NUMERACY AGREEMENT

LUCINDALE AREA SCHOOL

School and Community Working Together

PURPOSE

The Lucindale Area School Numeracy Agreement outlines the agreed approaches to teaching Mathematics and Numeracy across the school. It will outline school specific approaches to teaching Mathematics and Numeracy under this agreement.

This Agreement ensures consistent approach and language is being used across the school and that all staff are confident and competent in teaching Mathematics and Numeracy in a broad range of contexts.

RATIONALE

To be Numerate is to have the capacity, confidence and disposition to use mathematics in daily life. Being numerate means being able to problem solve and reason with mathematical concepts and to fluently apply these in a range of contexts.

We believe that all students can be powerful, successful lifelong learners of Mathematics. Every student has the right to at least one year of growth in Mathematics, for every year of learning. Students should be supported to develop a broad range of Mathematics skills that will enable them to be numerate, productive and active citizens.

Our school is committed to building the capacity of all staff as a result of high quality learning, collaborations and the development of quality teaching and learning programs.

PROGRAMMING AND PLANNING

The planning and programming of Mathematics is designed to give students opportunities to:

- Choose and use mathematics
- Allow for the development of the proficiencies: understanding, fluency, problem solving, reasoning
- Develop positive dispositions and transversal skills for powerful learning
- Use mathematics in real life situations

Key elements to be used for programming and planning should be:

- Australian Curriculum: Mathematics, with particular focus on the proficiencies
- General Capabilities, Cross Curriculum Priorities, and across all Learning Areas

Phone: 08 8766 2084
Fax: 08 8766 2058
Gum Avenue (PO Box 147)
Lucindale SA 5272
www.las.sa.edu.au

- Learning Design
- Engaging community members/trades/professionals with real life mathematical skills
- Opportunities for powerful learning, including positive dispositions and transversal skills
- Clear focus on mental computation skills

AUSTRALIAN CURRICULUM: MATHEMATICS

PROFICIENCIES Understanding, Fluency, Problem solving, Reasoning		
NUMBER AND ALGEBRA	**MEASUREMENT AND GEOMETRY**	**STATISTICS AND PROBABILITY**
Number and Place Value	Using Units of Measurement	Chance
Fractions and Decimals	Shape	Data Representation and Interpretation
Real Numbers	Geometric Reasoning	
Money and Financial Mathematics	Location and Transformation	
Patterns and Algebra	Pythagoras and Trigonometry	
Linear & Non-linear Relationships		

BIG IDEAS IN NUMBER

There should also be a strong focus on developing the Big Ideas in Number:

LEVEL	'BIG IDEA'
1 End of Reception	**Trusting the Count** Developing flexible mental objects for the numbers 0-10.
2 End of year 2	**Place value** The importance of moving beyond counting by ones, the structure of the Base 10 numeration system.
3 End of year 4	**Multiplicative thinking** The key to understanding rational number and developing efficient written and mental computation strategies in later years.
4 End of year 6	**Partitioning** The missing link in building common fractional and decimal knowledge and confidence.

5 End of year 8	**Proportional reasoning** Extending what is known about multiplication and division beyond rule based procedures to solve problems involving fractions, decimals, percent, ratio, rate and proportion.
6 End of year 10	**Generalising** Skills and strategies to support equivalence, recognition of number properties and patterns and the use of algebraic text, without which it is impossible to engage with broader curricula expectations at this level.

COMPONENTS OF A MATHS PROGRAM

The DECD requirement for the provision of Mathematics / Numeracy per week is a minimum of 300 minutes for students Reception – Year 7. Lucindale Area School commits to the provision of a minimum of 180 minutes of Mathematics/Numeracy instruction per week for Years 8-12.

Aspects that make the teaching and learning program effective would be:

- A common language and agreed practice across the site
- Use of Australian Curriculum glossary for terms and definitions
- Opportunities for a mixture of mental tasks, problem solving or investigations, and explicit teaching of strategies
- Time for reflection
- Teaching of the literacies of Mathematics and the comprehension strategies required for Mathematics learning
- Opportunities that demonstrate mathematics in real life situations

ASSESSMENT AND REPORTING

Teachers will use diagnostic, formative, and summative assessments throughout the year to inform teaching and learning programs and to make informed judgments about student progress.

Summative assessment through standardised testing across the school should be in line with DECD requirements.

What	When
NAPLAN	Term 2
PAT-M	Week 7 -10 Term 3
SACE Stage 1	Dates provided by the SACE Board
SACE Stage 2	Dates provided by the SACE Board

Written reports are sent home twice a year, at the end of term 2 and term 4. Students are reported against the Australian Curriculum achievement standards using A-E grades or word equivalents.

Other reporting may take the form of feedback to students, parent meetings or 3 way interviews.

AGREED TARGETS

	NAPLAN	PAT – Maths scale score	Curriculum
Reception			Satisfactory achievement of Foundation achievement standard
Year 1			Achievement at 'C' or above for year level achievement standard
Year 2			
Year 3	Band 3 or above	101 or above	
Year 4		110 or above	
Year 5	Band 5 or above	112 or above	
Year 6		120 or above	
Year 7	Band 6 or above	121 or above	
Year 8		122 or above	
Year 9	Band 7 or above	123 or above	
Year 10		127 or above	
Year 11			• Achievement of 'C' or above in all SACE Stage 1 subjects • Achievement of 'C-' or above in all SACE Stage 2 subjects • Credit awarded for SACE Board recognised learning
Year 12			

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DATA COLLECTION AND ANALYSIS

Staff will analyse NAPLAN and PAT-M after the testing each year at school level. SACE data will also be analysed in the areas of Mathematics.

Collaborative moderation, within sites and across sites within the partnership, to ensure the consistency of grade allocation against the Australian Curriculum will occur.

INTERVENTION

Students can be identified by site based diagnostic, formative or summative assessment processes or NAPLAN and PAT-M analysis.

Schools are required to implement the 3 waves of Intervention:

- Wave 1: Classroom Differentiation
- Wave 2: Intervention Programs
- Wave 3: Negotiated Education Plan and other specialized Individual Learning Plans

NUMERACY ACROSS THE CURRICULUM

Lucindale Area School staff will use the General Capabilities Numeracy Learning Continuum to support the promotion and development of numeracy across all curriculum areas. The Australian Curriculum General Capabilities Numeracy states:

Using mathematical skills across the curriculum enriches the study of other learning areas and contributes to the development of a broader and deeper understanding of numeracy. Therefore, a commitment to numeracy development is an essential component of learning areas across the curriculum and a responsibility for all teachers. It is essential that the mathematical ideas with which students interact are relevant and meaningful in the context of their lives. This means that all teachers:

- identify the specific numeracy demands of their learning area/s
- provide learning experiences and opportunities that support the application of students' general mathematical knowledge and skills
- should be aware of the correct use of mathematical terminology in their learning area/s and use this language in their teaching as appropriate.

PROFESSIONAL DEVELOPMENT

Lucindale Area School will provide appropriate opportunities for Professional Development around Mathematics/Numeracy for teachers, leaders and SSOs in line with the School Improvement Plan and Partnership Strategic Plan.