

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

Subject Inspection in Science & Physics

REPORT

Ainm na scoile / School name	St Conleth's College
Seoladh na scoile / School address	28 Clyde Road Ballsbridge Dublin 4
Uimhir rolla / Roll number	60590N

Date of Inspection: 25-10-2016



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 & 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	25-10-2016
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 three class periods• Examination of students' work• Feedback to principal, deputy principal and relevant staff

SCHOOL CONTEXT

St Conleth's College is a fee-charging, co-educational secondary school with a current school enrolment of 242 students. The school offers the Junior Certificate, the established Leaving Certificate, the Leaving Certificate Vocational Programme (LCVP) and a compulsory Transition Year (TY) programme.

SUMMARY OF MAIN FINDINGS AND RECOMMENDATIONS:

FINDINGS

- Student learning was of a very high standard overall; the overall quality of teaching ranged from good to very good.
- There was a very good atmosphere combined with positive classroom interactions observed in all lessons.
- There are evident weaknesses in the quality of many students' written records.
- Assessment strategies were adequate overall though possibilities for improvement exist.
- The overall quality of individual teacher planning for lessons was good though collaborative subject planning has evident weaknesses.
- Overall subject provision for Science and Physics is good though some timetabling and deployment deficits need to be addressed.

RECOMMENDATIONS

- Teachers should put measures in place to ensure that the deficits in the quality of students' written work and practical records are addressed.
- Teachers should extend as appropriate the use of formative written feedback.
- School management and teachers should ensure that the Science and Physics plans and schemes of work are significantly improved as outlined in the body of the report.
- Deployment of teachers by school management should ensure capacity building for the future in light of current significant changes in junior Science.

DETAILED FINDINGS AND RECOMMENDATIONS

1. TEACHING AND LEARNING

- The overall quality of teaching ranged from good to very good. Student learning was of a very high standard overall. When questioned, students displayed very good levels of knowledge and understanding.
- There was a very good atmosphere and positive classroom interactions were observed in all lessons. Students enjoyed their learning and were motivated to learn.
- Students were actively engaged in learning and were purposefully involved in meaningful learning activities in most lessons. Teachers used their expertise to choose effective methodologies and practical activities that supported student learning. There was an appropriate focus on student skills development. Laboratory activities were conducted in a safe environment. In one lesson, the sequencing of student tasks was not effective and required improvement so that the set tasks could be completed within the lesson timeframe.
- In the main, teachers selected and used teaching approaches appropriate to the learning intentions and to the needs of students. One lesson was overly teacher-led and did not allow for sufficient student input or respond to individual or differentiated learning needs. It is recommended that teachers plan for an appropriate balance between teacher instruction and student activity in such instances. This could be achieved by setting short student tasks and focused problems in a group setting so that all students are provided with the opportunity to participate more fully.
- Students worked collaboratively during some theory and practical lessons. There were short clear inputs from the teacher in many cases to aid student understanding.
- Teachers' classroom management skills were good overall.
- Teachers used information and communication technology (ICT) in an effective way to develop and support student learning and understanding. Photographs and video clips were well chosen by teachers.
- The overall quality of individual teacher planning for lessons was good and generally resulted in well-structured and well-delivered lessons. Teachers generally selected and used planning and assessment practices that progressed students' learning. Lesson intentions were written on the board or screen and were re-visited at the conclusion of most lessons. Teachers should ensure that all students attain the stated learning intentions. In one lesson, it would have been more beneficial for all students to consolidate their learning than for the teacher to introduce a new topic towards the end of the lesson. Students should be encouraged to reflect on their progress as learners in order to develop an enhanced sense of ownership and responsibility for their learning.
- Scientific literacy and numeracy were effectively integrated into learning in some lessons. Keywords and mathematical formulas were recorded on the board during some lessons.
- While assessment strategies were adequate overall, possibilities for improvement exist. There were evident weaknesses in the quality of many students' written records. Some work was incomplete or poorly presented. Teachers should put measures in place to ensure that the deficits in the quality of students' written work and practical records are addressed. In addition, teachers should extend as appropriate the use of formative written feedback.
- The good use of appropriate worksheets supported reinforcement and consolidation of learning. Homework tasks were corrected and assigned during lessons.

2. SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- There is very good provision for science education. Science is offered as a core subject at junior cycle. Physics, Chemistry and Biology are options at senior cycle. TY students sample Physics, Chemistry and Biology in the first term.

- The school has one science laboratory and teacher preparation area which are very well organised and maintained. Laboratory ICT facilities are good and support student learning.
- The school has addressed some of the resource recommendations outlined in an earlier inspection report. Science resources and equipment have been enhanced and health and safety concerns regarding chemical storage have been addressed by school management and teachers.
- Time allocation for the science subjects is very good overall. The timetable endeavours to maximise laboratory access. However, weekly access for double periods for all groups has not been possible due to single laboratory provision.
- Students are encouraged to partake in a number of co-curricular and extra-curricular activities including SciFest and the BT Young Scientist competition. Class visits are organised to the Science Gallery and guest speakers are invited to talk on science-related topics. This is praiseworthy.
- School examinations are held on three occasions throughout the year following which reports are sent to parents. Examination results are analysed and academic achievement is analysed and monitored. This is good practice, however, teachers should provide contextual reflection on trends and outcomes as part of overall science planning.
- There are three teachers in the science department, although only two are involved in teaching junior Science. Deployment of teachers by school management should ensure capacity building for the future in light of current significant changes in junior Science.
- School management encourages and supports all teachers to partake in relevant continuing professional development (CPD) courses. It is important that all teachers remain upskilled in light of the introduction of the new science specification which forms part of the Junior Cycle Framework. Teachers should also make use of the materials at www.jct.ie. Records of teacher professional development should form part of science department planning.

3. PLANNING AND PREPARATION

- Subject planning for Science and Physics requires significant improvement in many relevant areas. Collaborative subject planning has evident weaknesses. The plans are not comprehensive and only include syllabus learning outcomes and textbook chapters to be completed by each year group. An earlier inspection report highlighted these deficits, which have not been addressed.
- School management and teachers should ensure that a collaborative science plan and scheme of work is drawn up to encompass the new junior cycle specification for Science. Areas for inclusion are: reflections on state examination results, school self-evaluation (SSE), records of completed and planned teacher CPD, new assessment practices and modified schemes of work. Future planning should include strategies to facilitate the sharing of best practice not only with science colleagues but across the entire school. The utilisation of the transition unit template may further aid TY planning development.
- The co-ordination of Science is undertaken on a voluntary rotating basis by teachers. There are monthly meetings of the science department and minutes are maintained. Organisational, curricular and resource areas are discussed. These practices are praiseworthy. An enhanced collaborative focus on teaching, learning and assessment is recommended.

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 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;