

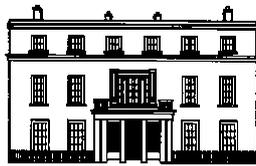
**An Roinn Oideachais agus Scileanna**

**Department of Education and Skills**

**Subject Inspection of Mathematics  
REPORT**

**Scoil Dara,  
Kilcock, County Kildare  
Roll number: 61691B**

**Date of inspection: 16 September 2011**



**AN ROINN | DEPARTMENT OF  
OIDEACHAIS | EDUCATION  
AGUS SCILEANNA | AND SKILLS**

**REPORT  
ON  
THE QUALITY OF LEARNING AND TEACHING IN MATHEMATICS**

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**INFORMATION ON THE INSPECTION**

<b>Dates of inspection</b>	<b>15<sup>th</sup> and 16<sup>th</sup> September 2011</b>
<b>Inspection activities undertaken</b> <ul style="list-style-type: none"><li>• Review of relevant documents</li><li>• Discussion with principal and teachers</li><li>• Interaction with students</li></ul>	<ul style="list-style-type: none"><li>• Observation of teaching and learning during nine class periods</li><li>• Examination of students' work</li><li>• Feedback to principal and teachers</li></ul>

**MAIN FINDINGS**

- Very high quality teaching and learning was evident in all of the lessons observed.
- Strategies to encourage students to take responsibility for their own learning were evident.
- There was very good practice in relation to differentiation of learning.
- While good strategies are used to assess students' progress in learning, there is scope to develop the use of Assessment for Learning (AfL) principles across the subject department.
- Whole-school provision for Mathematics is very good.
- The mathematics department has engaged well in planning for the subject.

**MAIN RECOMMENDATIONS**

- The use of AfL principles to encourage, motivate and provide students with advice on how to improve the quality of their work should be more widely used.
  - The mathematics department should develop its role in supporting literacy.
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## **INTRODUCTION**

Scoil Dara, Kilcock is a co-educational voluntary Catholic secondary school with 830 students. Transition year (TY) is provided as an optional programme.

## **TEACHING AND LEARNING**

- Very high quality teaching and learning was evident in all of the lessons observed. A wide range of methodologies including group and pair work, active learning and use of concrete materials was used to help students to reach a deeper understanding of the concepts taught.
- Teachers took a conceptual approach in exploring the ideas in each lesson by designing learning activities that exposed mathematical concepts. An activity involving students standing in a number line and exploring the concepts of 'less than' and 'greater than' provided a good example of this approach.
- Students demonstrated a sense of confidence in answering questions, arguing misconceptions and exploring ideas for themselves. Teachers encouraged this by asking open questions and by taking care not to over support students in their work. Overall, very good strategies to encourage students to take responsibility for their own learning were evident.
- Information and communications technology (ICT) was used to good effect in many of the lessons observed. However, the members of the mathematics department should consider ways to diversify the uses of ICT in teaching and learning.
- There was evidence of good practice in relation to assessment. Teachers routinely assess progress through observation and oral questioning. Cards depicting 'smiley faces' were held up by the students of one class visited to indicate levels of understanding. It is recommended that consideration be given to the use of AfL strategies to encourage, motivate and provide students with advice on how to improve the quality of their work. In addition, the use of laminate boards should be considered as this would provide teachers with a quick and comprehensive assessment of student learning.
- Learning was differentiated in a variety of ways. These included the provision of assistance to any student experiencing difficulty and the use of graduated handouts and additional work where appropriate. Students were challenged to think for themselves and to try hard. There were many instances where students were given opportunities to work at their own pace at an individual level, in pairs or in groups. As a way of supporting the current very good differentiation practices, it is suggested that very able TY students be encouraged to independently study elements of the Applied Mathematics course.
- The relationship between students and their teachers was observed to be very good. The atmosphere in each classroom visited was conducive to increasing student confidence with Mathematics and supporting students in their learning. Students clearly enjoyed the planned activities of each lesson.

## **SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT**

- Teaching and learning in Mathematics is supported through very good time allocation and timetable arrangements for level choice. There is also very good access to resources for teaching and learning and to ICT equipment.
- Students are assigned to mixed-ability classes in first year and to level groupings from second year onwards. Mathematics lessons are concurrently timetabled in all year groups where students are assigned to levels. In first year the lessons of some groups are timetabled at the same time to facilitate the provision of support for students with special educational needs. This is all very good practice.
- Very good supports are provided for students with special educational needs. However, there is scope for the mathematics department's role in supporting literacy to be developed. As a way of doing this it is suggested that teachers use a section of the board to highlight the key words of each lesson; these should be accompanied by a picture, diagram or symbol, as appropriate. In addition, care should be taken to ensure that the language on hand outs and worksheets is accessible to students with literacy difficulties.
- There has been extensive involvement in continuing professional development (CPD) courses by the members of the mathematics department and this involvement is strongly supported by school management.
- A wide variety of valuable opportunities is provided for students to participate in extracurricular activities in Mathematics.

## **PLANNING AND PREPARATION**

- A co-ordinator for the subject department has been appointed and it is good practice that this position rotates periodically. Formal meetings of the department are organised at least twice per term and informal meetings take place throughout the year.
- The mathematics department has engaged well with the planning process and there is a high level of collaboration amongst members of the teaching team. The mathematics teachers collaborate with the feeder primary schools and outside agencies in the development of the subject.
- The mathematics plan contains the relevant policy documents and programmes of work for each year group and level. The latter comprise a list of topics to be taught over an agreed timeframe. It is good that work has begun on incorporating the *Project Maths* syllabus material into the programmes of work. It is recommended that work now centre on the further use of the teaching and learning plans provided by the *Project Maths* development team with a view to ensuring a *Project Maths* approach in the delivery of the new syllabuses. This will complement the very good approaches used already.
- The programme of work for TY and the methodologies used in the delivery of TY lessons are in keeping with the spirit of a good TY programme. The school is working with the National Council for Curriculum and Assessment (NCCA) in the creation of 'Transition Units' for inclusion on the NCCA website. The TY mathematics teachers are piloting the lessons to be used in these units. This is good evidence of the subject department's enthusiasm for the subject and its development within the school.

- Lessons were very well planned and teachers had all the necessary resources prepared in advance. This added significantly to the success of lessons. Teachers are creative in using everyday objects such as cylindrical tins and mobile phones in mathematics lessons.
- The analysis of student achievement in the certificate examinations against national norms is carried out each year. This analysis indicates that the school is performing well.

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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

#### **Area 1: Observations on the content of the inspection report**

The main findings in a recent Mathematics inspection in Scoil Dara were all extremely positive in particular the “very high quality teaching and learning” that “was evident in all of the lessons observed”. The Board of Management would like to congratulate the Mathematics teachers and the School Management on achieving such a high quality report.

#### **Area 2: Follow-up actions planned or undertaken since the completion of the inspection activity to implement the findings and recommendations of the inspection**

While AfL principles are already part of the mathematics programme they will be developed further as suggested in the recommendations – as will a role in supporting literacy.