

An Roinn Oideachais agus Scileanna
Department of Education and Skills

Subject Inspection in Science & Chemistry

REPORT

Ainm na scoile / School name	Dominican College
Seoladh na scoile / School address	Griffith Avenue Drumcondra Dublin 9
Uimhir rolla / Roll number	60690R

Date of Inspection: 21-09-2016



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	21-09-2016
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 six class periods• Examination of students' work• Feedback to principal and relevant staff

SCHOOL CONTEXT

Dominican Convent is a voluntary secondary school for girls with a current enrolment of 704 students. The school provides the Junior Certificate, Leaving Certificate, Leaving Certificate Vocational Programme and an optional Transition Year (TY) programme.

SUMMARY OF MAIN FINDINGS AND RECOMMENDATIONS:

FINDINGS

- Teaching and learning are of a very high quality.
- A high level of student engagement was supported by the use of teaching strategies such as practical work, group work, presentations and discussions.
- Student progress was monitored effectively through a variety of assessment strategies; in some cases, questioning techniques could have provided greater challenge.
- Lesson content was communicated clearly with good use of electronic and print resources which supported the development of students' literacy skills.
- Subject provision and whole-school support are of a high standard.
- Planning and preparation are very effective.

RECOMMENDATIONS

- Teachers should review their use of different questioning strategies and the effect of such strategies on the depth of student engagement.

DETAILED FINDINGS AND RECOMMENDATIONS

1. TEACHING AND LEARNING

- Teaching and learning are of a very high quality overall. There was very good preparation for lessons. This was evident in the preparation of resources to support learning, and in the structure and sequence of learning activities in the lessons observed.
- At the start of most lessons, students' involvement in the learning process was promoted through discussion about the learning intentions to be achieved. This approach worked very well when students reviewed how they were doing in achieving the learning intentions both during and at the end of the lessons.

- Group work was used very effectively in all of the lessons observed. Well-planned resources such as worksheets, games, 'show-me boards' and 'placemats' supported this approach to collaborative learning. Students worked well both independently and in their groups.
- Practical activities were well organised and supported the development of students' understanding of the relevant concepts. An investigative approach to practical activities created a challenge that engaged actively students in learning.
- There was a very good balance of teacher-led versus student-centred activity in most lessons. Students were given good opportunities to express themselves in answering questions both through written tasks and verbally.
- A good variety of assessment strategies such as questioning, classroom observation, home work, and peer-assessment was used. Students are also encouraged to self-review their own progress and outcomes.
- In the majority of lessons, very effective questioning techniques probed the depth of students' learning and provided an appropriate level of challenge. In some cases, questions focused more on recall of information and insufficient use was made of higher-order questions. It is recommended that, as part of their ongoing sharing of professional practice, teachers should review their use of different questioning strategies and the effect of such strategies on the depth of student engagement.
- In some lessons, excellent attention was given to developing the skills of presentation, communication and argument through providing opportunities for students to present their work to the whole class.
- Very good classroom routines have been established. Students were very attentive and cooperative. They were confident in asking and answering questions.
- Lesson content was communicated clearly with good use of electronic and print resources to support students' learning. Literacy development was supported with a particular emphasis on the key scientific words required to communicate in science.

2. SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- Subject provision and whole-school support are of a high standard. There is very good curricular provision for science. It is an optional subject in junior cycle and has a high uptake. Four Leaving Certificate science subjects are provided and there is a strong element of science in the TY programme.
- Timetabling arrangements are appropriate and all classes have access to a laboratory for at least one double period per week. It is good practice that laboratory access is arranged collaboratively among the science teachers.
- The school has three well-equipped laboratories and a demonstration room for the teaching of science. Displays of students' work and science materials in the laboratories and adjacent corridors make for a bright attractive learning environment.
- Very good attention is given to creating a safe working environment. All laboratories are equipped with the appropriate health and safety equipment. The importance of laboratory rules and a safe working environment is emphasised to the students.
- The laboratories are well equipped with information and communication technology (ICT) such as data projectors and internet access.
- The school is very supportive of teachers' continuing professional development. Teachers have engaged with an extensive range of relevant in-service training. Whole-school initiatives such as instructional leadership, peer review, and mentoring of student teachers have impacted positively on the quality of teaching and learning of science subjects.

- Very good links have been developed with external agencies such as Dublin City University and Trinity College. Plans are in hand to extend these links to a third-level institution in the USA.

3. PLANNING AND PREPARATION

- Planning and preparation are very effective. The science department is well organised; the duties of coordination are shared and good records are maintained of regular formal meetings. Formal planning is supported by extensive informal ongoing collaboration among the teachers. Good use is made of ICT to support the sharing of teaching resources.
- The subject plan is very comprehensive and sets out the policies and practices agreed by the science department in relevant areas. Schemes of work have been developed for all subjects and year groups. Planning for teaching the new Junior-Cycle Science specifications is underway with a particular focus on the first term of the new course.
- Very good support for the full range of student abilities is evident in the liaison between the science and learning-support departments, and in the arrangements in place for gifted students. It is good practice that student attainment is analysed and reflected on by the science department.
- It is highly commendable that the sharing of good teaching practice is promoted both at subject department level and through whole-school initiatives. The school's engagement with instructional leadership was reflected in the many examples of innovative teaching strategies observed in lessons visited.
- Planning for resources is very good. The laboratories are well organised. The science teachers conduct an annual stock taking and are developing kits of equipment to support the provision of practical activities.
- A wide range of extra-curricular activities is planned throughout the school year. For example, students participate in the Young Scientist competition, the Walton Club, field trips, quizzes, and debates.

The draft findings and recommendations arising out of this evaluation were discussed with the 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. Overall, learners have access to a basic level of provision. 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;