

3 Year Plan for Numeracy 2015 - 2017

Target(s)

- To continue to achieve in the areas of Number, Algebra, Shape & Space, Measures
- To develop a whole-school approach to improving and understanding mathematical skills, in particular, mathematical language
- To increase the average score of problem solving within STen levels, as identified in the Sigma T analysis from Spring 2013 as follows:

<u>STen Level</u>	<u>Percentage achievement in Problem Solving</u>			
➤ STen 8-10	Current 66%;	68% in May 2015;	70% in May 2016;	72% in May 2017
➤ STen 7	Current 44%;	46% in May 2015;	48% in May 2016;	50% in May 2017
➤ STen 6	Current 40%;	42% in May 2015;	45% in May 2016;	47% in May 2017
➤ STen 5	Current 12%;	14% in May 2015;	16% in May 2016;	18% in May 2017
➤ STen 4	Current 0%;	2% in May 2015;	4% in May 2016;	5% in May 2017
➤ STen 1-3	Current 0%;	2% in May 2015;	4% in May 2016;	5% in May 2017
➤ Average	Current 27%;	29% in May 2015;	31% in May 2016;	33% in May 2017

- To create a culture and practice of mathematical problem solving in our school
- To enable the pupils to develop a positive attitude towards maths, to develop the pupils logic and higher-order thinking skills and to enable the pupils to apply maths to everyday life

Baseline data/evidence

- Sigma T Results for 2013 were analysed. It was shown that pupils performed least well in the area of problem solving.
- SCOT Analysis (attached)
- Focus Groups (attached)
- Teacher observations and teacher designed tasks and tests highlighted problem solving as an area for development
- Questionnaire was administered to pupils to gauge the children's opinions of problem solving.
- Questionnaire was administered to parents
- Staff discussion.

Year 1 actions 2015

- Analysis of 2nd Class Sigma T results from May 2014, compare with previous results

Year 2 actions 2016

- Analysis of 2nd Class Sigma T results from May 2015, compare with previous results

Year 3 actions 2017

- Analysis of 2nd Class Sigma T results from May 2016, compare with previous results

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<ul style="list-style-type: none"> • Analysis of 1st. Class Sigma T results from May 2014 • New Senior Infant Assessment Test to be introduced • Mata sa Rang to be introduced from Junior Infants to 1st. Class • Specific oral/mental maths time within maths lessons, word problems • Teach specific language for each maths area. • Incorporate problem solving in teaching. • Teacher modelling of problem solving strategy to whole class, small groups, peer groups and individual pupils • Continue with differentiated teaching for 2nd. Classes • School resources to be developed • Maths displays promoting maths language and problem solving strategies to be displayed in each classroom/corridor • Learning Support and Resource teachers to work with class teachers in implementing strategy 	<ul style="list-style-type: none"> • Analysis of 1st. Class Sigma T results from May 2015 • Review Year 1 actions for effectiveness and monitor pupils' attitudes towards problem solving • Mathematical language to be looked at and discussed for all strands and strand units • Continue to develop the bank of resources • Use of IT in problem solving activities • Inform parents about maths, focusing on language and problem solving. This will be achieved through: Information Meetings, School produced booklet for parents NCCA class-specific information sheets 	<ul style="list-style-type: none"> • Analysis of 1st. Class Sigma T results from May 2016 • Continue to develop the bank of resources • Inform parents about maths, focusing on language and problem solving. This will be achieved through: Information Meetings, School produced booklet for parents NCCA class-specific information sheets
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Year Plan to improve Problem Solving Skills

Target(s)

State in specific terms how Problem Solving Skills should improve as a result of actions in the school

- By developing a whole-school approach to the use of mathematical language throughout the school, pupils will become very familiar with the language of operations, and be enabled to apply their knowledge to mathematical problems
- Through teacher modelling of problem solving strategies, pupils will be enabled to discuss mathematical problems and understand the reasons behind each step in the process
- Through focussing on oral maths problems and word problems, pupils will develop higher order thinking and logic skills
- Pupils will develop strategies aimed at solving mathematical problems
- Pupils will be provided with regular opportunities to problem solve, enabling them to acquire proficiency in this area
- That the average score of problem solving will increase from 29% to 35% over the next 3 years

Actions

State proposed actions (both existing and new) to improve Problem Solving Skills

Action	Who?	When?	Resources?	Completed / ongoing?
<ul style="list-style-type: none"> Analysis of 2nd Class Sigma T results from May 2014, compare with previous results Analysis of 1st. Class Sigma T results from May 2014 New Senior Infant Assessment Test to be introduced 				

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<ul style="list-style-type: none"> • Mata sa Rang to be introduced from Junior Infants to 1st. Class 				
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Monitoring/Review

State how progress will be monitored and at what intervals (monthly/ termly/annually...) over the three years

- Teacher observation is a key tool which will be used in monitoring the progress of this numeracy strategy. Key observations will be noted and discussed at whole staff level
- Professional reflection section on cuntas míosúil's will be used to gauge feedback also
- Discussion at staff meetings and Croke Park Hour meetings re: feedback and the identification of new strategies and approaches
- Specific time will be allocated to the discussion and progress of the numeracy programme during our planning time and staff meeting
- Continuing professional development will be sought and staff encouraged to attend, to further develop teacher knowledge and skills and to keep abreast of best practice
- Pupil feedback will be sought at regular intervals throughout the year. Questionnaires, trend graphs will be used to gauge pupil opinions at the end of each year
- Parental Feedback will be sought through questionnaires, information evenings and at parent/teacher meetings
- Standardised Sigma T test will be given at end of each year to 1st. & 2nd. Classes. Results will be discussed to further develop our 3 year plan.

Success Criteria/Evaluation

State how impact of actions on Problem Solving Skills will be evaluated at the end of the three years

State how progress will be measured, using baseline and targets as guide

- Teacher observations will be noted and collated
- Class conferencing between teacher and pupils, pupils and pupils to gauge feedback
- Standardised testing at end of each year – data will be analysed over the three years to track performance of pupils' problem solving
- Pupil questionnaires will be analysed to gauge how pupil feedback altered over the three year period
- Review of children's work samples, maths projects etc.