

An Roinn Oideachais agus Scileanna
Department of Education and Skills

Subject Inspection in Science

REPORT

Ainm na scoile / School name	Portumna Community School
Seoladh na scoile / School address	Portumna Co. Galway
Uimhir rolla / Roll number	914130

Date of Inspection: 06-02-2018



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 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.

SUBJECT INSPECTION

INSPECTION ACTIVITIES

Date of inspection	06-02-2018
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

Portumna Community School is a co-educational post-primary school under the co-trusteeship of the Catholic Bishop of Clonfert and the Galway Roscommon Education and Training Board. The school draws its students from an extensive hinterland that is predominantly rural and its current enrolment is 460 students. A wide range of programmes is on offer in the school, and these include the junior cycle, an optional Transition Year programme, and all Leaving Certificate programmes.

SUMMARY OF MAIN FINDINGS AND RECOMMENDATIONS:

Findings

- The quality of teaching ranged from very good in almost all lessons to satisfactory in one lesson; where improvement is needed it will be achieved by further developing the use of active learning and by extending students' input into teaching and learning.
- The quality of learning ranged from very good in almost all lessons to satisfactory in one lesson; focusing on the uptake at higher level is an area that should be prioritised for future development.
- Overall, the quality of assessment practices was good; further developing the students' involvement in assessing their own learning would be beneficial.
- Subject provision and whole-school support are effective and it is timely that timetabling arrangements and teacher deployment are reviewed.
- The quality of planning was very good with highly commendable work done in creating a digital plan and developing the learning intentions for the new science specification.
- The level of support given by the science staff to students and science-related extra-curricular activities is highly commendable.

Recommendations

- To support the sharing of teaching methods among the science staff it is recommended that the practice of professional collaborative review be introduced.
- Focusing planning work on expanding the uptake at higher level is recommended.
- In line with the ongoing review of the subject sampling programme, the school should seek to optimise the timetabling arrangements for Science.

DETAILED FINDINGS AND RECOMMENDATIONS

1. TEACHING, LEARNING, AND ASSESSMENT

- All lessons were characterised by very high levels of individual care and attention that the teachers gave to their students.
- In almost all lessons, the teaching approaches that were used were very effective. For example, in the best lessons students benefited from the use of active learning strategies and the students were focused and engaged for the duration of the lesson. In the very small number of lessons where there was scope to improve the teaching approaches this could have been achieved through maximising the use of active learning strategies and providing greater levels of challenge for students.
- Where practice was highly commendable it was evident that the teachers used questioning strategies that maximised student involvement. They gave the students ample time to think about the questions and to compose answers and where students' volunteered answers they involved other students in evaluating and reflecting on the answers.
- A range of excellent practices was noted across the lessons observed. For example, in all lessons, the learning intentions were shared with the students at the outset, while in almost all lessons self-assessment and peer assessment were beneficial features of students' learning.
- There is breadth and depth of pedagogical skill among the science staff and, consequently, to support the sharing of teaching methods among the science staff it is recommended that the practice of professional collaborative review be introduced.
- In all lessons, the teachers demonstrated expert subject knowledge and accordingly they dealt effectively with any questions that the students posed.
- All lessons had been well prepared with all requisite materials being to hand.
- Overall, the management of learning was very effective. This was facilitated by the preparation that teachers had undertaken for the learning activities. However, in one lesson there were a small number of occasions when a very small number of students became disengaged. Addressing such instances requires careful monitoring of the classroom as well as clear classroom routines and ensuring suitable challenge for students in the learning activities.
- Interaction between the inspector and students showed that they were very articulate and aware of what best helped their learning. They expressed positive views about Science. In particular they most enjoyed working in groups and undertaking practical work. It was clear that the students have a lot of positive information to contribute in terms of feedback about their learning and this should be optimised by collecting feedback from them systematically as well as informally.
- One example of excellent practice in the use of assessment techniques was the application of "two stars and a wish", where students gave feedback to each other on their work, commenting on two items that were particularly meritorious and one area for further development. This practice was used expertly. In discussing the practice with the students, the inspector found that they were very knowledgeable and experienced in its use. It would be beneficial to extend this and similar practices to maximise opportunities for students to be involved in assessing their own learning as much as possible.
- Samples of students' work were viewed by the inspector. It was clear that there was very good quality presentation and level of work done by students overall. It was particularly

commendable that students had engaged in innovative experimental work and that they were very competent in reporting on it and discussing it.

- Examples of where teachers had monitored the students' copybooks were noted and it was evident that the students benefited from very good quality guiding and affirming comments to help them improve their learning.

2. SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- The school provides a very wide range of science subjects, with there being Agricultural Science, Biology, Chemistry and Physics available at senior cycle as well as Science at junior cycle.
- Recently the school has been re-examining the use of a subject sampling programme for first-year students, to aid them in choosing their subjects. The review of this programme is in train and it is advised that in completing the review the school should seek to optimise the timetable arrangements for Science.
- The level of support given by the science staff to students' involvement in science-related extra-curricular activities such as the BT Young Scientist and Technology Exhibition and SciFest is highly commendable. Students' involvement in such enterprises greatly benefits their learning and their engagement with the world of science, helping them to gain very valuable learning experiences.
- The school has recently supported the transformation of the layout of the science laboratories with the aim of making them even more student focused. This has been successful as was noted during lessons where students used the available whiteboards as workspaces. Discussion with the students showed that they were appreciative of the change and found that it helped their learning. The proactive approach of the school and the staff in making this change is very commendable.
- It was evident from the records viewed during the inspection that the science staff has engaged very well with school self-evaluation. The records showed that the teachers have done very good work in devising a science self-evaluation checklist. In addition, the science staff has given considerable thought and work to optimising laboratory access as well as to the issue of making Science a core subject at junior cycle.

3. PLANNING AND PREPARATION

- The science staff has done very good work in creating an excellent digital plan. In addition, the records that were viewed during the evaluation showed the very professional and thoughtful approach taken to developing the learning intentions for Science. Indeed, the teachers shared the view that giving students' access to their work on developing the learning outcomes for the specification would be beneficial, and this is to be encouraged.
- Work is currently in progress in setting up all students on a digital platform so that they will all have their own learning portfolios and this is highly commendable. The reflection that has been undertaken by the science staff is of excellent quality and the documentation that was reviewed provided ample evidence that a student-centred approach is foundational to the teachers' practices.
- The science staff has undertaken an analysis of students' outcomes in the certificate examinations. This analysis provides a rich source of data for continued improvement in students' learning. One area that would be worth prioritising is that of increasing the uptake of Science at the higher level. Focusing planning work on this is recommended. In doing so,

systematically collecting and incorporating student feedback on their expectations and learning experiences will provide an additional helpful source of information. Indeed, the science staff has already begun the collection of such data as a subject questionnaire has been used with students and this is very good practice.

4. CHILD PROTECTION

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

1. The school principal is aware that revised child protection procedures for primary and post-primary schools came into effect on 11 December 2017 and arrangements are in place to begin the process of implementing these procedures.
2. The name of the designated liaison person for child protection matters was prominently displayed near the main door of the school / in the school's reception area.
3. The school has a Child Protection policy in place.
4. All teachers are aware that they are mandated persons and of their responsibilities in that regard.

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

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