

# St Philip Neri Numeracy Plan

## What are we doing?

Introduced and incorporated the Board of Studies 2014 NSW K-10 Mathematics Syllabus for the Australian Curriculum into the school Numeracy Plan.

Programs are reflective of the St Philip Neri Mathematics Policy, Numeracy Policies and Numeracy Plan.

All programs are outcomes based and use specific indicators of learning.

Allocate a dedicated block of time to Mathematics.

Have a balance between the three strands- Number and Algebra; Measurement and Geometry; Statistics and Probability.

Have revisited lesson structure as a staff, including Lesson Starters for all lessons.

Challenging and open-ended tasks are a feature of every mathematics classroom.

Encourage children to manipulate materials and use concrete materials to solve problems and address investigations.

Worked on ways to share and display children's learning with their peers.

<b>What are we going to do?</b>	<b>How</b>	<b>Who</b>	<b>When</b>
Continue to seek ways to integrate numeracy across all Key Learning Areas.	Ongoing staff professional development	KRT/ K -6	Ongoing
Link assessment (formal and informal) to future planning.	Program evaluation; BST analysis; ICLT tracking	Principal;K-6	Ongoing
Continually upgrade and organize Mathematics resources.	KRT audit	KRT	On going
Incorporate the Religious Dimension in classroom teaching programs.	Differentiating the curriculum evidenced in Programs	Principal/ AP/ KRT	2014
Differentiate class programs so that all children of all abilities are catered for.	Differentiating the curriculum evidenced in Programs	K- 6	On going
Developed K- 6 Maths Continuum based on the Board of Studies 2014 NSW K-10 Maths Syllabus for the Australian Curriculum .	Audit current practice	KRT/ K- 6	2014-2015

## LEADERSHIP AND CO-ORDINATION

*We believe that effective leadership and coordination is required to ensure the efficient functioning of our school team.*

### What are we doing?

Work together as a team to clarify shared beliefs and understandings about the teaching and learning of Numeracy.

Use assessment and standardized testing to inform classroom teaching practice

Monitor class resources and purchase resources to support teaching programs.

What are we going to do?	How	Who	When
Work collaboratively to develop a K- 6 Maths Progress Map from the 2014 Maths syllabus. Monitor every 2-3 years. Review process.	Staff Meetings	Led by AP & KRT	2014
Share classroom management ideas K- 6 to support the implementation of 2014 Maths syllabus	Staff Meetings Visit other schools	K- 6	Ongoing
Maintain on-going professional development	QT staff meetings and mini projects	K-6 teachers	2014-2016
Establish a consistent assessment practices and expectations K- 6. Monitor regularly then review.	Staff Meetings	Led by AP & KRT	2014
Maintain high standards in school	Monitor BST results	Led by AP with KRT and Stage 3 teachers	Ongoing
Continue to upgrade and evaluate resources.	Consultation	KRT	Ongoing

## CLASSROOM TEACHING PROGRAMS

*We believe effective teaching occurs best in a structured environment that focuses on the specific learning needs of children. The effective teaching of numeracy requires an understanding of both how children learn mathematics and of the mathematical processes themselves. This in turn requires well established classroom routines and teachers skilled in using a range of classroom strategies to respond to the assessed needs of children.* **What are we doing?**

Work together cohesively to improve teaching and learning of numeracy.

Appoint a Key Reference Teacher who co-ordinates and organizes activities involving numeracy including external competitions.

Use the Board of Studies 2014 NSW K-10 Maths Syllabus for the Australian Curriculum as the basis of our planning.

Budget appropriately to provide resources and time allocation for teacher professional development.

Provide professional reading material.

Work with outside consultant to review and utilize the Quality Teaching framework in relation to Maths.

Implement the EMU-Extending Mathematical Understanding program.

Work with Gifted and Talented Education Consultant to identify and provide challenges for students K-6.

Provide opportunities for students to engage in programs such as Maths Olympiad

Provide opportunities for parents to be informed about Numeracy.

Attend CSO and other professional development opportunities where appropriate and implement new practices in the classroom as appropriate.

Review shared beliefs and understandings through staff meetings and professional development opportunities in Mathematics.

Utilise a standardized program proforma for Mathematics.

<b>What are we going to do?</b>	<b>How</b>	<b>Who</b>	<b>When</b>
Examine the time allocation, blocks used for Mathematics.	Staff Meeting	K- 6	Each term for programs
Continue to provide professional development	Staff Meeting	Principal, AP & KRT	Ongoing
Up-skill teachers in EMU Program and enable them to become Numeracy Specialist Teachers	CSO Meetings Staff Meeting	KRT & Staff	Ongoing
Work with consultant to design QT mini projects with Maths as the focus.	Staff Meetings Staff Development Day	K- 6	Ongoing

## STANDARDS AND TARGETS

*We believe standards and targets need to be established to map children's progress in Mathematics. Broad benchmarks standards need to be set for each Stage. Benchmarks assist in identifying both students requiring extension and students at risk. Having been identified, targets for these individuals need to be set to ensure their learning needs are being met.*

## What are we doing?

Teach from outcomes based programs written from the Board of Studies 2014 NSW K-10 Maths Syllabus for the Australian Curriculum

Assess according to stage outcomes and indicators as articulated in the Board of Studies 2014 NSW K-10 Maths Syllabus for the Australian Curriculum

Administer the Mathematics Assessment Interview K-6; Basic Skills Test (Numeracy) in Year 3 and Year 5; administer PAT Maths Years 3-6

Offer Maths Olympiad to talented children in Mathematics.

What are we going to do?	How	Who	When
Work collaboratively to develop a K- 6 Maths Progress Map from the 2012 Maths syllabus.	Staff Meeting	Led by Principal & KRT	Ongoing
Continue teacher professional development.	Professional opportunities; shared practiced	K- 6	On going
Identify students who are vulnerable in Mathematics.	Formal testing; class assessment; MAI	Learning Support; K- 6	Beginning of school year; on going
Use assessment to inform the basis for future planning. (BST)	BST analysis; Staff Meetings; Program evaluations.	Principal/ AP/ KRT/ K- 6	Ongoing
Analyse Basic Skills Test & school based testing results to determine areas of strength and areas of weakness across the school.	BST analysis; Staff Meetings; Program evaluations.	Principal, AP & KRT	Ongoing
Ensure that our assessment is ongoing, relevant and consistent across grades.	Staff Meeting	Led by AP & KRT	Ongoing

## **SCHOOL / CLASSROOM ORGANISATION**

*We believe well organized schools and classrooms facilitate effective teaching and learning.*

### **What is in place?**

Explicit teaching of the skills for Numeracy.

An uninterrupted numeracy block.

Well-resourced classrooms appropriate to stage level.

Classroom displays that highlight numeracy.

Encourage students to talk about numeracy and learn from one another.

Encourage risk taking.

Encourage self-evaluation.

Encourage high standards

Have accessible Mathematics Areas which :

Provide suitable resources

Have shelves located at the children's level.

Labelled containers.

Children's work is displayed

What are we going to do?	How	Who	When
Examine strategies that help with extension and differentiation	Professional reading; Staff Meetings	KRT; K -6 Outside consultant	Ongoing
Ensure strategies are in place to identify children who require Learning Support.	Formal testing; class assessment	Learning Support; K-6	Ongoing
Support vulnerable children identified through the MAI and provide intervention via the EMU program.	Offer learning support	Learning Support	Ongoing
Review and employ QT framework to exploit best practice in teaching Maths	Staff Meetings	Principal/ AP/ KRT K-6	Ongoing

## **BELIEFS ABOUT TEACHING AND LEARNING IN NUMERACY**

### **Belief 1**

*All students have the capacity and the right to learn and the need to experience successful learning.*

Therefore

Whole school programs will be continually monitored and evaluated to ensure that the children have experience of quality programs and successful learning.

### **Belief 2**

*All students are individuals who learn at different rates, with different strengths and with a*

*variety of preferred learning styles.*

Therefore

Class programs will be based on knowledge of individual learning needs and differentiated to cater for these needs.

**Belief 3**

*Learning is lifelong, continuous, developmental and holistic; students need to learn how to learn and to actively evaluate their learning.*

Therefore

Proficiency in Mathematics is best developed when skills and content are taught in a systematic, developmental, context-based and holistic way.

**Belief 4**

*Teaching and learning need to take place within a context of high expectations and within a positive, supportive environment.*

Therefore

The teacher needs to provide structures, scaffolds and challenging learning contexts, where adequate and appropriate resources are provided and sufficient, dedicated time is allocated to the teaching and learning of Mathematics.

**Belief 5**

*Effective learning occurs when students are engaged in learning contexts that are collaborative and draw upon prior experiences, knowledge, understanding and skills.*

Therefore

Learning in Mathematics is best when it occurs within a collaborative environment that structures group work and allows for the supportive and critical mutual sharing of experiences, skills and ideas.

**Belief 6**

*Teaching and learning is informed by explicit assessment and feedback, which in turn will inform future learning pathways.*

Therefore

Class programs are based on authentic assessment and evaluation.

## **HOME, SCHOOL, COMMUNITY PARTNERSHIP**

*We believe that the home/school relationship is a vital part of children succeeding at school. We recognize parents as the primary educators of their children. We see the provision of opportunities for Parents to develop their own understanding of numeracy an important part of our role.*

### **What are we doing?**

Reporting children's progress in Mathematics

Annotating children's work samples in portfolios.

Parent helpers are involved in some classroom practice.

Communication through newsletter, homework

Classroom displays of tasks and children's work

Advertise mathematics competitions

What are we going to do?	How	Who	When
Implement existing outcomes based reporting procedures	Mid year and end of year reports and interviews	Staff	Ongoing
Learning support assistance offered to targeted children in consultation with Parents	Learning support teacher to liaise with Parent about child's learning needs	Learning Support/ K-6 teachers	Ongoing
Provide parent workshops to discuss the school's Maths Strategies	Meetings and workshops with parents	Staff and parents	2008 - 2010

## RELIGIOUS DIMENSION

*We believe that as a community of disciples of Jesus, we have a responsibility to empower children by teaching each child to become fully numerate.*

### What are we doing?

- ⇒ Acknowledge individual learning needs through differentiating the curriculum.
- ⇒ Acknowledge that children have the right to a holistic approach to education (including multiple intelligences), which also includes the right to be numerate.
- ⇒ Offer support and intervention to children with learning needs.
- ⇒ Celebrate children's learning in the classroom and within the school community.

- ⇒ Encourage children to be risk takers without fear of failure.
- ⇒ Encourage children to take responsibility for their learning.
- ⇒ Acknowledge a constructivist approach to numeracy that is closely aligned with our Vision and Mission statement.

What are we going to do?	How	Who	When
Establish effective identification and intervention processes for children with special learning needs	Staff Meetings	Learning Support Teacher/ KRT	Ongoing
Develop strategies for children to be risk takers in their learning.	Staff meetings	KRT/ K- 6	Ongoing

## MONITORING AND ASSESSMENT

*We believe that assessment informs the writing of teaching/ learning programs. By assessing children’s learning needs we can establish realistic learning goals for each child. In doing so, we can explicitly inform parents. What are we doing?*

Pre school screening

Implementing MAI for all children

Observe and listen to children’s responses to challenges and tasks.

Portfolio samples

Information used to inform parents.

Using Basic Skills Results to inform our teaching.

Testing annually with the Pat Maths test.



Keep records of children’s assessments - anecdotal, checklists, work samples and portfolios.

Professional development on assessment and reporting.

Analysis of weaknesses and strengths (BST)

What are we going to do?	How	Who	When
Outcome based and continuous assessment based on new syllabus used consistently by all teachers	Shared understanding of assessment practices; evidenced in Program.	K- 6	Ongoing
Tracking and monitoring of children from grade to grade.	Staff_ share to use track student progress	AP/ KRT	Ongoing
Consistency of practice in assessment.	Staff Meetings	AP/KRT/ K-6	Ongoing
Encourage children’s self assessment.	Shared class practice	K- 6	Ongoing

## PROFESSIONAL LEARNING TEAM

*We believe school improvement means bringing about change, particularly in how teachers operate within the classroom and as part of a team.*

**What are we doing?**

Appoint a Key Reference Teacher in Mathematics to provide support and coordination in Mathematics.

Establish an EMU team

Ongoing professional reading

Share teaching and learning practices around QT Framework and catering for differentiation

Share beliefs about learning

What are we going to do?	How	Who	When
Offer further professional development opportunities	CSO courses; Staff Meetings	KRT; AP	Ongoing
Develop and formalize school assessment practices and understandings about effective assessment measures	Staff Meetings	KRT; AP	Ongoing

Establish quality teaching and learning programs that address and assist children with specific learning needs in the area of Mathematics.	Staff Meetings	KRT; AP	Ongoing
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## INTERVENTION AND SPECIAL ASSISTANCE

*We believe that regardless of good teaching and practice that some students will struggle and require extra assistance in order to make satisfactory progress. Early identification and intervention is essential to address diagnosed issues.*

### **What are we doing?**

Teacher intervention in class

Communication with Parents

Some Large Class Support time allocated to special assistance.

<b>What are we going to do?</b>	<b>How</b>	<b>Who</b>	<b>When</b>
Identify needs at an early stage and act appropriately	Review and fine tune process of identification of children with special needs	Learning Support/ KRT	Ongoing

**Date of Policy: 2014**

**Revision Date: May 2016**

**Further Review Date: May 2017**

**Principal's Name:**

**Date:**