**KEW EAST PRIMARY SCHOOL**

**MATHEMATICS POLICY**

**PURPOSE**
- To ensure students are equipped with the high level of mathematical knowledge, skills and behaviours that enable them to become inquiring, independent and lifelong mathematicians who can confidently and competently problem solve and participate in the ever changing world.

**POLICY GUIDELINES**
- The Victorian Essential Learning Standards (VELS) provides an outline of what is important for all Victorian students to learn and develop in Mathematics. VELS provides a clear set of common state-wide standards in mathematics which KEPS uses to guide the planning of its mathematics program, assess student progress and report to parents. The VELS Domain of Mathematics includes the five dimensions of Number, Space, Measurement, chance and data, Structure and Working Mathematically;
- KEPS strives to provide an interesting, relevant and balanced mathematics program that encourages students to work like a mathematician to develop concepts and strategies to problem solve effectively;
- Teaching and learning in Mathematics at KEPS is also inclusive of the e5 Instructional Model and the Principles of Learning and Teaching (PoLT) which focus on improving teaching practices to meet the diverse needs of all students;
- KEPS uses an investigative learning approach (as opposed to the more traditional textbook approach) that engages and motivates students to work mathematically whilst developing the skills necessary to be a successful mathematician;
- The mathematics program utilises the pedagogical approach of Charles Lovitt and strives to present students with rich tasks wherever possible. Rich tasks can be defined as:
  - engaging, challenging and relevant
  - requiring students to work mathematically (investigatively)
  - developing essential skills
  - developing thinking, reasoning and communication skills
  - deepening genuine understandings
  - using relevant and meaningful contexts
  - 'open' and cater for student diversity with multiple entry and exit points (differentiated)
  - incorporating relevant technology
  - utilising concrete materials
  - supporting students to think, investigate and problem solve
  - using varied teaching strategies (cooperative group, estimation, modelling, etc)
  - catering for various learning styles (visual, kinaesthetic, etc)

**PROGRAM IMPLEMENTATION**
- Be guided by the VELS Learning Focus Statements and Mathematics Developmental Continuum when planning, and the Progression Points and Standards when assessing Mathematics;
- Ensure the Mathematics program is differentiated with multiple entry and exit points so as to meet the learning needs of individual students;
- Utilise the pedagogical approach of a mathematical consultant that ensures mathematics tasks are ‘rich’ tasks whenever possible;
- Utilise a variety of mathematics resources and texts but ensure all selected and planned tasks are ‘rich tasks’ with multiple features. Maths 300 is a highly recommended teaching and learning resource but teacher manuals such as Nelson and Oxford also contain rich possibilities for the discerning and adaptive teacher;
- Mathematics lessons are concrete based and child centred in their approach to ensure meaningful connections are made by students. Teaching practices are based on a clear focus on concepts and thinking, an emphasis on valuing children’s strategies and encouraging students to share their strategies and solutions;
- Typically, mathematics lessons are centred on the Early Years model of the whole-part-whole approach and incorporate the Middle Years Inquiry model in the upper levels. Mathematics lessons usually include a mental mathematics component as well as an investigative or applied component;

**Policy Area:** Teaching & Learning

**Ratified School Council:** October 2010

**Next Review:** 2014
• The Mathematics program is meaningfully integrated into the school curriculum, particularly into the Integrated units of work, in recognition of the VELS strands that are the essence of each student’s education. Just as different learning and teaching approaches are a part of the delivery of the Mathematics curriculum, different assessment methods are utilised in tracking student achievement. These include peer, self, teacher, online and DEECD assessment;
• Resources used in the Mathematics program include the VELS, VCAA, the Mathematics Continuum, Maths 300, a variety of texts, including Nelson, and relevant documents such as ‘Numeracy in Practice: teaching, learning and using mathematics;
• Students will experience ability groupings, mixed ability groupings and cooperative groupings to learn with and from each other during Mathematics lessons;
• Integrate the application of mathematical concepts into all areas of the curriculum so as to enable students to make authentic connections;
• Conduct pre and post testing for each unit of work in Mathematics so as to establish student learning needs;
• Utilise concrete materials with all students across all levels whenever possible to aid genuine understanding;
• Incorporate an inquiry, investigative approach to mathematics units of work whenever possible;
• Ensure Mathematics assessment tasks are VELS based and differentiated;
• Use a variety of assessment methods, such as peer, self, teacher and electronic;
• Track high and low achievers on the Student Data Base;
• All students P-6 will have Mathematics work samples placed in their learning portfolios which are sent home each semester;
• Provide Individual Learning Plans for those students whose mathematical needs are not being met in general classroom instruction, including students at risk (these are designed for students performing well above or well below the expected level);
• Conduct ongoing assessment and monitoring of students’ VELS results at a whole school and team level;
• Provide regular professional learning opportunities for staff to strive for improved teaching and learning in Mathematics;
• Use NAPLAN, the Mathematics Online Interview and other external data to further inform teaching and learning; and
• Within and outside the school, provide enrichment and extension programs that focus on Mathematics.

Evaluation
• The Mathematics policy will be reviewed by the AIP Mathematics Team and the Education Subcommittee on a cyclical basis according to the School Council Policy Review Schedule.

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