An Roinn Oideachais
Department of Education

Subject Inspection: Science
Report

REPORT

Ainm na scoile/School name	Coláiste Treasa
Seoladh na scoile/School address	Kanturk Co Cork
Uimhir rolla/Roll number	71000A
Dáta na cigireachta/ Date of evaluation	02/05/2024
Dáta eisiúna na tuairisce/Date of issue of report	09/09/2024

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.

Included in this subject inspection report is a student-friendly page that provides information for the children/young people in your school about the inspection that occurred recently. It outlines for them some of the main findings and recommendations.

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.

Actions of the school to safeguard children and prevent and tackle bullying

<table>
<tr><td colspan="2">During the inspection visit, the following checks in relation to the school's child protection and anti-bullying procedures were conducted:</td></tr>
<tr><td>Child Protection</td><td>Anti-bullying</td></tr>
<tr><td>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.</td><td>1. The school has developed an anti-bullying policy that meets the requirements of the Anti-Bullying Procedures for Primary and Post-Primary Schools (2013) or Bí Cineálta (2024) and this policy is reviewed annually.
2. The school's current anti-bullying policy is published on its website and/or is readily accessible to board of management members, teachers, parents and students.</td></tr>
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The school met the requirements in relation to each of the checks above.

Subject inspection

Date of inspection	30/04/2024 and 02/05/2024
Inspection activities undertaken • Review of relevant documents • Discussion with principal and subject teachers • Interaction with students, including a focus group	• Observation of teaching and learning during six lessons • Examination of students' work • Feedback to principal, deputy principal, and subject teachers

School context

Coláiste Treasa is a co-educational post-primary school under the patronage of the Cork Education and Training Board (CETB). At the time of the evaluation, the school had an enrolment of 605 students. It offered the Junior Cycle, an optional Transition Year programme (TY), the Leaving Certificate Vocational Programme (LCVP), and the Leaving Certificate (Established) (LCE).

Summary of main findings and recommendations:

Findings

- The quality of teaching, learning and assessment was very good overall.
- A range of highly effective formative assessment practices was observed in all lessons.
- In almost all lessons, student inquiry was central to learning. Tasks were meaningful and well-designed, resulting in high levels of student motivation and engagement.
- Very good use was made of digital technology to support and reinforce learning; simulations supported student understanding of abstract concepts, while matching games enabled student self-assessment.
- The quality of provision and whole-school support for Science was very good.
- Planning and preparation were of a very high standard.

Recommendations

- In a small number of lessons, not all students were suitably challenged by the tasks set. In order to extend learning opportunities for these students, the teachers should plan extension activities or include various levels of difficulty within tasks.
- While assessment activities were noted for each learning outcome in the junior cycle science plan, in some instances, they did not align with the action verb in the learning outcome. The science teachers should review their junior cycle plan to ensure that the focus of all assessment checks is determined by the relevant action verb.

Detailed findings and recommendations

1. Teaching, learning and assessment

- The quality of teaching, learning and assessment was very good overall. Teachers displayed high levels of subject and pedagogical knowledge, while their enthusiasm for the subject had a positive impact on students' motivation.

- Interactions between students and teachers were highly respectful, and student behaviour was excellent. A key strength of all lessons was the way in which teachers consistently acknowledged and affirmed students' contributions.
- High expectations with regard to student learning were evident in all lessons observed and students displayed very good knowledge and understanding in Science.
- Lessons were very well structured. Almost all lessons began with a recap of prior learning, which allowed teachers to assess student understanding. A range of methods was used to assess this learning, including targeted questioning, digital show-me boards, and online games.
- In lessons where new topics were introduced, students' thoughts and ideas were gathered through brainstorming, think-pair-share, and placemat activities. These allowed teachers to determine the level of students' prior knowledge and to identify any potential misconceptions.
- Learning intentions were frequently shared at the outset of lessons. Where these were used most effectively, teachers explained the intended learning in student-friendly language. This ensured a shared understanding of the purpose of the lesson, enabling students to assess their own learning and to identify areas for improvement. Learning intentions were less effective when they were written as a list of topics that did not provide sufficient guidance for student self-assessment.
- A range of highly effective formative assessment practices was observed in all lessons. Examples included differentiated worksheets, structured discussions, and online quizzes. In a few lessons, success criteria were used to guide students in the completion of homework tasks. In one instance, the students co-constructed the success criteria with the teacher, which helped to develop their assessment literacy and their understanding of quality.
- Very good oral questioning was a feature of all lessons observed. Teachers used a variety of question types, allowed sufficient wait time, distributed questions among the students, and used supplementary questions to probe understanding.
- An effective focus on students' numeracy and scientific literacy was evident in all lessons. Teachers clearly explained and discussed the meaning of new vocabulary and students were expected to use scientific terminology during classroom discussions. Students' engagement with scientific articles helped to develop their ability to comprehend and critically analyse scientific texts, while opportunities were also provided for students to analyse data, predict results, draw conclusions, and justify their reasoning.
- Teachers used models effectively to explain difficult concepts and to encourage students to make predictions about scientific phenomena. It was very positive that in some cases, the students were encouraged to evaluate the strengths and limitations of the models used.
- In almost all lessons, student inquiry was central to learning. In most instances, classroom tasks were meaningful and well-designed, resulting in high levels of student motivation and engagement. The students worked collaboratively and productively, while displaying considerable capacity to take ownership of their learning.
- In a small number of lessons, not all students were suitably challenged by the tasks set. Where this occurred, in order to extend learning opportunities for these students, the teachers should plan extension activities or include various levels of difficulty within tasks.
- Very good use was made of digital technology to support and reinforce learning. Simulations were very successfully used to support student understanding of abstract concepts, while matching games enabled student self-assessment. Teachers also used the school's digital platform to share notes and homework tasks with students.
- During the focus group held with students as part of the evaluation, they indicated that they found Science interesting, describing their science lessons as interactive and engaging. They particularly enjoyed carrying out scientific investigations and research. They also mentioned that videos, simulations, and revision sheets supported their understanding of difficult concepts, while online quizzes, mind maps and collaborative group work further supported their learning and their ability to self-assess.

2. Subject provision and whole school support

- The quality of provision and whole-school support for Science was very good; time allocation for junior cycle Science was above the minimum requirements of the specification, and all junior cycle students studied Science.
- All transition-year students sampled each senior cycle science subject through a series of modules, which assisted them in their senior cycle subject choice.
- Student access to senior cycle Science was very good. Agricultural Science, Biology, Chemistry and Physics were available to all students and there was a very high uptake of these subjects.
- There was an excellent level of support for science-related extra-curricular and co-curricular activities, such as participation in the BT Young Scientist and Technology exhibition and a national agricultural science competition. Involvement in these events extended students' learning beyond the classroom and allowed them to explore areas of interest to them, while further developing their appreciation of Science.
- The teachers were very committed to engaging in professional learning and this was encouraged and facilitated by management.

3. Planning and preparation

- Planning and preparation were of a very high standard.
- Individual lessons were effectively planned and resource materials were of a very high quality.
- The science department had done extensive work on the junior cycle science plan. Each unit of learning identified key learning from the contextual strands and linked this to relevant learning outcomes from the *Nature of Science* strand. This explicit inclusion of learning from the *Nature of Science* strand in each unit was very positive, as it facilitated an integrated approach to the teaching and learning of investigating and researching in Science.
- Potential teaching resources and assessment activities were noted for each learning outcome, and this highly effective practice was further supported by the use of the school's online platform to share teaching resources. However, in some instances, the assessment activities identified did not align with the action verb in the learning outcome. The science teachers should review their junior cycle plan to ensure that the focus of all assessment checks is determined by the relevant action verb.
- Considerable thought had been given to the order in which units of learning would be taught to ensure that each topic built on learning from previous units. Commendably, the teachers regularly reflected on the plan content, adapting it when necessary, to better support student learning.
- It was very positive that the science policy included differentiated teaching methodologies to cater for mixed ability classes and that many of these strategies were evident in the lessons observed.
- The subject department worked in a highly collaborative manner and the teachers demonstrated an excellent level of formal and informal communication. This was supported by weekly subject department meetings, which provided opportunities for the teachers to discuss teaching methodolgies.

The draft findings and recommendations arising out of this evaluation were discussed with the principal, deputy principal, and science teachers at the conclusion of the evaluation.

An Roinn Oideachais
Department of Education

For the students of Coláiste Treasa about their learning in Science
02/05/2024

What kind of inspection did your school have?

Recently, an inspector called to your school to carry out a subject inspection. The inspector visited some classes and had a talk with the principal and teachers. They also met with a focus group of students who study Science. The inspector wanted to hear what the focus group of students had to say about their learning experience in that subject.

What were the main findings of the inspection?

The inspector saw many things during the inspection. The main findings were:

- Teachers used a number of very good ways to see how students were doing in their learning.
- In almost all lessons, students learned by investigating, which made learning interesting.
- Digital simulations and matching games helped students to learn and to check their own progress.

What did the inspector recommend to make teaching and learning better in Science?

- Teachers should design classroom learning experiences to suit all students by adding extra activities or preparing tasks with different levels of difficulty.
- The teachers had planned activities to check students' learning, but sometimes these did not link directly to the science course. The science teachers should make sure that all planned activities link with the learning outcomes in the course.

Thank you for taking the time to read this page.
A special thank you to the students who participated in the focus group.

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 of the school's provision of each area.

Level	Description	Examples of descriptive terms
Excellent	**Provision that is excellent** is exemplary in meeting the needs of learners. This provision provides an example for other schools and settings of exceptionally high standards of provision.	Excellent; exemplary; outstanding; exceptionally high standard; with very significant strengths
Very good	**Provision that is very good** is very effective in meeting the needs of learners and is of a very high standard. There is potential to build on existing strengths to achieve an excellent standard.	Very good; of a very high quality; very effective practice; highly commendable; very successful
Good	**Provision that is good** is effective in meeting the needs of learners. There is need to build on existing strengths in order to address the aspects to be developed and achieve a very good standard.	Good; of good quality; effective practice; competent; useful; commendable; good standard; strengths outweigh the shortcomings; appropriate provision although some possibilities for improvement exist
Requires improvement to achieve a good standard	**Provision that requires improvement to achieve a good standard** is not sufficiently effective in meeting the needs of learners. There is need to address certain deficiencies without delay in order to ensure that provision is good or better.	Fair; less than effective; less than sufficient; evident weaknesses that are impacting on learning; experiencing difficulty; shortcomings outweigh strengths; must improve in specified areas; action required to improve
Requires significant improvement to achieve a good standard	**Provision that requires significant improvement to achieve a good standard** is not meeting the needs of learners. There is immediate need for significant action to address the areas of concern.	Weak; poor; ineffective; insufficient; unacceptable; experiencing significant difficulties; serious deficiencies in the areas evaluated; requiring significant change, development and improvement to be effective