An Roinn Oideachais agus Scileanna

Department of Education and Skills

Subject Inspection in Science & Chemistry

REPORT

Ainm na scoile / School name	Saint Vincent's C.B.S.
Seoladh na scoile / School address	Glasnevin Dublin 11
Uimhir rolla / Roll number	60400F

Date of Inspection: 14-03-2017

AN ROINN OIDEACHAIS AGUS SCILEANNA | DEPARTMENT OF EDUCATION AND SKILLS

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.

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.

SUBJECT INSPECTION

INSPECTION ACTIVITIES DURING THIS INSPECTION

Date(s) of inspection	14-03-2017
Inspection activities undertaken • Review of relevant documents • Discussion with principal and key staff • Interaction with students	• Observation of teaching and learning during eight class periods • Examination of students' work • Feedback to deputy principal and relevant staff

SCHOOL CONTEXT

Saint Vincent's CBS is a voluntary secondary school with a current enrolment of 369 boys. The school participates in Delivering Equality of Opportunity in School (DEIS), the action plan of the Department of Education and Skills for educational inclusion.

SUMMARY OF MAIN FINDINGS AND RECOMMENDATIONS:

FINDINGS

- The overall quality of teaching and learning in the lessons observed was good.
- Clear learning intentions were shared with students at the start of most lessons; these were used in some cases to assess progress later on.
- Practical activities were well organised and facilitated a high level of student engagement; students' laboratory reports were not generally assessed.
- The quality of whole-school support for science subjects is very good.
- The quality of subject planning is good; innovative subject planning is evident in the current development of a new course on Forensic Science for use in Transition Year.
- The current scheme of work for first-year science students is not based on the new specification for Junior Cycle Science.

RECOMMENDATIONS

- Good practice with respect to the use of learning intentions to engage students in self-reflection should be shared among staff.
- Teachers should develop a shared policy regarding the assessment of students' laboratory reports.
- The science department should collaboratively plan for the appropriate implementation of the new Junior Cycle Science specification.

DETAILED FINDINGS AND RECOMMENDATIONS

1. TEACHING AND LEARNING

- The overall quality of teaching and learning observed was good. All lessons had a clear overall focus and were conducted in a supportive environment. Good classroom routines have been established.
- Most lessons were well planned. Teachers had thought about what they wanted students to achieve and had designed a range of appropriate learning activities. New material was presented in a structured manner which helped students develop their knowledge and understanding.
- Students benefited from a range of useful teaching resources such as worksheets and notes. Information and communication technology (ICT) was well used to present information and illustrate difficult topics.
- The setting out of learning intentions at the start of most lessons helped to engage students in the learning process. These intentions were used again later in some lessons as a means of assessing progress. In other lessons, however, they were not mentioned again. Teachers should share good practice with respect to the use of learning intentions.
- Students' prior learning was activated by questioning at the start of most lessons. It was also good practice that students' engagement with learning after the lesson was facilitated by the assignment of homework.
- There was a strong focus on developing students' literacy skills in a number of lessons. Significant scientific terms were explained and recorded in key-word journals. Very good practice was evident when attention was paid to ensuring that students understood non-scientific terms and to linking new scientific terms with their use in other disciplines or languages. It would be worthwhile for teachers to share such good practice.
- Hands-on practical activities were observed in many lessons. These activities were well organised and facilitated a high level of student engagement. This active involvement in laboratory work supported the development of students' manipulative and investigative skills. It was very evident that they enjoyed working independently in small groups.
- Students' records of laboratory work were generally checked for completion. However, most of the records observed were not assessed for quality. In order to support the development of students' reporting skills, teachers should develop a shared policy regarding the assessment of students' laboratory reports. For example, some credit could be given in examinations for work completed or students could be involved in self-assessing or peer-assessing reports.
- Students' knowledge and understanding was assessed during lessons mainly through teacher questioning and observation. Best practice was observed where students were challenged to answer questions frequently and explain things in their own words.

2. SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- The quality of whole-school support for the provision of science subjects is very good.
- Two well-equipped science laboratories have been re-furbished to a high standard. Very good ICT facilities, including internet connection, are available in the laboratories.
- A wide range of science subjects is available. As well as Junior Cycle Science, the school offers three Leaving Certificate science subjects. The uptake of both Science and Chemistry is very good.
- The timetabling arrangements for science subjects are appropriate. It is good practice that all double periods are held in a laboratory and that all class groups are of mixed ability.
- New teachers are supported by a short induction programme at the start of the school year as well as ongoing monitoring and support from senior management. In a context where a large proportion of the science department is newly qualified, it would be worthwhile for the school to explore further formal means of supporting the professional development of new teachers.
- The school has chosen e-learning as a current focus for school self-evaluation and the science department in very active in promoting the use of ICT.

3. PLANNING AND PREPARATION

- The quality of subject planning is good. The subject department is well organised and co-ordinated. Formal planning is complemented by a high level of informal ongoing planning.
- Very good use is made of ICT to support collaborative planning. Teaching resources are shared electronically and the department is exploring the use of electronic platforms to share such resources with students.
- Schemes of work have been developed which allow for the use of common examinations and are linked to useful resources for supporting students' practical work. Innovative subject planning is evident in the current development of a new course on Forensic Science for use in Transition Year.
- Teachers reported that, due to industrial action, planning for the implementation of the new specification for Junior Cycle Science and attendance at relevant professional development events have been limited. The current scheme of work for first-year science students is not based on the new specification for Junior Cycle Science. The science department should collaboratively plan for the appropriate implementation of the new science specification.
- It is very good practice that the subject department reviews student outcomes in state examinations within the context of school-based data. A commitment to improving outcomes for students is evident in the identification of issues of concern and the on-going monitoring of progress.
- The science laboratories are very well organised. The science teachers have an effective system in place to maintain equipment and resources, and the school provides financial support as needed.

- Good attention has been given to planning for health and safety. All science students and their parents are required to sign a safety contract before engaging in practical work. Training in first-aid has been undertaken by a number of staff.

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

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 *very good* 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;