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| APPLICABLE TO | Teaching staff at St Therese’s New Lambton |
| DOCUMENT OWNER | St Therese’s Executive |
| APPROVAL DATE | June 2020 |
| APPROVED BY | This is a System policy: St Therese’s practices are consistent with this policy |
| LAST REVIEW DATE/S | March 2016 |
| NEXT REVIEW DATE | February 2023 |
| RELATED DOCUMENTS | St Therese’s Mathematics ProcedureCSO Programming K–12 Policy 2016 CSO Reporting K–12 Policy 2017 CSO Assessment K–12 Policy 2017 |

# Purpose

Mathematics

Policy

The purpose of this Mathematics K–6 Policy is to present clear guidelines for acceptable and consistent practice in the teaching of Mathematics K–6.

# Policy Statement

Mathematics is a reasoning and creative activity employing abstraction and generalisation to identify, describe and apply patterns and relationships. The symbolic nature of mathematics provides a powerful, precise and concise means of communication.

Mathematical ideas have evolved across all cultures over thousands of years and are constantly developing. Digital technologies facilitate this expansion of ideas, providing access to new tools for continuing mathematical exploration and invention. Mathematics is integral to scientific and technological advances in many fields of endeavour. In addition to its practical applications, the study of mathematics is a valuable pursuit in its own right, providing opportunities for originality, challenge and leisure.

Mathematics in K–10 provides students with knowledge, skills and understanding in Number and Algebra, Measurement and Geometry, and Statistics and Probability. It focuses on developing increasingly sophisticated and refined mathematical understanding, fluency, communication, logical reasoning, analytical thought and problem-solving skills. These capabilities enable students to respond to familiar and unfamiliar situations by employing strategies to make informed decisions and solve problems relevant to their further education and everyday lives.

The ability to make informed decisions and to interpret and apply mathematics in a variety of contexts is an essential component of students’ preparation for life in the 21st century. To participate fully in society, students need to develop the capacity to critically evaluate ideas and arguments that involve mathematical concepts or that are presented in mathematical form.

The Mathematics curriculum makes clear the links between the various components of mathematics, as well as the relationship between mathematics and other disciplines. Students learn to apply their mathematical knowledge, skills and understanding in a broad range of contexts beyond the mathematics classroom, including in such core learning areas as science, geography, history and English.

The study of mathematics provides opportunities for students to appreciate the elegance and power of mathematical reasoning and to apply mathematical understanding creatively and efficiently. The study of the subject enables students to develop a positive self-concept as learners of mathematics, obtain enjoyment from mathematics, and become self-motivated learners through inquiry and active participation in challenging and engaging experiences.

(NSW Mathematics K–6 Syllabus Rationale, p.13)

# Definitions

The Glossary of terms located in the NSW Mathematics K–6 Syllabus is to be used as the primary source for defining and interpreting elements of the syllabus.

# Scope

This policy applies to all primary schools and system personnel in the Diocese of Maitland-Newcastle and is read in conjunction with the Procedure document.

# Guiding Principles

The NSW Mathematics K–6 Syllabus (2012) is reflected in all K–6 primary schools’ scope and sequence documents and teaching programs across the Diocese of Maitland-Newcastle.

**Mathematics is timetabled for 20% (5 hours) per week. The Maitland-Newcastle Catholic Schools Office (CSO) recommends that the teaching of Mathematics is given time and priority during the school day and that one hour of uninterrupted teaching time is reflected in all classroom teachers’ timetables**.

Assessment in Mathematics K–6 aligns with the Maitland-Newcastle CSO Assessment Policy (2017) and the individual school Assessment Policy.

Reporting in Mathematics K–6 aligns with the Maitland-Newcastle CSO Reporting Policy (2017) and the individual school Reporting Policy.

The aim of Mathematics in K–10 is for students to:

* be 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 mathematical processes, and be 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, enjoyable discipline to study, and an important aspect of lifelong learning.

(NSW Mathematics K–6 Syllabus Aim, p.16).

KNOWLEDGE, SKILLS AND UNDERSTANDING

Students:

**Working Mathematically**

* develop understanding and fluency in mathematics through inquiry, exploring and connecting mathematical concepts, choosing and applying problem-solving skills and mathematical techniques, communication and reasoning

**Number and Algebra**

* develop efficient strategies for numerical calculation, recognise patterns, describe relationships and apply algebraic techniques and generalisation

**Measurement and Geometry**

* identify, visualise and quantify measures and the attributes of shapes and objects, and explore measurement concepts and geometric relationships, applying formulas, strategies and geometric reasoning in the solution of problems

**Statistics and Probability**

* collect, represent, analyse, interpret and evaluate data, assign and use probabilities, and make sound judgements.

(NSW Mathematics K–6 Syllabus Objectives, p.16)

# Responsibilities

CSO TEACHING AND LEARNING

Teaching and Learning Services are responsible for:

* Reviewing and amending the current policy and procedures as required. (in consultation with relevant stakeholders)
* Advising schools of changes made to the current policy and associated documentation
* Providing advice to schools on Programming, Reporting and Assessment in Mathematics as required
* Ensuring syllabus implementation is in accordance the NSW Education Standards Authority (NESA) school registration and accreditation processes

SCHOOL PRINCIPALS

The Principal is responsible for communicating this policy and procedure to all teachers in the school. If this policy is adapted for an individual school, the Principal is responsible for the writing, approval, implementation and dissemination of the policy and any associated procedures or guidelines.

TEACHING STAFF

All Teaching Staff are responsible for programming, assessing and reporting from the NSW Mathematics K–6 Syllabus (2012).

# Budget

Appropriate funds will be allocated from the school budget to allow for the successful teaching of Mathematics K–6.

# Legislative/Professional Guidelines

1. NSW Mathematics K–10 Syllabus – Volume 1 (K–6) 2012 (NESA)
2. CSO Programming K–12 Policy 2016
3. CSO Reporting K–12 Policy 2017
4. CSO Assessment K–12 Policy 2017