

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

Subject Inspection in Science & Biology

REPORT

Ainm na scoile / School name	St. Mel's College
Seoladh na scoile / School address	Longford Co. Longford
Uimhir rolla / Roll number	63750B

Date of Inspection: 17-11-2016



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 & Biology 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 of inspection	17-11-2016
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 five class periods• Examination of students' work• Feedback to principal and relevant staff

SCHOOL CONTEXT

St Mel's College, a boys' voluntary secondary school under the trusteeship of Bishop Francis Duffy, has a current student enrolment of 474. Students come from a wide variety of socio-economic backgrounds. An optional Transition Year programme is included on the school's curriculum.

SUMMARY OF MAIN FINDINGS AND RECOMMENDATIONS:

FINDINGS

- The quality of both teaching and learning was satisfactory in all the lessons observed with examples of good practice commonly evident.
- A good variety of teaching methodologies was observed in use, these were mostly appropriate, but with a tendency towards a teacher-centred approach evident in some lessons.
- Examples of very good questioning were observed during some lessons.
- Students engaged positively in lessons, worked hard, and made many significant contributions to lessons.
- Some very good support for students' literacy development was evident during lessons but no overt interventions to support numeracy development were observed.
- The work of the science teachers has facilitated co-ordination of course delivery and the provision of common assessments to the greatest level possible.

RECOMMENDATIONS

- Teachers should adopt an agreed and consistent approach to the provision of developmental written feedback on students' written work.
- It is recommended that the school's numeracy strategy be revisited and its implementation reviewed.
- More formal science department structures should be put in place to co-ordinate a more proactive and strategic approach to subject department planning and development.
- Schemes of work require significant additional detail and, in addition, a written plan for Transition Year should be prepared at an early date.
- The work of the science department should be extended to planning for improvement in certificate examination outcomes for students.

DETAILED FINDINGS AND RECOMMENDATIONS

1. TEACHING AND LEARNING

- The quality of teaching was satisfactory in all the lessons observed with examples of good practice commonly evident. Students were mostly well challenged by their teachers. They behaved very well at all times and they engaged positively in lessons. They worked hard, made many significant contributions and demonstrated their learning.
- Lessons were well prepared and all required resources were to hand. Classroom management was universally very good.
- A good variety of teaching methodologies was observed in use and these were mostly appropriate.
- A tendency towards a more teacher-centred approach was apparent in some lessons. However, in some instances, the use of good quality questioning increased the level of teacher-student interaction.
- Lessons were well structured, with clear learning intentions shared with students and these were reviewed at the close of lessons, consolidating learning.
- Examples of very good questioning were observed during some lessons. An appropriate mix of lower-order and higher-order questions was used, students were allowed time to consider their responses and questions were redirected as necessary. Such questioning was used on occasion to assist in developing the lesson content and to give students feedback on their learning progress.
- A combination of questioning, discussion and teachers' movement within the classroom contributed to the provision of a good level of individual assessment of, and differentiated support for, students in some classrooms.
- Students' efforts in class were generally well affirmed. However, there is a need to place a similar emphasis of affirming and providing developmental written feedback on students' written work. Such feedback will also be valuable in supporting the development of students' report-writing skills and it is recommended that teachers adopt an agreed and consistent approach.
- Some very good support for students' literacy development was evident during lessons but no overt interventions to support numeracy development were observed. It is recommended that the school's numeracy strategy be revisited and its implementation be reviewed.

2. SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- Science is a core subject in junior cycle and the full range of science subjects is offered to students entering senior cycle. Uptake of Biology is consistently high.
- The work of the science teachers has facilitated co-ordination of course delivery and the provision of common assessments to the greatest level possible.
- An appropriate system of assessing students through in-house examination and of reporting to students' homes on their progress is in place.
- Timetabling arrangements are appropriate at all levels and laboratory access for students is well managed.

- It is positive that students get opportunities to go on science-related trips and participate in science quizzes.
- Appropriate health and safety equipment is in place in the laboratories. However, safety notices are lacking and these should be placed on prominent display at an early date.

3. PLANNING AND PREPARATION

- Documentation indicates that the science department is operating at a basic level and that planning for course delivery is essentially confined to listing the topics to be taught in each term or year for Junior and the Leaving Certificate courses.
- These schemes require significant additional detail: timeframes should be shortened and be more specific to enable progress to be monitored to a greater degree and to enhance opportunities for co-ordination; and practical activities associated with each topic should be highlighted to facilitate advance provision of resources.
- Formative and summative assessment practices and procedures should be described and linked to both course content and assessment events.
- More formal science department structures should be put in place to co-ordinate a more proactive and strategic approach to subject department planning and development, as described above, and to support implementing a more student-centred approach to teaching and learning.
- A plan for Transition Year is lacking and should be prepared at an early date. This should include details of the aims and objectives of the course, subject-specific content, course delivery schedules, teaching methodologies and assessment details.
- Outcomes for more able students at higher level in the certificate examinations are very good. However, failure rates are high at both higher and ordinary level in Science and Biology. There is a need to extend the work of the department to planning and implementing the improvements necessary to reduce these failure rates.
- Evidence from an analysis of outcomes in in-house assessments and past certificate examinations, along with additional evidence, should be used to identify strengths and areas for improvement. Action planning to achieve stated improvements should be documented, implemented and reviewed in the light of outcomes. Clear targets for improvement should be set.
- In addition, the manner of implementing the new junior certificate science specification should be reviewed by the science department to ensure that appropriate teaching approaches are being adopted to meet the requirements of the specification.

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, and the response of the board will be found in the appendix of this report.

Appendix

School response to the report

Submitted by the Board of Management

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 intends to address all issues which relate to the recommendations in the report. These will include:

- Agreed approach to written feedback on students' written work
- Creation of more formal department structures where the co-ordination of planning can happen. The existence of available time e.g. Croke Park Hours will aid this.
- Updating of subject plan and TY plan
- Analysis of certificate results and an improvement plan where required.

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;