The science department should conduct an annual risk assessment using the template provided and this should be included in the statement.
- The school should consider using an e-learning platform. This would offset the need for note taking during lessons. Where note taking is deemed necessary, teachers are encouraged to use a 'note-making' approach.
- Teachers are committed to participating in, and have undertaken, science related continuing professional development (CPD). This is commended. The science department is encouraged to avail of opportunities to further enhance the development of generic teaching and learning methodologies, if such CPD opportunities arise.

3. PLANNING AND PREPARATION

- A good level of collaboration exists among science department members. This is evidenced by the development of a common programme of work for junior cycle and the shared electronic folder used by teachers for sharing planning documentation
- The science department has engaged with the new junior cycle specification for Science in subject department planning. Building on this good practice, it is recommended that the department put teaching and learning on the agenda of science meetings, with a view to formalising the sharing of effective practices, and to discussing how the development of key skills and the nature of science strand would be integrated into the teaching of the other science strands.

- On occasion, following analysis of results in certificate examinations in Science, the department has put strategies in place to further improve learning experiences and achievement. Building on this good practice, the department should set targets and agree actions in relation to teaching and learning to further enhance students' learning and achievement in the sciences.
- Commendably, some chemistry-related topics, not studied for Junior Certificate or Leaving Certificate, form part of the TY programme. This is good practice as it helps to broaden students' knowledge and understanding of, and interest in, Chemistry.
- Overall preparation for lessons was very good.

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.

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;