

An Roinn Oideachais agus Scileanna
Department of Education and Skills

Subject Inspection in Science

REPORT

| | |
|---|---|
| Ainm na scoile / School name | Stepaside Educate Together Secondary School |
| Seoladh na scoile / School address | Belarmine Vale Belarmine Stepaside |
| Uimhir rolla / Roll number | 68241F |

Date of Inspection: 29-03-2019



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

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.

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.

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

| | |
|--|--|
| Dates of inspection | 28 and 29 March 2019 |
| Inspection activities undertaken <ul style="list-style-type: none">• Review of relevant documents• Discussion with principal, deputy principal and key staff• Interaction with students | <ul style="list-style-type: none">• Observation of teaching and learning during four one-hour lessons• Examination of students' work• Feedback to principal, deputy principal and relevant staff |

School context

Stepaside Educate Together Secondary School is a co-educational and multi-denominational school. The school is currently in temporary accommodation pending the construction of a new building which will accommodate 1000 students. The school has a current enrolment of 152 junior cycle students and will offer a compulsory Transition Year (TY) programme in the next academic year.

SUMMARY OF MAIN FINDINGS AND RECOMMENDATIONS:

Findings

- The overall quality of teaching and learning was very good; there were some elements of exemplary practice.
- Students were engaged in meaningful inquiry-based learning activities in all lessons; they worked independently and collaboratively and demonstrated a very good level of responsibility for and ownership of their learning.
- The overall quality of assessment was good; students received developmental feedback on assignments in oral, written and digital format, but some students lack necessary handwriting skills.
- Teachers are aware of and responsive to changes in science education, embrace professional development that enriches students' learning, work as a team and share resources and expertise.
- The quality of subject provision and whole school support for Science is very good; senior management implements the junior cycle curriculum to ensure that students can maximise their experience of the statements of learning relating to Science.
- The quality of individual and collaborative planning for Science is very good overall; a well-developed science plan and curriculum plan are in place, though strategic planning for an expanded curriculum has yet to be fully developed.

Recommendations

- Teachers should plan for the development of students' hand-writing skills so that they can apply this skill as necessary and especially during assessments.
- Teachers and senior management should further strategically plan for the expansion and development of science education into TY and senior cycle.

DETAILED FINDINGS AND RECOMMENDATIONS

1. TEACHING, LEARNING, AND ASSESSMENT

- The overall quality of teaching and learning was very good; there were some elements of exemplary practice.
- Teacher expertise and enthusiasm impacted positively on student learning. Teachers are aware of and responsive to changes in science education and engage in science-related professional opportunities that develop their own pedagogical practice.
- Lessons were well structured and had good developmental and consolidating phases. Opportunities were provided for students to apply their learning both inside and outside the classroom. For example, students creatively utilised the green spaces adjacent to the school to collectively investigate the utilisation of ecology equipment and created unique videos as evidence of their experiences.
- Teachers planned sequences of differentiated learning activities suitable to the learning activities of lessons and facilitated purposeful independent and collaborative work. During a lesson where students worked on developing their Classroom Based Assessment (CBA), effective differentiated approaches including intensive individual and group support worked very effectively in the development of student investigations and research strategies. It is suggested that, at the conclusion of lessons, the entire class be provided with the opportunity to share their knowledge collectively.
- Short, clear teacher inputs during lessons supported student activity and learning. For example, during a lesson on the theme of digestion, students' existing knowledge was collated through an initial brainstorming exercise and as the lesson progressed students provided effective feedback to the teacher and the class on their level of understanding. Following an investigation activity where solutions were tested for starch, plenary questions consolidated learning very effectively.
- Teachers used a range of questioning techniques very well, including individual questioning as a means of maximising student participation.
- There was a high level of student autonomy, enjoyment and motivation and students' expectations of themselves were set at a high level. Students used digital technology seamlessly. During a lesson on the theme of corrosion, students used digital devices to research the topic, and teacher-generated thematic photographs and differentiated worksheets greatly supported the learning experience for all students.
- Students had a clear sense of success criteria and a positive approach to presenting their research and investigative findings.
- Practical work was carried out safely and efficiently and students were encouraged to think creatively and critically about their investigations and to predict the outcomes of their research questions. This was particularly in evidence when students posed a testable hypothesis and evaluated and compared strategies for investigating hypotheses.
- Students were engaged in meaningful inquiry-based learning activities in all lessons; they worked independently and collaboratively and developed a very good level of responsibility for and ownership of their learning.
- The overall quality of assessment was good; students received developmental feedback on assignments in oral, written and digital format, but some students lack necessary handwriting

skills. Teachers should plan for the development of students' hand-writing skills so that they can apply this skill as necessary and especially during assessments.

2. SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- The quality of subject provision and whole school support for Science is very good. Senior management implements the junior cycle curriculum to ensure that students can maximise their experience of the statements of learning relating to Science.
- Science is offered as a core subject and the time allocation facilitates ongoing investigative practical activities. Senior management and teachers are planning for science education as an integral part of TY. The school is developing a focused approach to the integration of Science, Technology, Engineering and Mathematics (STEM) subjects into the TY programme and across the entire curriculum. School management and teachers have indicated that a theme for TY will be STEAM, whereby other subjects, including the arts subjects, are linked thematically to the STEM subjects.
- The school is currently in temporary accommodation and is maximising the use of a large classroom in lieu of a science laboratory. The current temporary facility is well organised and maintained. Students' project work and some classwork are prominently on display and the use of whiteboards, display boards and digital technology is maximised for the benefit of student learning.
- Students are encouraged to partake in a range of co-curricular and extra-curricular activities. Thematic science events are celebrated, teachers organise visits for students to science-related events and students are supported in an after-school science club. The school promotes global citizenship and is part of the World Wise Global Schools project.
- Science teachers develop their professional skills on an ongoing basis by their involvement in regular continuing professional development.
- School reports are available to parents following focused student assessments on three occasions per year.
- Students with additional needs are well supported and there is a strong awareness by teachers and senior management of inclusive interventions and supports that help all students to achieve.

3. PLANNING AND PREPARATION

- The quality of individual and collaborative planning for Science is very good overall. Teachers have collaborated with other schools for Subject Learning and Assessment Review (SLAR) meetings. A well-developed science plan and curriculum plan are in place. The plan outlines good classroom strategies for assessment for learning and differentiation, and how digital technology and Junior Cycle for Teachers (JCT) resources can be effectively utilised to support student inquiry-based approaches to learning.
- It is suggested that whole school self-evaluation (SSE) themes be integrated into science planning and that records of completed and planned continuing professional development and how this can be shared, be documented in the plan.
- In light of the school offering TY in the next academic year and a full senior cycle curriculum the following year, strategic planning for an expanded science curriculum has yet to be fully

developed. Teachers and senior management should further strategically plan for the expansion and development of Science education into TY and senior cycle.

- The curricular plan focuses on key areas including key skills, literacy and numeracy, assessment, the statements of learning and commendably the overarching Nature of Science strand.
- Minutes of science department meetings indicate that key areas relating to the development of Science are collectively discussed and actions are taken to implement important strategies.
- Commendably, areas for development have been identified by the science department and include a focus on improved consistency in students' reporting on practical activities, building on assessment techniques and increasing the number of cross-curricular projects. The science department should consider greater focus on teaching and learning discussions. *Looking at Our School 2016* and the quality framework should form the basis for this reflective practice.
- Teachers were very well prepared for lessons and identified in advance relevant activities and resources that impacted positively on student learning. It is praiseworthy that teachers create their own classroom resources rather than utilising textbooks.

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.

Appendix

SCHOOL RESPONSE TO THE REPORT

Submitted by the Board of Management

Part A Observations on the content of the inspection report

The Board of Management are pleased to acknowledge affirmation of our innovative practice in the areas of the use of technology and not using text books at Junior Cycle level. Further the Board acknowledges that the overall quality of teaching and learning was very good with exemplary features. The Board wishes to recognise the effective use of classroom-based technology and the generation of individual resources for learners as a positive strength demonstrated throughout the inspection.

Part B 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 designed a handwriting module to be introduced as part of the induction and transition programmes. The school also looks forward to developing a Senior Cycle curriculum based in a STEAM focused transition year and the introduction of Leaving Certificate Biology, Chemistry and Physics as examinable subjects from 2022 onwards. The school currently offers all Junior Cycle students Science as a compulsory subject.

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; |