



St. Martin de Porres School

Avondale Heights

MATHEMATICS POLICY

RATIONALE

Mathematics is the abstract science of space, number and quantity. (Oxford, 1987)

Mathematics is a precise, quantitative way of making sense of, patterning and ordering our world. It provides us with the means of reasoning and solving problems in a universal way, as it crosses cultural and linguistic boundaries.

We teach Mathematics because it is vital for living. It helps us make sense of and discover our world by assisting in developing spatial concepts, lateral thinking and investigative, inquiry skills. It therefore allows and empowers us to interact in real life situations, make meaning of them and further develop necessary life skills.

The Victorian Curriculum (AusVELS), developed in conjunction with the Australian Curriculum in 2012/13, is mandated for implementation in Victorian schools. It identifies dimensions of Mathematics which organise content into the areas of 'Number & Algebra', 'Measurement & Geometry' & 'Statistics & Probability' and expects students to be proficient over time in their understanding, fluency, problem solving and reasoning abilities at their particular and appropriate standard.

Students will best learn Mathematics when :

- ◆ they participate in a 'safe' environment, where risk taking is encouraged and making mistakes is seen as an important part of the learning process;
- ◆ problem solving is a feature of the way they interact with number and measurement;
- ◆ they have the opportunity to work with their peers in various groupings;
- ◆ the activities are purposeful and relevant;
- ◆ they can make the connection between theory and practice in real life situations;
- ◆ mathematical skills are taught sequentially;
- ◆ they have a positive, confident approach;
- ◆ they know they can achieve success on a regular basis;
- ◆ activities are 'hands on' and enjoyable;
- ◆ their teachers are skilled, knowledgeable and confident in teaching mathematics;
- ◆ appropriate concrete materials are readily accessible.

GENERAL GOALS

Students at St. Martin de Porres will work towards :

- ◆ acquiring mathematical skills and knowledge so they can deal confidently and competently with daily life;
- ◆ developing knowledge and skills in using mathematics for outside school interests;
- ◆ being able to interpret and communicate quantitative and logical ideas accurately;
- ◆ recognising the fundamental importance of mathematics to the functioning of society;
- ◆ understanding and appreciating the nature of mathematical thinking, the processes by which mathematics changes and its cultural role;
- ◆ understanding the dynamic role of mathematics in social and technological change;
- ◆ using technology appropriately and effectively to support the learning of mathematics, and in carrying out mathematical activities in context.

IMPLEMENTATION

Achieving the goals mentioned above involves the students mastering mathematical facts, being able to carry out mathematical procedures and being able to use mathematics in solving problems and describing and understanding the world.

OVERALL ORGANISATION

- ◆ Mathematics is implemented by the classroom teachers, with the support of the Numeracy Co-ordinator.
- ◆ Professional Learning Team (PLT) planning weekly or fortnightly and termly in P-2, 3/4 and 5/6 areas of the school.
- ◆ PLT meetings every three weeks at a P – 6, P – 2 or Yr. 3 – 6 level.
- ◆ The content to be implemented is arranged in the AusVELS for Mathematics.
- ◆ The school adapts the ‘Scope and Sequence for Primary Schools’, written by Pearn, Saunders & Vetri (2007).
- ◆ Major resources used are the AusVELS for Mathematics, the Scope and Sequence charts noted above, SINE professional development and research findings.
- ◆ A variety of other mathematical publications supplement programs such as ‘Nelson Maths’ & SINE Growth Points
- ◆ Pre-testing of students from P – 6
- ◆ The structure of lessons usually follows the whole – small – whole model, with each lesson commencing with a ‘mental maths’ warm up, games session or tables drill. The children then move into small group activity and conclude with whole group share time of children’s learnings.
- ◆ Regular evaluation at PLT levels and keeping of records of on-going assessment.
- ◆ Support of the CEOM Zone Numeracy Resource Officer.

IMPLEMENTATION (cont.)

- ◆ Use of open-ended questioning and rich assessment tasks.
- ◆ Integration, where appropriate, into other domains such as the Arts, Science, Humanities, Technology and English.
- ◆ Resource development co-ordinated by the Numeracy Co-ordinator and Librarian.

COORDINATION

Numeracy Coordinators

- ◆ Lead the staff in exploring alternative approaches to the development of their mathematics teaching practices.
- ◆ Maintain the development of the Mathematics Resource Centre.
- ◆ Provide support in the implementation of SINE testing.
- ◆ Assist teachers in the analysis of SINE testing data.
- ◆ Facilitate professional development according to staff needs during PLTs and other professional development days.

Planning Teams and Professional Learning Teams (PLTs) at Junior, Middle and Senior levels meet to plan the numeracy requirements for their particular groups of students on a regular basis. The PLTs discuss the progress of individual students, share strategies for dealing with specific issues and new strategies, and other initiatives are shared via the Numeracy Coordinator.

Professional Development for teachers is provided both on and off site to further develop a deeper understanding of the rationale behind the teaching strategies used and improve their capacity to impact effectively on students' numeracy progress.

ASSESSMENT & REPORTING

- ◆ SINE testing for all students in February & August each year
- ◆ Anecdotal records
- ◆ Observation in small groups
- ◆ Checklist of each dimension's progression points
- ◆ Formal testing
- ◆ Focus Evaluation book
- ◆ Parent / Teacher interviews in February and June, formal written reports, including work sample portfolios, on student progress towards standards in June and December

EVALUATION

Policy review on an annual basis.

*Policy developed in May 2002
Policy review in 2004, 2009, 2014, 2018*