

An Roinn Oideachais agus Scileanna
Department of Education and Skills

Subject Inspection in Science & Physics

REPORT

Ainm na scoile / School name	Da La Salle College
Seoladh na scoile / School address	Upper Churchtown Road Churchtown Dublin 14
Uimhir rolla / Roll number	60310E

Date of Inspection: 10-03-2017



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 & Physics 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.

Subject Inspection

INSPECTION ACTIVITIES DURING THIS INSPECTION

Date(s) of inspection	10-03-2017
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 class periods• Examination of students' work• Feedback to principal, deputy principal and relevant staff

SCHOOL CONTEXT

De La Salle College is a boys' voluntary secondary school with a current enrolment of 388 students. The school offers the Junior Certificate, the established Leaving Certificate, and a compulsory Transition Year (TY) programme.

SUMMARY OF MAIN FINDINGS AND RECOMMENDATIONS:

FINDINGS

- The quality of teaching, learning and assessment ranged from good to very good overall; there were some elements of adequate practice.
- Positive classroom interactions supported a co-operative and productive learning environment.
- Students engaged in purposeful investigative practical activities though there was insufficient learner autonomy during some lessons.
- Assessment strategies worked well overall; teachers' use of developmental formative written feedback was of a high standard.
- The quality of collaborative planning and individual teacher planning for lessons was very good overall.
- Subject provision for Science and Physics is good overall though some resource deficits need to be addressed.

RECOMMENDATIONS

- Teachers should plan and collaborate to ensure that inquiry-based learning is maximised and that students have the opportunity to lead learning in all lessons.
- School management and teachers should collaborate to address any resource deficits that may impact on the student learning experience.

DETAILED FINDINGS AND RECOMMENDATIONS

1. TEACHING AND LEARNING

- The overall quality of teaching, learning and assessment ranged from good to very good overall. There were some elements of adequate practice.
- Positive classroom interactions supported a cooperative and productive learning environment. Students enjoyed their learning and were motivated to learn. Teachers showed very good classroom management skills.
- Lessons progressed seamlessly, and were guided by learning intentions that were shared with students and were revisited. This good practice impacted positively on student learning.
- The quality of individual teacher planning for lessons was good overall and resulted in well-structured lessons. Teachers generally selected and used planning and assessment practices that progress students' learning.
- Students worked collaboratively during some theory and practical lessons. There were short clear inputs from the teacher in many cases to aid student understanding.
- Students engaged in purposeful investigative practical activities. There was an appropriate focus on student skills development when teachers used their expertise to choose effective methodologies and practical activities that supported student autonomy and inquiry-based learning.
- Small student group activities convened by the teacher worked particularly well in most lessons. Student learning was supported when they predicted the outcome of investigations and then compared their prediction to the actual outcome.
- In some lessons, there was insufficient learner autonomy, groups were too large for meaningful student engagement or teacher demonstrations should have been replaced with student activities. Teachers should plan and collaborate to ensure that inquiry-based learning is maximised and that students have the opportunity to lead learning in all lessons.
- Students experienced an appropriate level of challenge which was developed by teachers in some lessons through the setting of thought-provoking questions which enabled students to think more clearly about important concepts.
- Teachers used information and communication technology (ICT) in an effective way to develop and support student learning and understanding. In order to make learning more relevant, teachers should link lesson material to practical applications of the lesson theme using ICT.
- There was appropriate focus on problem-solving skills and 'hands-on' practical skills in most lessons. There was good focus on precautions and errors in measurement during practical activities. Laboratory activities were conducted in a safe environment.
- Scientific literacy and numeracy were effectively integrated into learning in some lessons. Keywords and mathematical formulas were recorded on the board and provided on handouts during some lessons.
- Positive differentiation strategies supported learning.
- Assessment strategies worked well overall. Teachers' use of developmental formative written feedback was of a high standard. The quality of students' written work was good overall; some students will need to complete the corrections outlined by teachers.
- Questioning strategies worked well overall, especially when questions were directed at individual students so that participation in learning was maximised. Best practice was observed when students were encouraged to reflect on their learning and when teachers modified their approach to take account of student feedback.
- When examined, students relayed good levels of knowledge and understanding overall though in some cases teachers should ensure that more time is spent on developing key lesson

themes. The academic progress card in the student journal encourages students to be self-reflective learners. This is good practice.

- Well-designed student handouts, worksheets and the assignment of appropriate homework greatly supported and consolidated learning.

2. SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- Subject provision for Science and Physics is good overall. Science is offered as a core subject at junior cycle. Physics, Chemistry and Biology are options at senior cycle. TY students experience ten-week modules in Physics, Chemistry and Biology. Time allocation for the science subjects is very good.
- First and second-year science class groups are currently of mixed ability and all junior cycle science class groups will be mixed ability from the next academic year.
- The school has three science laboratories which are very well organised and maintained. Laboratory ICT facilities are good and support student learning.
- Appropriate chemical storage was recommended in a previous science inspection report, this has been addressed and improvements have been implemented. The outdated health and safety statement is currently being reviewed following a whole school audit of facilities.
- Some basic science equipment deficits need to be addressed. School management and teachers should collaborate to address any resource deficits that may impact on the student learning experience.
- Students are encouraged to partake in a number of co-curricular and extra-curricular activities including SciFest and science week activities. Class visits to events including the BT Young Scientist competition are organised.
- Reports are sent to parents on four occasions throughout the year following school assessments. Examination results are analysed and academic achievement is analysed and monitored. Teachers should engage in contextual reflection on trends and outcomes as part of overall science planning.
- All teachers are encouraged and supported by school management to partake in relevant continuing professional development (CPD) courses. It is important that all teachers remain upskilled regarding the new science specification which forms part of the Junior Cycle Framework. Teachers should also consult www.jct.ie. Records of teacher professional development should form part of science department planning.

3. PLANNING AND PREPARATION

- The quality of collaborative subject planning for Science and Physics is very good overall.
- Subject plans have been substantially reviewed and a previous recommendation made to develop a comprehensive and wide-ranging collaborative science plan has been substantially fulfilled. Further development of this plan should include school self-evaluation (SSE) and new assessment practices. Reflections on state examination results should lead to documented strategies for improved uptake of higher level. Modified curriculum plans should be expanded to link methodologies, resources and assessment strategies to each section of the course.
- The TY plan has been reviewed and updated. It is recommended that, when material from the Leaving Certificate course is included, it be used innovatively to fulfil the aims of TY. The inclusion of student presentations, project work and portfolio assessment is also recommended.
- Teachers work collaboratively to plan and implement the curriculum. There is currently no overall co-ordinator of Science. It is therefore recommended that the co-ordination of Science be undertaken on a voluntary rotating basis by teachers.

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. 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.

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 <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;