

St Philip Neri Catholic School Mathematics Policy

1. Introduction

Mathematics is a mandatory Key Learning Area. The Board of Studies 2014 NSW K-10 Maths Syllabus for the Australian Curriculum and the St Philip Neri Catholic School Numeracy Plan are the key resources. Mathematics plays a crucial role in the rapidly changing world we are living in. Children need to learn, develop proficiency in and become literate in mathematical thinking to become a successful member of contemporary society. At St Philip Neri, Mathematics is a precise and concise means of interaction with creative thought, active engagement and authentic self directed learning.

2. Purpose

This policy is to provide a clear framework for the systematic teaching and learning of Mathematics at St Philip Neri Catholic School. This policy is designed to transform and increase teacher capacity to improve student outcomes. The NSW K-10 Mathematics Syllabus for the Australian Curriculum will provide content to be taught and developed conceptually delineating the continuum of skill development in each of the strands. This policy makes explicit our commitment to core values outlined in the Diocesan Mission Statement. It reflects the identity of the school as articulated in St Philip Neri Catholic School Mission and Vision Statement.

3. Aim

This policy aims to develop children's mathematical thinking, understanding, competence and confidence in the application of mathematics, their creativity, enjoyment and appreciation of the subject and their engagement with life long learning.

4. At St Philip Neri Catholic School the Principles of Teaching and Learning Mathematics are:

Principle	Implication
<i>We believe all students have the capacity and the right to learn and the need to experience successful learning.</i>	Whole school programs need to be continually monitored and evaluated to ensure that there are opportunities for deep learning with differentiated programs to meet the needs of the learners.
<i>We believe students are individuals who learn at different rates, with different strengths and with a variety of preferred learning styles.</i>	Class programs and groupings need to be based upon authentic assessment strategies and knowledge of learning needs, fostering risk taking and responsibility for individual learning.
<i>Learning is life long, continuous and relevant making purposeful connections to real life experiences</i>	Proficiency and understanding in mathematics is best developed when students are highly engaged in student focused learning experiences.
<i>Teaching and learning need to take place in a context of high expectations and in a positive, supportive environment.</i>	The environment needs to be highly engaging with rich tasks to stimulate intellectual curiosity in effective numeracy blocks. It needs to be well resourced, autonomous and active in promoting high academic expectations.
<i>Teaching is informed by explicit assessment and feedback, which in turn will inform future learning pathways.</i>	Teaching programs are based on assessment that is ongoing through a variety of assessment tasks and strategies, both formal and informal, so that sufficient evidence is gathered to make sound judgements about individual students learning and learning needs. These assessments are used to critically inform the teaching and learning process.
<i>Teachers need to maintain and continue to be active contributors to the educative leadership of the school.</i>	Teachers need to know the policies, frameworks, resources and the curriculum in use at St Philip Neri. There will be ongoing opportunities for professional learning and dialogue pertinent to Mathematics education.
<i>Parents are valued partners who are actively involved in their children's learning.</i>	Parents are informed of the content of class programs and provided opportunities to deepen their understanding of the teaching and learning of mathematics.

5. Catholic Dimension of Mathematics

At St Philip Neri Catholic School we are a community of disciples of Jesus who share our Catholic faith and life experience. Mathematics is an important part of the sharing, describing and celebrating the world through creation that God has blessed us with. In striving to build the Kingdom of God, the children will learn to use the values and attitudes, skills and knowledge of the Key Learning Area. The goal of developing productive and proactive Catholic disciples is furthered through the rigorous study and use of Mathematics.

6. Outcomes

This policy shall ensure that: -

- the children will

6.1 experience systematic teaching and learning of content in regard to Number and Algebra, Measurement and Geometry, Statistics and Probability.

6.2 develop skills in using and articulating the processes of working mathematically.

6.3 develop values and attitudes that reflect the relevance, enjoyment and appreciation of mathematics whilst considering Christian discipleship as well as cultural, environmental, spiritual and gender perspectives.

- the teachers will

6.4 have a clearly articulated framework for the teaching and learning of mathematics.

6.5 have adequate resources and technologies for the effective teaching of mathematics.

6.6 participate in professional development opportunities.

- the parents and community will

6.7 be informed as to the content of the mathematics curriculum at St Philip Neri Catholic School

6.8 provided opportunities to develop deeper understandings of how mathematics is taught.

7. References

- NSW Board of Studies Mathematics K-10 Syllabus for the Australian Curriculum (2014)
- NSW Board of Studies ACARA Mathematics Sample Units of Work (2014)
- EMU-Extending Mathematical Understanding Program
- St Philip Neri Catholic School Numeracy Plan
- St. Philip Neri Assessment and Reporting Policy

7. Appendices

A. Learning Continuum

Currently, St Philip Neri Catholic School uses the K-10 Learning Continuum as described in the NSW Board of Studies Mathematics K-10 Syllabus for the Australian Curriculum (2014). Teachers are to refer to school overviews to ensure that all areas of the curriculum are covered.

B. Programming Expectations

All Teaching Programs in mathematics at St Philip Neri Catholic School are developed from the NSW Board of Studies Syllabus K- 10 for the Australian Curriculum.

Syllabus outcomes are to be stated explicitly in teacher's programs.

Working Mathematically underpins the three content strands. Processes are to be made explicit in programs.

Teaching programs provide both quality modelling and explicit teaching of mathematical procedures, processes, metalanguage and ways of representing learning.

Programming should reflect the components of the effective numeracy block. (See **Appendix 1**)

The Programming proforma included as **Appendix 2** is intended as a guide and may be adapted to suit individual teacher's needs.

Programming is a flexible process that needs to reflect the constantly changing classroom environment. The minimum requirement for Mathematics programming at St Philip Neri are a yearly overview which shows what areas of Mathematics is to be taught within each term, a completed proforma which outlines outcomes to be achieved, differentiated teaching and learning experiences, reflection and assessment strategies. Evidence of transformed learners and learning needs to be an integral part of programming.

C. Assessment and Reporting

Teachers assess and report on student achievement and progress against the syllabus outcomes taking into consideration any systemic or school policies. Assessment is a significant form of feedback to the children from the teacher about their learning. Assessment strategies are soundly based on the quality learning environment and the significance of the task or strategy. Reflective practice in the form of ongoing assessment of children and evaluation of programs informs future planning and teaching practice.

Assessment data is collected from a variety of sources including NAPLAN, MAI- Mathematical Assessment Interviews, UNSW Competitions, school based assessment, diagnostic and standardised tests.

Reporting is the process of communicating the knowledge and understanding gained from assessing a student's learning. The key purpose of reporting is to support student learning by providing information to students and parents about student achievement and to indicate areas for further development.

Samples of children's work in each of the content strands are to be collected, annotated and included in the child's Portfolio each term. Portfolios are to be used as part of Parent/ Teacher reporting. Children are to be given the opportunity to develop the skills of goal setting and reflection.

D. Use of ICLT

The use of ICLT to enhance the mathematics classroom is expected.

Refer to the Science and Technology K-6 Syllabus 'Using Technology' processes which has specific outcomes that have implications for the use of ICLT.

ICLT is to be used as a tool with which to do mathematics and not as an end unto itself. Thus, the use of ICLT is to be authentic.

E. Numeracy Plan

A Numeracy Plan has been developed to guide the ongoing development of mathematics at St Philip Neri Catholic School. It contains definitions of numeracy and mathematics, classroom management and organisation, programming, the numeracy block, assessment strategies and timeline, intervention and resourcing.

8. Evaluation of Policy

Staff will ensure currency and relevance by regular reviews of this policy.

Time will be allocated for the professional development of staff to discuss programming and classroom practices.

Date of Policy: 2014

Revision Date: May 2016

Further Review Date: May 2017

Principal's Name:

Date: