

An Roinn Oideachais agus Scileanna

Department of Education and Skills

**Subject Inspection of Science and Physics
REPORT**

**Mountrath Community School
Mountrath, County Laois
Roll number: 91550B**

Date of inspection: 19 October 2011



**A N R O I N N | D E P A R T M E N T O F
O I D E A C H A I S | E D U C A T I O N
A G U S S C I L E A N N A | A N D S K I L L S**

**REPORT
ON
THE QUALITY OF LEARNING AND TEACHING IN SCIENCE AND PHYSICS**

INFORMATION ON THE INSPECTION

Date(s) of inspection	18 and 19 October 2011
Inspection activities undertaken <ul style="list-style-type: none">• Review of relevant documents• Discussion with principal and teachers• Interaction with students	<ul style="list-style-type: none">• Observation of teaching and learning during nine class periods• Examination of students' work• Feedback to principal and teachers

MAIN FINDINGS

- The members of the science teaching team have co-operated very well and have achieved much in establishing a well-functioning department.
- Teaching was good in the science and the physics lessons observed and it was clear that students were learning in all lessons.
- There is good liaison between the learning-support department and the science department with regard to students with additional educational needs.
- The number of students opting for physics each year is rather low.
- While it was evident that the students' work in Science was being assessed and monitored by most teachers, in a small number of cases this was not happening.

MAIN RECOMMENDATIONS

- Consistent and comprehensive procedures for the assessment of students' work should be a key priority of the science department and of individual teachers.
 - A strategy should be developed to increase the current uptake of physics. This should involve the physics teachers and the guidance department.
 - The science department should have as their core priority the further development of teaching and learning through consistent use of learning objectives and further development of methodologies that will increase students' active involvement in learning.
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INTRODUCTION

Mountrath Community School opened in 2009 and has 694 students. The school was formed from the amalgamation of three second level schools. The school has a Transition Year (TY).

TEACHING AND LEARNING

- While teaching was good in the Science lessons observed, there is scope for a greater integration of students' life experiences and also for links with other subjects.
- Teaching was good in the physics lessons observed. The range of student activities in lessons should be increased, perhaps through encouragement of students' research and presentation skills.
- While it was clear that students were learning in all lessons observed, this was especially evident in those lessons where students were most active in their learning
- The development of students' literacy skills through their participation in Science should be supported through the use of keywords, and demanding full sentences from students in their answers to questions.
- Student practical work carried out was well organised and it was evident that students were learning in the course of it. The use of the investigative approach was noted in many lessons.
- While in almost all lessons, students were informed of the topics to be covered at the outset, in some cases this did not occur. The learning objectives of lessons should be made clear at the start of lessons and be referred to during and at the end of lessons. The learning objectives should be used for assessment and for summarising the learning points of the lesson.
- While all classes observed were of mixed ability, differentiation was not generally evident. The recent whole-school continuing professional development (CPD) on differentiation should provide a framework for the development of differentiation practices.
- All classrooms were well managed with good discipline and good teacher-student relationships evident. The atmosphere in all classrooms was conducive to student learning.
- In the course of the evaluation it was evident that students' work in Science was being assessed and monitored by most teachers. In a small number of cases this was not the case. The assessment of students' work, both written and oral, is an essential part of the teaching process and should be carried out in a consistent, comprehensive manner so that teachers and students are aware of the quality of students' learning.
- It was evident in the physics lessons observed that students' work was well presented and was being regularly assessed.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- There is very good provision for Science and Physics on the school's curriculum and classes are appropriately timetabled.

- There is a strong whole-school emphasis on student assessment that is reflected in the recent inclusion of the post of academic monitor in the school's management structure. The school also has a draft homework policy that is being developed in consultation with the staff. These reflect the school's commitment to assessment for learning practices.
- The science and physics teachers show good practice in analysing student outcomes in the State Examinations Commission examinations. Student outcomes are good including the proportion taking the subjects at higher level. Students are also assessed on a regular basis through topic tests and term tests and records are kept of these.
- There is good liaison between the learning-support department and the science department in respect of students with additional educational needs.
- In order to address the low number of students opting for Physics the science department, in co-operation with the guidance department, should adopt an approach whereby second and third year students are given information on what the study of Physics entails and the progression routes from such study. This could be done either by teachers in the school or by external speakers. To support this the physics teachers should apply for school membership of the Institute of Physics.
- The school has very good resources for Science. The science and physics teachers have shown considerable commitment, and professionalism in ensuring the successful transition from three separate science departments to one large department.
- Laboratories are well organised and the provision of large display boards outside them for the display of students' work and other material relevant to the science subjects benefits the students. Evidence was also seen of good practices in relation to record-keeping regarding laboratory resources and the storage of laboratory equipment in a readily-accessible manner.

PLANNING AND PREPARATION

- The science and physics teachers have achieved much in a short time in terms of planning and co-operation. The records of the frequent department meetings reflect the commitment of the teachers. Up to now this planning has necessarily been mainly concerned with organisational issues. A future focus for planning should be the experience of students in studying Science and Physics and it should build on the work done to date with regard to curriculum and assessment.
- There are at present a range of different practices among the members of the science team with regard to the number of notebooks and copies that students have for Science and the manner in which these and students' workbooks, laboratory books and textbooks are used. The department should agree common practices in respect of these, including their assessment.
- Common subject plans have been developed for Science and for Physics. The plans should be further developed so as to increase their usefulness to teachers in supporting teaching and learning. Reference should be made in them to methodologies, resources, and assessment. Provision should be made for regular review.
- In developing the TY science programme more detail should be included on the methodologies in use, on the timing, and on the activities in which students are engaged.

- The sharing of resources for teaching and learning is developing among the science staff and there are clear plans for use of information and communication technology (ICT).
 - Individual teacher planning and preparation of resources for each lesson observed was very good.
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The draft findings and recommendations arising out of this evaluation were discussed with the principal and the 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.