An Roinn Oideachais agus Scileanna

Department of Education and Skills

Subject Inspection in Mathematics

REPORT

Ainm na scoile / School name	Moyle Park College
Seoladh na scoile / School address	Clondalkin Dublin 22
Uimhir rolla / Roll number	60121B

Date of Inspection: 19-10-2017

AN ROINN OIDEACHAIS AGUS SCILEANNA | DEPARTMENT OF EDUCATION AND SKILLS

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 Mathematics under the following headings:

1. Teaching, learning 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.

The board of management of the school was given an opportunity to comment on the findings and recommendations of the report; the board chose to accept the report without response.

SUBJECT INSPECTION

INSPECTION ACTIVITIES

Dates of inspection	18 & 19-10-2017
Inspection activities undertaken • Review of relevant documents • Discussion with principal and key staff • Interaction with students • Discussion with representatives of the learning support department	• Observation of teaching and learning during seven class periods • Examination of students' work • Feedback to principal and relevant staff

School context

Moyle Park College is a voluntary secondary school with a current enrolment of 724 boys and operates under the patronage of the Marist Brothers. The Junior Certificate Programme and Junior Certificate School Programme are available for junior cycle students. Transition Year (TY) is optional, and in senior cycle the school offers the Leaving Certificate and the Leaving Certificate Applied programme and the Leaving Certificate Vocational Programme.

SUMMARY OF MAIN FINDINGS AND RECOMMENDATIONS:

Findings

- The quality of teaching ranged from good to very good, with a small majority in the latter category.
- Purposeful learning was evident in all of the lessons but there was scope, in most lessons, to make the students' learning more student-centred and challenging.
- The inclusion of rich tasks that prompted discussion and facilitated different approaches to problem solving, in some lessons, enhanced the quality of student learning.
- Classroom management was very good and the best lessons featured effective differentiation of the lesson content.
- The amount of time allocated to teaching Mathematics is very good but the scheduling of mathematics lessons in senior cycle is in need of review.
- The members of the mathematics department collaborate very effectively and are committed to ongoing professional development.

Recommendations

- Subject department planning in Mathematics should seek to ensure that a wider range of teaching approaches are employed during lessons than is currently the case.
- The existence of the streamed class in first year should be reviewed with the intention of delivering Mathematics in mixed-ability settings across the year.
- Assessment for learning (AfL), particularly in relation to the provision of formative feedback, should be used more consistently and systematically by the mathematics department.

DETAILED FINDINGS AND RECOMMENDATIONS

1. TEACHING, LEARNING, AND ASSESSMENT

- The quality of teaching was either good or very good, with a small majority of lessons being in the latter category.
- High expectations of student engagement and participation were evident in all of the lessons. All of the teachers taught with enthusiasm and modelled positive dispositions towards Mathematics.
- Purposeful learning featured in all of the lessons but there was, in some lessons, scope to enhance the breadth and scope of the students' experience of Mathematics and to make their learning experience more student-centred and challenging.
- Where student learning was at its best, the students engaged with rich tasks that provoked discussion and provided opportunities for different approaches to problem solving to be deployed.
- The use of rich tasks was evident, for example, in a lesson exploring the factor theorem. Here, the students worked in pairs and were encouraged to speculate and make predictions about the nature of the roots of cubic equations and how these related to the graph of the function. The approach, supported by very good resources prepared by the teacher, ensured that student learning was of a high quality and that students were able to progress at a rate appropriate to their abilities.
- Where the breadth of student learning was less than ideal the lessons were primarily teacher-led and student activity was limited to them working individually on assigned tasks. It is therefore recommended that future department planning in Mathematics focus on implementing a wider range of pedagogical approaches than is currently the case. These approaches should more student-centred learning becomes and might include; providing students with rich tasks that facilitate collaboration and problem solving, ensuring that every lesson includes opportunities for students to make and test hypothesise, draw conclusions and explain their reasoning.
- Classroom management was uniformly very good and all interactions were polite and respectful. In the very best lessons, classroom management embraced very good differentiation practices where difficulties encountered by students were comprehensively addressed.
- All of the teachers were well prepared for their lessons and a wide range of resources, including those utilising digital technologies, were prepared in advanced. In light of the recommendation above, the focus of lesson planning should now be extended to reduce the reliance on teacher-led approaches.
- Formal assessment practices in Mathematics are very good and feature a high level of teacher collaboration. There is scope for improvement in the practices relating to AfL, particularly in relation to the provision of formative feedback. Given the school's stated objective of enhancing this element of its activities, it is recommended that the mathematics department embrace AfL more consistently and systematically than is currently the case.

2. SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- Timetabling provision, in relation to the amount of time allocated to teaching Mathematics, is very good. Scheduling of mathematics lessons in junior cycle is very good but, owing to the provision of two double periods, senior cycle students only access Mathematics four days per week. This situation should be reviewed with the intention of providing students in fifth and sixth year with access to at least one mathematics lesson each day.
- Mathematics is delivered in mixed-ability settings in first year with the exception of the MENSA class, and effectively a streamed class group which was introduced to the school a number of years ago. This class was established with a view to providing students, identified as being more able during the transition process, with an opportunity to cover the first-year mathematics and science programmes more quickly and with greater depth than the remaining students. The rationale for its introduction was to boost the numbers of students taking higher-level in these subjects in the certificate examinations. To that end, the introduction of this class appears to have been successful. Given the introduction of The Junior Cycle Framework and its emphasis on key skills and broadening the students' educational experience it is recommended that the provision in first year be reconsidered with a view to reinstating mixed-ability classes across the year.
- The qualifications profile of the department is very good. The commitment of its members to their professional development is exemplary.

3. PLANNING AND PREPARATION

- Subject department planning in Mathematics is well established, benefits from the very good leadership provided by the department's co-ordinator and features both formal and informal elements.
- Departmental meetings are held regularly and a very good subject department plan for Mathematics is in place. With the advent of junior cycle reforms, the plan will need to be revisited to reflect the requirements of the new mathematics specification and the wider implications of implementing the Junior Cycle Framework. Particular focus will need to be given as to how the Framework's key skills can be integrated into lesson design and delivery.
- A very good plan for Mathematics in TY, both in relation to its content and the variety and quality of the assessment tasks with which the students are presented, is in place.

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 of 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;