

# **School Improvement Plan Numeracy**

**San Carlo Senior School.  
Roll Number: 19875V**

**May 2015**

## **Summary of Main strengths in Numeracy as identified by the SSE (school self evaluation)**

- Mental Maths is encouraged and given a specific time slot.
- There is equal emphasis on all strands though some require more time than others.
- Parents were confident they understood their child's attitude and abilities in Maths
- Parents reported their children had a good attitude to Maths.
- 92% of children reported they like Maths all the time or sometimes
- Teachers' planning is based on the Maths curriculum and the school Maths plan. Teachers within cohorts collaborate together and with Learning Support team.
- Talk & Discussion and opportunities for pupils to explain answers for part of Maths lessons.

- There is an agreed whole school policy on Maths Language and agreed strategies for teaching various Maths topics.
- The school has a good supply of Maths resources centrally located.
- The staff constructed Maths trails appropriate to each class level and incorporating all strands.
- Results of assessments are used to inform teacher planning.
- IT is used to support Numeracy.

### **Areas prioritised for improvement with regard to Numeracy**

- A) Quicker recall of number facts.
- B) Problem Solving – teaching and learning.
- C) Communication with Parents with regard to Maths and pupil performance.

Area of Focus and Targets for Learning in Numeracy	Actions Year 1: 2015-16	Carried out
<p><b>Analysis of standardised tests</b></p> <p>Target: Sigma-T results will be analysed.</p> <p>Target: Review attitudes to Maths and Problem Solving by pupils, parents and teachers.</p>	<p>Sigma-T 2014 results analysed and compared to the national norms.</p> <p>Sigma T 2014 results analysed for 3<sup>rd</sup> and 5<sup>th</sup> classes with regard to areas of difficulty, discrepancies, strand/skills scores.</p> <p>Sigma-T 2014 results analysed to establish a baseline for ability in problem –solving throughout the school.</p> <p>Questionnaire to be administered to all pupils  Parents’ questionnaire for parents of 4<sup>th</sup> class pupils  Teacher review of the teaching of Problem Solving.</p>	<p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p>

Area of Focus and Targets for Learning in Numeracy	Actions Year 1: 2015-16	Carried out
<p><b>Improving rapid recall of Number Facts</b>  Target: Staff to decide on strategies for improving number facts</p> <p>Target: Explore with the whole staff the <b>Use of Conceptual Strategies in Mental Calculation</b> as described In the PDST Mental Maths Handbook and at Mata sa rang workshops.</p> <p>Target: To adapt these strategies throughout the school.</p> <p>Target: All classes will be conversant with the class appropriate Mental Maths strategies for Multiplication and Division as outlined in the PDST Mental Maths Handbook.</p>	<p>From Sept 2015, all classes will intensify focus on number facts with daily tests, homework and use of text book:</p> <p>All classes will be tested in September, January and June on Tables using Ballard Westwood Tables test.</p> <p>The strategies suggested in the PDST Mental Maths Handbook will also be shared and adopted by the whole school.</p> <p>We will adopt these methods in September 2015  We will look for PDST support to be used during Croke Park hour.</p>	

Area of Focus and Targets for Learning in Numeracy	Actions Year 1: 2015-16	Carried out
<p><b>Problem Solving</b> Investigate methodologies on Problem Solving Strategies and Procedures to support pupils' problem solving needs to be agreed at whole school level.</p> <p>Target: To arrive at a whole school consensus on particular problem solving strategies.</p> <p>Target: The average score for problem solving will improve by 2 ½ % in 4<sup>th</sup> class.</p> <p>Target: The % of children in 4<sup>th</sup> class who do not like Problem solving will fall from 22% to 18%</p>	<p>Two Learning Support teachers complete online summer course on Problem Solving. Adopt a whole school approach to problem solving.</p> <p>A pilot project to develop Problem Solving Methodologies was carried out in one Third Class in Term 3, 2015 by Learning support teacher and Class teacher</p> <p>Other strategies will also be explored and adapted where deemed appropriate to the class level. Particular strategies will be assigned to particular class levels based on observation of Fourth Classes in 2015/16</p> <p>In September 2015, three Learning Support teachers will deliver the devised programme of Problem Solving to Fourth Classes in a team teaching scenario, twice per week for 20 minutes, focussing on</p>	<p>✓</p> <p>✓</p> <p>✓</p>

Area of Focus and Targets for Learning in Numeracy	Actions Year 1: 2015-16	Carried out
<p><b>Home School Communication</b>            Target: Parents will report being more confident/able to help their children with Maths homework</p> <p>Targets: Parents will feel comfortable with the Mental Maths Calculations and problem solving strategies being implemented throughout the school</p> <p>Target: Parents can access information on the mathematical language and methods being used in the school.</p>	<p>On the school website, a page with links to websites to help parents understand the way Maths is taught will be displayed.</p> <p>In September 2015, Fourth Class pupils will use Problem solving journal to record and communicate their learning experiences to parents.</p>	

Area of Focus and Targets for Learning in Numeracy	Actions. Year 2. 2016/17	Carried out
<p><b>Analysis of standardised tests</b>            Target: Sigma-T results will be analysed.</p> <p>Target: Review attitudes to Maths and Problem Solving by pupils, parents and teachers of Fifth Class.</p>	<p>Sigma-T 2015 results of 4<sup>th</sup> class June 2015, analysed to establish if an improvement has been achieved.</p>	.
<p><b>Improving rapid recall of Number Facts</b>            Target: Focussed Tables teaching and testing.</p> <p>Target 1 Children will <b>Use of Conceptual Strategies in Mental Calculation</b> as described In the PDST Mental Maths Handbook</p>	<p>Teachers to adopt Number Word Sequences strategies and Mental Calculation Strategies for addition and subtraction</p>	.

as assessed by teacher observation  
Children's scores on the Ballard Woodward Test will improve by 10% this year and a further 5% next year.

All teachers will receive a copy of the PDST Mental Maths Handbook/summary.  
Assess the children's attitudes to mental computations.

Whole staff reflection on the effectiveness of targeting Mental Calculations in this way

**Problem Solving**

Target: To reduce from 25% to 18% the number of children in all classes who said they did not like problem solving.

Target: To improve scores in Problem Solving in standardised tests by 2.5%

- Target: To establish problem solving as an integral part of the Maths lesson.

Re-administer the attitudinal survey to pupils from 5<sup>th</sup> who have completed one year of the Problem Solving programme

Extend the programme to all other classes (team teaching twice per week of Problem Solving investigations.  
All classes to do online Problem Solving during Computer room time slot  
All pupils to engage in reflective learning by using problem-solving log.

All varieties of problem solving to be included in programme  
Word Problems to be the main focus of Problem solving in term 3



	<p>Review as a staff the effectiveness of this approach, procedure and strategies.</p>	
<b>Involving Parents</b>	<p>Re administer parent questionnaire to same parents to ascertain if attitudes towards Maths have improved.</p> <p>Support parents via our school website.</p> <p>Use Pupil Problem Solving log to encourage problem solving at home.</p> <p>Log to include websites useful for parents on specific strands</p>	<p>.</p> <p>.</p>
<b>Concrete materials and Textbooks</b>	<p>Renewed emphasis on the use of concrete materials in the senior classes.</p> <p>Source more problem solving materials</p>	<p>.</p>
<b>IT Resources</b>	<p>Time slots in computer room will be used for Maths problem solving once per month.</p>	<p>.</p>

	There will be a link created for parents on our web-page to the mathematical language, methodologies and problem solving strategies that we use	
<b>Maths Environment</b>	<p>Maths Trails around the school. Specific days will be set in Term 3</p> <p>Magnetic boards will be provided in school hall with problems and magnetic manipulatives</p>	

<p><b>Persons Responsible:</b> All Teachers with leadership from Learning support team.</p> <p><b>Review:</b> Ongoing Staff evaluation at staff meetings.</p>	<p><b>Success Criteria:</b></p> <ul style="list-style-type: none"> <li>• More Children will have a positive attitude towards Maths.</li> <li>• The average score for problem solving will improve by 2 ½ % in all classes 3rd to 6<sup>th</sup>.</li> <li>• Staff engagement with new methodologies will be reported as increased.</li> <li>• Parental attitudes will be reported as more positive.</li> </ul>
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