



**St. Mary's  
National School**

*Mol an Óige agus Tiocfaidh Sí*

## Numeracy School Improvement Plan

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### Introduction

A school self-evaluation of teaching and learning in Numeracy was undertaken during the school year 2017/2018. A focus group with representation of teachers from all class levels was set up and meetings held. The focus group conducted a SCOT analysis (Strengths, Concerns, Opportunities, Threats) based on the key areas of the Maths curriculum and the results of the Standardised Maths Scores from June 2017 & 2018. In line with the requirement of Circular 0039/2012 and other directives from the Department of Education & Science, our school produced a School Self-Evaluation (SSE) report for Numeracy in September 2018. School Self Evaluation is a collaborative, reflective process of internal school review. During school self-evaluation, the principal, deputy principal and teachers, under the direction of the Board of Management and patron, and in consultation with parents and pupils, engage in reflective enquiry on the work of the school. School self-evaluation of teaching and learning of Numeracy in St. Mary's School was undertaken during the school years 2017/2018. The following is a summary of the findings and a plan for our school improvements in the area of Numeracy.

### School context

- St. Mary's National School is a Catholic Primary School situated in Croom village, Co. Limerick.
- It is a co-educational primary school with multi-grade classes.
- There are currently 163 pupils enrolled.
- There are six mainstream teachers on staff, 1 ASD Class teacher and 5 Special Education Support Teachers. There is also an administrative principal.
- The school administers standardised tests such as Sigma – T for Mathematics and Micra-T for English reading from 1st to 6th class.

### Sources of Evidence:

The following evaluation methods were used during the process of compiling our report:

- Staff Review (SR)
- Maths Focus Group (FG) with representation from all class levels.
- The focus group conducted a SCOT analysis (Strengths, Concerns, Opportunities, Threats) based on the key areas of the maths curriculum.
- Analysis of assessment data and information. Both qualitative (staff observations and views) and quantitative (Standardised Maths from June 2018 and teacher generated tests)
- Review of school documents and reports: Curriculum Statement for Numeracy, individual long-term class level Maths plans, fortnightly plans and monthly progress reports.
- Teacher Questionnaire (TQ)
- Pupil Questionnaire (PQ)
- Parent Questionnaire (PTQ)

### The Findings

- (Learner Outcomes) Sigma-T results were analysed in terms of strand areas and process skills. Second, third, fourth and fifth class standardised scores were collated. The following results indicate areas for improvement:

The skill of problem solving lagged behind concepts and facts/computations and procedures with 57 children in the 17<sup>th</sup>-50<sup>th</sup> percentile. The areas of Data and Measures showed a need for improvement with the area of data in particular being a concern from results of Sigma T's.

- (Learning Experiences) Examination of questionnaires from 3rd -6th class pupils showed that 88% of students like maths. Only 37% of students reported that they were good at solving Maths Problems. In response to the statement 'I am good at maths' 24% of pupils responded that they 'don't know'. The majority of pupils surveyed 55% responded that the thing they most like about Maths is working with peers in groups.
- (Learning Experiences) Of the parents who wrote in the 'any other comment' box in the parent questionnaires, one of the parents suggested that more emphasis be put on word problems.

- (Teaching Practices) Staff dialogue by means of SCOT analysis specified that teachers recognised that the multi-class settings meant that there was a vast range of ability in each classroom. Teachers appreciated the need for a common planned approach / strategy to modelling and explicitly teaching an agreed problem solving procedure across all class levels in numeracy.

### **Progress made on previously identified improvement targets**

The 2015/2016 School Improvement plan on Numeracy stated the target that it wanted to increase scores by 1% in the 2016/2017 school year. *Achieved*

### **School Improvement Plan-Numeracy**

The SIP identified our areas of strengths and our areas requiring improvement as well as nine improvement targets, all of which are outlined below:

#### **Summary of Areas of Main Strengths:**

- There are a wide range of concrete resources available in the school.
- (Learner Outcomes) Our whole school standardised test results across numeracy indicated that algebra and number are areas of considerable strength.
- (Learning Experiences) Parent / Pupil input through questionnaires / surveys indicated that there is a need for more ICT to be used in the teaching of mathematics. (See Digital Strategy of school)
- (Teaching Practices) Staff indicated their satisfaction with pupil's mathematical knowledge and skills in the area.
- Parents of the pupils in St. Mary's National School are very enthusiastic to be involved in their child's learning and monitor their development.
- There is a designated press for Maths resources.
- Maths resources and varied concrete materials are used frequently (TQ).
- Staff members have high expectations for students' achievement.
- Numeracy Posters and information supporting teaching and learning of maths in the classroom (PQ).
- Maths is celebrated through displays of pupils' achievements and work e.g. bar charts / assembly presentations (PQ).
- Fruitful collaboration occurs between parents, teachers and support team (TQ & PTQ).
- Children enjoy Maths and have confidence in their ability (PQ).
- Pupils and teachers enjoy success in Mental Maths activities (TQ & PQ).

### **Summary of Areas Requiring Improvements:**

- Consistent language of maths and methodologies to be adopted at class level as per school plan (TQ).
- The language of problem solving and suitable strategies employed (TQ).
- The area of Data/pictorial representation needs to be taught at intervals across the school year (TQ).
- Focused regular feedback to pupils and parents on ongoing progress in maths (PTQ).
- Targeted communication with parents through website (PTQ).

### **Key Improvement Targets:**

- (Learner Outcomes) To increase the amount of pupils in the 85<sup>th</sup> to 98<sup>th</sup> percentile in the area of problem solving. An increase of 3 % is desirable in year 3
- (Learning Experiences) All teachers intend to plan for and develop collaborative 30 minute weekly problem solving sessions at all class levels beginning in Term 1 of Year 1. It is intended that this action will allow pupils opportunities to actively participate in, discuss and reflect upon their learning in problem solving.
- (Learning Experiences) All teachers will use more ICT in the teaching of mathematics.
- (Teaching Practices) Staff will develop and review a whole school plan for Mathematics.
- (Teaching Practices) Staff will also develop a whole school plan in Maths Language to adopt consistency in Maths Vocabulary at each class level.
- Adopt a means of providing regular feedback to pupils and parents on maths progress through regular class tests and communicate with parents on agreed teaching methods of number operations relevant to class levels.
- (Learner Experiences) Provide parents with maths websites to utilise at home.
- (Teaching Practices) Adopt a whole school approach as per Maths Plan to the teaching of measures and data.
- (Learner Experience) The engagement in Maths Week every year with the continuation of practices such as Maths Trails for different strands such as measures.
- (Teaching Practices) Adopt a whole school approach as per Maths Plan to the teaching of fractions, decimals and percentages.

## School Action Plan for Numeracy 2018 -2021

Target	Required Action	Leaders	Timeframe	Success Criteria
<p><b>1. To increase the amount of pupils in the 85<sup>th</sup> to 98<sup>th</sup> percentile in the area of problem solving. An increase of 3 % is desirable in year 3</b></p> <ul style="list-style-type: none"> <li>• Dimension 2- Domain 1 Row 1 =D2(D1-R1) <i>(Promote a culture of Improvement, collaboration, innovation and creativity in learning teaching and assessment)</i></li> </ul> <p>Dimension 1 - Domain 1 Row 1 <i>(Students enjoy their learning are motivated to learn and expect to achieve as achievers)</i></p>	<p>We will develop a whole school approach to the teaching of the following strategies of problem solving:</p> <ul style="list-style-type: none"> <li>• Drawing a picture to explain a problem.</li> <li>• Solving a simpler version of a problem.</li> <li>• Making a chart or table of the information.</li> <li>• Making a guess and testing it out. (rude process)</li> </ul> <p>Teachers will incorporate the teaching of Problem solving into a Whole School “Problems On Thursday” (POT) approach using the Maths Box Resource To provide CPD with PDST advisor on Problem solving for teachers.</p>	Whole Staff / Principal	Term 1 2018	Recorded Improvement in Standardised tests results in area of problem solving. Pupils feedback (PQ) Teacher feedback (TQ)
<p><b>2. Staff will develop and review a whole school plan for Mathematics</b></p> <p>Dim 2 (D3-R2) (D1-R3) Dim 1 (D1-R3)</p>	<p>Staff will meet at staff meetings/croke parks and focus on a review of the old Maths curricular plan with the intention of producing a new plan that includes best practice, examples and whole school approach to strands.</p>	All Teachers	2018	Finished document. Retained evidence in Cuntas Miosúil.

<p><b>3. Staff will also develop a whole school plan in Maths Language to adopt consistency in Maths Vocabulary at each class level.</b>  <b>Dim 2 (D3-R2) (D1-R3)</b>  <b>Dim 1 (D1-R3)</b></p>	<p>Staff will meet at staff meetings/croke parks and focus on a review of a new Maths Language curricular plan. It is the intention to adopt a whole school approach to Maths Language based on the plan.  Teachers will display word banks related to appropriate Maths language</p>	<p>All staff / Principal</p>	<p>2018</p>	<p>Finished document.  Retained evidence in Cuntas Miosúil.</p>
<p><b>4. All teachers will use more ICT in the teaching of mathematics.</b>  <b>Dim 1 (D3-R2)</b>  <b>Dim 2 (D1-R4)</b></p>	<p>Staff will utilise the IWB more in Maths class. A list of games/resources will be made available for the teachers which will promote the use of the IWB for number/problem solving/measures etc. I pads and tablets will also be used in the classroom-selected teachers will be sent for relevant CPD in LEC.</p>	<p>All staff / Principal</p>	<p>2018/2019/2020</p>	<p>Pupil Feedback- (PQ)  Parent Feedback - (PTQ)  Evidence in cuntas miosiúl</p>

<p>5. <b>Adopt a means of providing regular feedback to pupils and parents on maths progress through regular class tests and communicate with parents on agreed teaching methods of number operations relevant to class levels.</b>  <b>Dim2 (D4-R2)</b>  <b>Dim 1(D4-R3)</b></p>	<p>Purchasing of Aladdin Connect which enables teachers to share results, scores etc. with parents confidentially  Training in Aladdin connect via webinars.  Teachers will provide regular focused feedback regarding Maths progress through regular Maths tests from 1st to 6th class.  Teachers will continue to provide regular focused feedback regarding Maths progress through regular Maths tests from 1st to 6th class.  Checklists will be devised and utilised as an "Assessment For Learning" (AFL) tool  Children will be supported in developing their problem solving strategies through use of checklists upon completion of class test.</p>	<p>Principal  All staff to upload and share information</p>	<p>Term 1 2020   Term 1 2020   Term 1 2018   Term 2 2019</p>	<p>Feedback from parents (PTQ) (TQ)  Standardised test results</p>
<p>6. <b>Provide parents with maths websites to utilise at home.</b>  <b>Dim 1 (D2-R4)</b>  <b>Dim2 (D3-R3)</b></p>	<p>Provide parents a range of resources on Maths via the school website. This will be in the Parents Corner of the website. Parents will be directed there via the "Text a Parent" system and also at Parent Teacher Meetings</p>	<p>Principal</p>	<p>Term1 2019</p>	<p>Feedback from Parents (PTQ)  Standardised scores  2019/2020</p>

<p><b>7. Adopt a whole school approach as per Maths Plan to the teaching of fractions, decimals and percentages.</b>  <b>Dim 2 (D1-R3)</b>  <b>DIM 1(D3-R2)</b></p>	<p>Teachers to use the new Maths Curricular Plan and Maths Language plan to create a whole school approach to Fractions, Decimals and Percentages. Fractions Boards to be used throughout the school with displays on corridor drawing attention to Maths and the systems used throughout the school. Teachers will engage in planning meetings to agree Maths language associated with problem solving in Number (All), Extending Patterns (Infants), Fractions (1st -6th ), Decimals (3rd-6th) and Percentages(5th-6th) as per the school plan.</p>	<p>All staff</p>	<p>Term 1 2019</p> <p>Term 1 2018</p> <p>Term 3 2019</p>	<p>Teachers planning as evidenced in Cuntas Miosiúl.</p>
<p><b>8. All teachers intend to plan for and develop collaborative 30 minute weekly problem solving session at all class levels beginning in Term 1 of Year 1. It is intended that this action will allow pupils opportunities to actively participate in, discuss and reflect upon their learning in problem solving.</b>  <b>Dim 1 (D3-R3)</b>  <b>Dim 2 (D1-R1)</b></p>	<p>Teachers plan collaboratively sharing examples of best practice  PDST instructor offer guidance  Maths boxes to be utilised for problem solving for each class</p>	<p>All staff</p>	<p>Term 1 2018</p>	<p>Teachers planning as evidenced in Cuntas Miosiúl.  Standardised test results in strand area.  Pupil Feddback (PQ)  Teacher Feedback (TQ)</p>



<p><b>9. The engagement in Maths Week every year with the continuation of practices such as Maths Trails for different strands such as measures.</b>  <b>Dim 1(D2-R1)</b>  <b>Dim 2(D1-R3)</b></p>	<p>Teachers use the local environment to create a variety of maths trails which will have a clear problem solving focus (Measures etc.)  Promote Maths Week every year with timetable,  Maths Week Certificate of Merit awards and  Maths Week Assembly  Continue good practice throughout the year.</p>	<p>Principal/Mrs. Kennedy/Mr. R Murphy  All staff</p>	<p>Term 1 2018</p>	<p>Pupil Feedback (PQ)  Evidence of Maths trails taking place in local environment  Parental Feedback (PTQ)</p>
<p><b>10. To devise a whole school approach to the teaching of the strand of data.</b>  <b>Dim 1(D3-R3)</b>  <b>Dim 2(D1-R3)</b></p>	<p>Devise a teaching approach in the Maths curricular plan.  Data as part of Maths week.  Make data fun for students with data displays/statistics on corridors.  More homework on data.  CPD for staff members  DATA and pictorial representation to be taught across school year</p>	<p>Principal/ISMT</p>	<p>Term 1 2019</p>	<p>Pupil Feedback (PQ)  Evidence of Maths trails taking place in local environment  Parental Feedback (PTQ)  Standardised test results in strand area</p>