

## WHOLE SCHOOL NUMERACY PLAN

Roseworth Primary School

Vision	A commitment to achieving the best possible Numeracy outcomes for all students.
Mission	In the Numeracy Learning Area the school will provide planned opportunities for the explicit teaching of the knowledge, understanding, skills and processes required for students to actively engage in the learning programs of the school. Teachers will actively engage in Planning, Teaching, Assessing and Reporting (from 2015) using the content descriptors from the Australian Curriculum.
Ethos	The school believes all students can be successful numeracy learners.
Values	The Numeracy Learning Area will be supported by the school values: Confidence, Organisation, Getting Along, Persistence and Resilience.
Community Partnerships	The school recognises the value of parents and the wider community in supporting the development of numeracy skills and will actively seek out partnerships to enhance student learning.

## WHOLE SCHOOL BELIEFS ABOUT NUMERACY

Roseworth Primary School

Learning	<ul style="list-style-type: none"><li>• All students are capable of experiencing success in the numeracy learning area.</li><li>• Students learn at different rates / will solve problems in different ways.</li><li>• Students learn best in a safe, caring, supportive environment.</li><li>• Behavioural boundaries need to be set – use of CMS strategies.</li><li>• Students develop independence and are responsible for their efforts.</li><li>• Prior knowledge of the learner is considered.</li></ul>
Instruction	<ul style="list-style-type: none"><li>• Early years instruction has a hands-on multi-sensory play-based approach.</li><li>• Expose students to the language of mathematics.</li><li>• Open ended tasks give opportunity to demonstrate learning across all levels.</li><li>• Expose children to a variety of teaching strategies (e.g. modelling, explicit teaching, demonstration and questioning).</li><li>• Variety of classroom organisation for problem solving (individual, whole class, groups).</li><li>• Evidence based instruction.</li><li>• Concepts and skills will be revisited, strengthened and extended as deemed necessary.</li><li>• Wide range of resources, both commercial and student generated.</li><li>• Teachers model a positive attitude to mathematics.</li><li>• Encourage risk taking.</li><li>• Make the purpose of the task explicit.</li></ul>
Assessment	<ul style="list-style-type: none"><li>• Observe and collect data in line with outcomes.</li><li>• Diagnostic assessments lead planning and instruction.</li><li>• Judgements based on a comprehensive collection of work samples.</li><li>• Variety of assessment tools used.</li><li>• Educative – of value to the student, teacher and parent.</li><li>• Provide opportunities for student reflection, such as maths journals.</li></ul>

Reporting	<ul style="list-style-type: none"> <li>• Meaningful and user-friendly for all stakeholders.</li> <li>• Includes effort and achievement.</li> <li>• Be aligned with the CAR policy until 2014.</li> <li>• Detailed to allow for semester comparison.</li> <li>• Aligned to ACARA developments with formal reporting for the Australian Curriculum in 2014.</li> </ul>
Working as a collaborative team	<ul style="list-style-type: none"> <li>• Parent and community involvement in planning – school board / committees.</li> <li>• Provide links to community services.</li> <li>• Provide welcoming, safe, communicative environment for all stakeholders.</li> <li>• Develop positive relationships between staff members.</li> </ul>

### Aims of the Australian Curriculum

The Australian Curriculum: Mathematics aims to ensure that students:

- are confident, creative users and communicators of mathematics, able to investigate, represent and interpret situations in their personal and work lives and as active citizens
- develop an increasingly sophisticated understanding of mathematical concepts and fluency with processes, and are able to pose and solve problems and reason in *Number and Algebra, Measurement and Geometry, and Statistics and Probability*
- recognise connections between the areas of mathematics and other disciplines and appreciate mathematics as an accessible and enjoyable discipline to study.

## Parent/ Community/Partnership Strategies 2012-2014

### Information

- Class newsletters
- Portfolios
- Class parent meetings

### Involvement

- Parent workshops
- Open day
- Passport Program
- Board Meeting Data Representation
- Numeracy Week Activities
- Wildcats
- ECU/Fogarty Foundation

## WHOLE SCHOOL NUMERACY PLAN

### Roseworth Primary School Operational plan

<b>Target Outcome</b>	<b>Strategies / Action</b>	<b>Timeline / Staffing</b>	<b>Resources / Funding</b>	<b>Evaluation / Monitoring</b>
Full implementation of Australian Curriculum – Maths by the end of 2012.	<ul style="list-style-type: none"> <li>•PD of curriculum leader.</li> <li>•Development of implementation plan.</li> <li>•PD of staff in content and planning using AC.</li> </ul>	T2 – Staff PD on AC content. T1,2,3 LfNL PD GM, CR, MO. T2,3 Sharing of planning documents at fortnightly block meetings MO	\$3000 for relief (4 day program)	Staff confidence in planning using AC. Survey of staff conducted in T4. Used to plan staff PD in 2013.
Development of Numeracy Common Assessment Tasks to be fully implemented in 2013.	<ul style="list-style-type: none"> <li>• T2 - Evaluation of possible CAT – MTS</li> <li>• T3 – MTS summative tests to guide targets in 2013 (MO)</li> </ul>	T3 – MTS Wkshop (MO) T3 – Numeracy Committee T3 – School licence for MTS Online T3/4 – Staff PD on MTS.	\$66  \$22/teacher  \$120 – Peter Nowland	Staff feedback on testing process
Fortnightly collaborative planning meetings with a focus on staff PD and delivery of diagnostic tasks.  Maximise effectiveness of program delivery across the mathematics curriculum.	<ul style="list-style-type: none"> <li>• Provide planning assistance, materials and resources to all staff during meetings.</li> <li>• Utilise cooperative learning strategies to maximise student engagement.</li> </ul>	T1 2012 whole school PD on use of cooperative learning strategies.	Whole school PD. \$?	Evidence shown in PM meeting of cooperative learning strategies being used in classrooms.  Discussions at fortnightly meetings with CM.  Observed increase in quality student academic engaged time.

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<p>Staff, in collaborative groups, to identify students or groups of students to target for improved performance.</p>	<ul style="list-style-type: none"> <li>• Collaborative meeting time each fortnight for reflection.</li> <li>• Staff to access NAPLAN and school data (MTS) for planning and monitoring purposes.</li> <li>• Staff training in understanding and use of maths trajectories for identifying and evaluating student progress.</li> </ul>	<p>Fortnightly collaboration meetings – CM, all staff.</p> <p>Deputy, CM.</p> <p>CM</p>	<p>Yearly NAPLAN testing. Best Performance data analysis \$2000 Diagnostic tasks.</p> <p>Maths trajectories.</p>	<p>Completion of DP's for SAER .</p> <p>In class testing using past NAPLAN tests.</p> <p>Staff use of “Planning and Assessment Tools” folders.</p>
<p>Staff to become more aware of the type of work samples necessary to evaluate student progress effectively.</p>	<ul style="list-style-type: none"> <li>• Staff timetabled to allow for collaborative planning meetings.</li> <li>• Create a teacher file “Planning and Assessment Tools” folder with FSiM diagnostic tasks, recording masters and maths trajectories.</li> <li>• Provide assistance with administration and evaluation of diagnostic tasks.</li> </ul>	<p>T1 – ongoing. CM, Deputy. all staff.</p> <p>T2 – CM</p> <p>Ongoing – CM, all staff.</p>	<p>Planning and Assessment Tools folders.</p> <p>CM during collaborative meetings</p>	<p>Tasks completed by staff.</p> <p>Evidence of results leading future planning – DP's.</p> <p>Discussions at fortnightly collaboration meetings.</p>

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Maintain and update maths resources to support priority initiatives.	<ul style="list-style-type: none"> <li>• Maths curriculum leader to stocktake current resources.</li> <li>• Resources updated and teacher kits created to provide all teaching staff with basic resources for Number, as per the Numeracy Practices Guide.</li> <li>• Resources restocked each term</li> </ul>	<p>T2 – MO</p> <p>T2 – MO</p> <p>1 day each term</p>	<p>Maths budget for 2012 updated to \$16 000.</p> <p>1 Day EA / Term \$310/Term</p>	<p>Effective borrowing procedures in place for staff to access maths resources.</p> <p>Appropriate storage facilities for resources.</p> <p>Staff feedback on effectiveness and resources in maths kits.</p>
To give mathematics a high profile within the school and wider community.	<ul style="list-style-type: none"> <li>• Inclusion of maths quiz in newsletter – 1 per term.</li> <li>• Whole school maths activity to involve the wider community.</li> <li>• Numeracy backpacks used in class as a reward.</li> <li>• Numeracy Week activities.</li> </ul>	<p>T2 – MO</p> <p>CM, Numeracy committee</p> <p>CM, Numeracy committee</p> <p>CM, T3 W7, Numeracy committee</p>	<p>Prizes</p> <p>Prizes</p> <p>Backpacks</p> <p>Whole school Incursion \$500</p> <p>Numeracy week activity prizes \$100</p>	<p>Student / Parent participation and feedback.</p> <p>Student / Teacher feedback</p>
Effective use of all teaching and non teaching staff during mathematics sessions.	<ul style="list-style-type: none"> <li>• EA's to be utilised within the classroom structure to benefit student learning.</li> <li>• ECU Resident students used in classroom programs on timetabled days to focus on target students in use of 'hands on' activities.</li> </ul>	<p>T1 – ongoing, CM, Deputy</p> <p>Wed/Thurs distributed days Daily during block prac</p>	<p>EA Timetable</p> <p>ECU Resident students</p>	<p>Student participation.</p>

# 2012 – 2014

## Strategic Plan – Numeracy

STRAND	2012	2013	2014
<b>Number and Algebra</b>	<ul style="list-style-type: none"> <li>• Number and Place Value (F-8)</li> <li>• Fractions and Decimals (1-6)</li> </ul>	<ul style="list-style-type: none"> <li>• Money and Financial Mathematics (1-10)</li> <li>• Patterns and Algebra (F-10)</li> </ul>	<ul style="list-style-type: none"> <li>• Real Numbers (7-10)</li> </ul>
<b>Measurement and Geometry</b>		<ul style="list-style-type: none"> <li>• Using units of measurement (F-10)</li> <li>• Shape (F-7)</li> <li>• Location and Transformation (F-7)</li> </ul>	<ul style="list-style-type: none"> <li>• Geometric Reasoning (3-10)</li> </ul>
<b>Statistics and Probability</b>			<ul style="list-style-type: none"> <li>• Chance (1-10)</li> <li>• Data representation and interpretation (F-10)</li> </ul>



## School Targets 2012 – 2014

Assessment	Target		
NAPLAN Numeracy – Year 3, 5, 7.	2012	2013	2014
	Year 3 – 16% below National average	Year 3 – 11% below National average	Year 3 – 6% below National average
	Year 5 – 19% below National average	Year 5 – 14% below National average	Year 5 – 9% below National average
	Year 7 – 12% below national average	Year 7 – 7% below National average	Year 7 – 2% below National average
OnEntry Numeracy – PP.	2012	2013	2014
Westwood 1 minute basic facts test – Year 1 – 7 (+ and -)	2012	2013	2014
	Average scores	Average scores	Average scores
	Year 1 – 4	Year 1 – 6	Year 1 – 8
	Year 2 – 8	Year 2 – 10	Year 2 – 12
	Year 3 – 12	Year 3 – 14	Year 3 – 16
	Year 4 – 17	Year 4 – 19	Year 4 – 21
	Year 5 – 20.5	Year 5 – 22.5	Year 5 – 24.5
	Year 6 – 23.5	Year 6 – 25.5	Year 6 – 27.5
Year 7 – 30	Year 7 – 32	Year 7 – 34	
Westwood 1 minute basic facts test – Year 3 – 7 (x and ÷)	2012	2013	2014
	Year 3 – 5.5	Year 3 – 7.5	Year 3 – 9.5
	Year 4 – 9	Year 4 – 11	Year 4 – 13
	Year 5 – 13	Year 5 – 15	Year 5 – 17
	Year 6 – 17	Year 6 – 19	Year 6 – 21
	Year 7 – 21	Year 7 – 23	Year 7 – 25
EasyMark (SOMT) – Year 1 – 7	Revise after trial testing Nov 2012.		

	2012 - 2014	2013 - 2014	2014
MTS Summative tests – Year PP – 7	Mental (average scores) Year 1 – 30% Year 2 – 31% Year 3 – 31% Year 4 – 22% Year 5 – 20% Year 6 – 20% Year 7 – 20%	Mental Year 1 – 40% Year 2 – 41% Year 3 – 41% Year 4 – 32% Year 5 – 30% Year 6 – 30% Year 7 – 30%	Mental Year 1 – 50% Year 2 – 51% Year 3 – 51% Year 4 – 42% Year 5 – 40% Year 6 – 40% Year 7 – 40%
	Written (Number focus) Year 1 – 35% Year 2 – 29% Year 3 – 28% Year 4 – 17% Year 5 – 12% Year 6 – 11% Year 7 – 11%	Written (Measurement and Geometry focus) Year 1 – 45% Year 2 – 39% Year 3 – 38% Year 4 – 27% Year 5 – 22% Year 6 – 21% Year 7 – 21%	Written (Statistics and Probability focus) Year 1 – 55% Year 2 – 49% Year 3 – 48% Year 4 – 37% Year 5 – 32% Year 6 – 31% Year 7 – 31%

# PRIORITY PLAN – NUMERACY 2012 / 2013

## Number

Target Outcome	Teaching Strategies / Actions	Resources / Timeline	Assessment / Evaluation
<ul style="list-style-type: none"> <li>• <b>Develop a whole school approach to systematically teaching the meaning, order and relative magnitudes of whole numbers (counting and place value).</b></li> </ul>	<ul style="list-style-type: none"> <li>• Collaborative planning and teaching situations to cater for differences in student ability.</li> <li>• Develop a numeracy session structure to include daily mental activities and drills to improve automatic recall of basic facts.</li> <li>• Whole school scope and sequence of mental strategies to be explicitly taught in classrooms.</li> <li>• Integration into literacy program</li> <li>• Manipulatives and resources placed into classrooms for teaching for regular teaching of counting and mental mathematics strategies.</li> <li>• Use of Maths journals in all classes to encourage daily reflection and highlight any student misconceptions.</li> </ul>	<ul style="list-style-type: none"> <li>• Fortnightly collaborative planning/meeting times.</li> <li>• Mental Maths posters (junior, middle/upper) distributed to teachers for use and display.</li> </ul>	<p>NAPLAN results MTS Summative Test Results</p> <p>Westwood 1 minute basic Maths test results</p>

## Whole school plan for professional learning linked to student Numeracy improvement 2012/2013

School Numeracy Priority	Phase of schooling i.e. Professional Learning needs at each level	Focus / Coordination / School Resource requirements for Professional Learning
Development of Numeracy Common Assessment Tasks.	Whole school	Use of Summative tasks available through MTS online. Staff access to MTS (\$22/Teacher) Whole staff training in use of MTS
Number 2012 / 2013 Focus – Australian Curriculum Content Strand - Number and Algebra, Substrand - Number and Place Value.	<p>K - 3</p> <ul style="list-style-type: none"> <li>• Knowledge of learning trajectories and their use in early intervention.</li> <li>• Knowledge of diagnostic tasks in “Planning and Assessment Tools” folder with FSiM diagnostic tasks, recording masters and maths trajectories.</li> <li>• AC Content</li> </ul> <p>4 – 5</p> <ul style="list-style-type: none"> <li>• Knowledge of diagnostic tasks in “Planning and Assessment Tools” folder with FSiM diagnostic tasks, recording masters and maths trajectories.</li> <li>• AC Content</li> </ul> <p>6 - 7</p> <ul style="list-style-type: none"> <li>• Knowledge of diagnostic tasks in “Planning and Assessment Tools” folder with FSiM diagnostic tasks, recording masters and maths trajectories.</li> <li>• AC Content</li> </ul>	<p>Planning for intervention. Diagnostic tasks Learning trajectories Numeracy Practices Guide</p> <p>Planning for intervention. Diagnostic tasks Learning trajectories Numeracy Practices Guide</p> <p>Planning for intervention. Diagnostic tasks Learning trajectories Numeracy Practices Guide</p>

Development of Numeracy Leadership	Whole school	Leadership for Numeracy Learning (LfNL) distributed days. Principal, CM and MO.  Development of Numeracy committee (staff from each phase of schooling)
Implementation of Australian Curriculum	Whole school	Staff PD on content of AC.  Staff PD on potential planning documents using AC content.  Fortnightly collaborative meeting to discuss implementation issues.