

**An Roinn Oideachais agus Scileanna**  
**Department of Education and Skills**

**Subject Inspection in Science**

**REPORT**

<b>School name</b>	North Wicklow Educate Together Secondary School
<b>School address</b>	Putland Road Bray Co Wicklow
<b>Roll number</b>	68261L

**Date of Inspection: 21-03-2018**



## **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.

## **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

<b>Date of inspection</b>	21-03-2018
<b>Inspection activities undertaken</b> <ul style="list-style-type: none"><li>• Review of relevant documents</li><li>• Discussion with principal and key staff</li><li>• Interaction with students</li></ul>	<ul style="list-style-type: none"><li>• Observation of teaching and learning during three class periods</li><li>• Examination of students' work</li><li>• Feedback to principal and relevant staff</li></ul>

### School context

North Wicklow Educate Together Secondary School is a newly established co-educational school in Bray. Currently, the school has first-year and second-year students and it is providing the Junior Cycle. The current enrolment is 119. There are plans in place to provide the Transition Year (TY) programme after the next academic year. The school's mission is to create a learner-centred, positive environment and to enable students to become creative, life-long learners.

### SUMMARY OF MAIN FINDINGS AND RECOMMENDATIONS:

#### Findings

- The quality of teaching, learning and assessment in Science is excellent; classroom practice is highly adapted to the new junior cycle specification and assessment guidelines.
- Students demonstrated highly-developed skills in investigating and in communicating the outcomes of their investigations.
- Subject provision is very good; within temporary accommodation and a science classroom, Science is very well resourced enabling the full implementation of the curriculum.
- Planning for teaching, learning and assessment is highly effective in progressing students' skills and concepts; an innovative subject department plan for Science is linked to the school mission but it could be linked to the school improvement plan (SIP).

#### Recommendations

- Within the science plan, explicit links should be made with the targets and classroom actions of the school improvement plan (SIP).

## DETAILED FINDINGS AND RECOMMENDATIONS

### 1. TEACHING, LEARNING, AND ASSESSMENT

- The quality of teaching, learning and assessment is excellent. Classroom practice is highly adapted to the new junior cycle specification and assessment guidelines for Science.
- Learning is inquiry-based. With appropriate levels of scaffolding, students are developing their understanding of scientific processes, using evidence to support explanations and acquiring an understanding of scientific concepts through investigation and research.
- Students demonstrated highly-developed skills in investigating and in communicating the outcomes of their investigations. First-year students were able to confidently pose testable hypotheses, plan, conduct and present the outcomes of experiments. Second-year students had more developed skills in planning and communicating their experiments; they were able to peer-review each other's investigation plan, discuss strategies to achieve improvement and refine their planning for an investigation. These are excellent learner outcomes.
- Students were competent in working collaboratively and they instinctively elected to do so according to their needs in making progress with tasks. Their engagement was excellent. Students' literacy and numeracy skills were being very well developed.
- A very high level of professionalism was evident in the teacher's individual practice and in planning for Science. The teacher designed tasks for students that facilitated active learning, building on students' existing knowledge, abilities and interests, and leading them to develop an understanding of scientific phenomena and to acquire scientific knowledge.
- The teacher created an inclusive, orderly, student-centred learning environment based on mutual respect and affirmation. The teacher modelled enthusiasm, enjoyment and an inquiry-based approach to learning Science thereby creating conditions where students were self-motivated to engage in and extend their learning.
- The teacher has high expectations of students' work and communicates these exceptionally well. On slides, verbally and in the task sheets given for each activity, the teacher describes at the outset the success criteria at different levels of achievement. Students are expected to use these criteria to aid their progress in the tasks. As a consequence, students have a sense of ownership of their learning and are able to take steps to improve their work.
- The quality of formative feedback given to students was very good. Students' copies contained laboratory reports, notes on topics and written assignments. Reports were written to a very high standard using relevant scientific terminology and representations. Written feedback from the teacher was in the form of evaluative comments that used the productive terms "what is working well" and "even better if" together with the criteria that were shared with the student.
- The teacher used exceptionally high-quality questioning techniques that both assessed and extended students' ability and comprehension. During questioning, the teacher frequently sought extended answers and exemplification and justification of responses.
- The teacher's response to individual learning needs, including the differentiation of learning activities as necessary, was highly effective. Through very productive circulation, the teacher skilfully managed to challenge and support students individually, moving their learning forward at all times.

## **2. SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT**

- Laboratory management and resourcing are accomplished to a very high standard. The school is operating within temporary accommodation including a science classroom, rather than a purpose-built laboratory, and a separate storage room for chemicals and laboratory equipment. Within that environment, however, Science is very well supported and resourced enabling the full implementation of the curriculum. Health and safety is communicated effectively. Plans are in place to move to a larger classroom that will provide more space for student and teacher movement during practical work.
- Science is a core subject for all students within the junior cycle. An appropriately qualified teacher is deployed. A very good time allocation is given to the subject. Lessons are one-hour duration supporting the use of active and student-centred teaching and learning.
- The quality of subject provision and whole-school support is very good. The principal strongly supports the teacher in implementing the changes required by junior cycle reform and the new curriculum.

## **3. PLANNING AND PREPARATION**

- In planning for the implementation of the curriculum, an innovative subject plan for Science has been designed. A unique themed approach plots a route through the specification's learning outcomes. For each theme, the plan outlines a series of very well-designed activities that meet selected learning outcomes together with an associated set of assessments and assignments that enable the teacher to gather evidence of the intended learning.
- In the subject plan, the teacher has designed a structured, step-by-step approach to develop students' skills and concepts. Some learning outcomes are revisited and further developed each year. For example, during term one, the plan provides for first-year students to design and carry out simple experiments, collect results, plot graphs, draw simple conclusions and produce laboratory reports. The subject plan then provides for progressively more challenging ways for students to develop their skills in investigating and communicating in Science through the series of learning activities that support experimentation and research in a range of contexts and concepts. This is an excellent approach; it empowers students in realising the curriculum and opens up further learning opportunities.
- Within the science plan, strong links are made with the school's mission, particularly in education for sustainability. It is recommended that explicit connections also be made with the school's SIP, particularly the specific targets and agreed whole-school classroom actions.
- The teacher engages in reflective practice, reviewing the subject plan based on the experience of implementing it in the classroom.
- The teacher's assessment records enable the tracking and monitoring of student progress, leading to measurable benefits. Reports sent home to parents give a very good picture of how well the student is attaining the skills and concepts of the curriculum as well as pointing to how their performance might be improved.
- To support collaborative practice in planning and assessment, the teacher engages with science teachers in other schools and with the Junior Cycle for Teachers (JCT) service. The teacher also uses electronic communication to share approaches to implementation. Plans are in place for collaborative subject learning and assessment review (SLAR) meetings.

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

The board of management of the school was given an opportunity to comment in writing on the findings and recommendations of the report, and the response of the board will be found in the appendix of this report.

## 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 in each area.

Level	Description	Example of descriptive terms
<b>Very Good</b>	<b>Very good</b> 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 <b>outstanding</b> 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
<b>Good</b>	<b>Good</b> 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
<b>Satisfactory</b>	<b>Satisfactory</b> 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
<b>Fair</b>	<b>Fair</b> 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
<b>Weak</b>	<b>Weak</b> 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;

# **Appendix**

**SCHOOL RESPONSE TO THE REPORT**

**Submitted by the Board of Management**



### **Area 1 Observations on the content of the inspection report**

The Board welcomes the inspection report and acknowledges the very positive findings. In particular, the Board notes the highly effective practices identified by the inspector. The evidence gathered will be a very useful tool in planning learning and teaching throughout the school.

### **Area 2 Follow-up actions planned or undertaken since the completion of the inspection activity to implement the findings and recommendations of the inspection.**

The School has already had an SSE advisory visit from a member of the inspectorate and has followed this up with a number of helpful communications.

The SIP for 2018/ 2019 will focus on a practice chosen by the staff. The Principal and Board will ensure that all subject department plans make explicit reference to the SIP. The practice identified by the staff will be the focus of a professional learning community group and will be an agenda item at the first staff meeting of 2018/ 2019.