St. Pius X Boys School

School Self-Evaluation Report - Numeracy

The Focus of the Evaluation:

A school self-evaluation of teaching and learning in numeracy was undertaken in St. Pius X Boys' School during the school year 2014/15. During the evaluation, teaching and learning in numeracy was evaluated, including focused reflection on mathematical strategies and language. The emphasis on the language of maths was deemed an appropriate progression of our school's self-evaluation following on from our focus on genre writing (and the appropriate language to use in these genres) in our previous plan. This report presents the results of this evaluation.

Power Maths (introduced in October 2014):

Power Maths is a numeracy-based intervention which is currently being used to assist in the teaching of mathematics in 1st and 2nd class. Through different media, children are enabled to gain a deeper understanding of the concept in question. Unlike its literacy equivalent (Power Hour) this programme focuses on one specific aspect of the maths curriculum per intervention (normally spanning 3 weeks). In the academic year (2014/2015) the strand units of Time and Fractions were identified as the key concepts which would be addressed. Power Maths is taught via station teaching. 5 stations are used – 2 games stations, 1 pencil and paper station, 1 group work with the class' Interactive Whiteboard and finally a group working with concrete materials. Power Maths takes place twice a week. The class teacher and 4/5 SEN teachers facilitate Power Maths. Groupings for this programme are based on ability and determined by a school designed pre-test. This test is administered again following the intervention to ascertain whether progress is observable.

There are many positive benefits to this type of approach to numeracy. The children are given more opportunities to express and articulate themselves orally. Quieter children find their voices in a small group setting and the use of concrete materials aids in the challenges of comprehending abstract concepts. The teachers involved also have a chance to assess individual needs and to get to know the children better. Finally, it also facilitates children who normally are withdrawn for resource class, receive in-class support and experience structured group work with their peers.

Maths Eyes:

We incorporated the Maths Eyes programme into our mathematical curriculum so that individual pupils could see the different types of mathematics that they are doing every day. Having "Maths Eyes" also helps the children to understand that mathematics is more than the skills and formulae they might associate with their school experience. Furthermore, the "Maths Eyes" programme encourages discussion about, and language development around, mathematics and in our adaptation, our focus is around shape and space in the child's environment at home.

The Maths Eyes programme was initiated in Junior and Senior Infants in 2014. The aim of the programme was to make children more aware of the inclusive and all-encompassing nature of Mathematics in their surroundings (both at home and at school). This was facilitated by the children taking photographs of everyday objects and displaying them on the walls of the school corridors. Through discussion and exploration children developed a sense of shape and pattern that extended beyond the interior walls of the school.

Enrichment Programme for pupils exhibiting significant ability in Maths:

Education Act 1998

The 1998 Education Act places obligations on all schools to cater for the special educational needs of all pupils including *"the educational needs of exceptionally able students."*

Criteria for Selection

Two pools of children are formed - one for English and one for Maths.

- Children who are currently enrolled in 3rd, 4th, 5th or 6th class are considered for selection to either or both pools.
- Children who have scored a sten of 10 in either a standardised English test or a standardised Maths test will be placed in either (or both) pools. Such a test will have been administered in this or another school or by a certified educational psychologist.

Mathematics: The children are exposed to a learning environment that aims to improve their problem-solving ability and their creative thinking competencies. Ability-appropriate tasks, activities and challenges are chosen to stimulate the child's lateral thinking abilities. The programme aims to develop logic and problem-solving strategies. Computer programming is a major element of the Maths programme.

In-Class Support:

The school is fortunate to have the support of a dedicated Maths SEN teacher. This teacher, in consultation with class teachers, monitors and assists pupils at the lower end of the school's standardised test results (SIGMA-T). Depending on the needs of the pupils, the numeracy learning support teacher will either withdraw or opt to engage with them through in-class support. In Senior Infants and 6th Class, however, this teacher works exclusively in-class. At these levels, the class and numeracy learning support teachers operate a team-teaching approach, utilising a shared set of objectives for each concept.

Summary of School Self-Evaluation Findings:

Our School Strengths in Relation to Teaching and Learning in Numeracy:

- Pupils, parents and teachers have a very positive attitude towards the teaching of Maths in St. Pius X Boys School.
- Numeracy attainment is in line with national norms as evidenced by analysis of the Standardised Test results, and in most cases, our pupils' scores exceed the national averages.
- Most parents indicated that their child liked Maths lessons, was doing well at Maths, and had little difficulty completing assigned Maths homework.
- Overall, parents felt there was good communication between home and school in relation to their child's progress in Maths.
- Several numeracy programmes/practices have presently been adopted by the school, i.e., Power Maths, In-Class support, Maths Eyes and the Enrichment programme for high achievers in numeracy.

School Improvement Plan:

- A whole school approach to the teaching of problem solving, ensuring that a structured approach and a more uniform language/vocabulary system be utilised.
- All relevant school personnel have been consulted in this plans creation and its actions are currently being executed via a series of working group sessions. The numeracy plan will be evaluated and reviewed annually. To assist in this, standardised tests will be analysed and a review of learning logs will take place at the end of the academic year.