Malvern Central School
Mathematics Policy

1. Rationale

This policy is written to guide the teaching and learning of Mathematics at Malvern Central School. Mathematics provides students with access to important mathematical ideas, knowledge and skills that they will draw on in their personal and work lives. The curriculum also provides students, as life-long learners, with the basis on which further study and research in mathematics and applications in many other fields are built. The Mathematics curriculum focuses on developing increasingly sophisticated and refined mathematical understanding, fluency, reasoning, modelling and problem-solving. These capabilities enable students to respond to familiar and unfamiliar situations by employing mathematics to make informed decisions and solve problems efficiently.

2. Aims

The aims of teaching Mathematics at Malvern Central School are to:

- Develop useful mathematical and numeracy skills for everyday life, work and as active and critical citizens in a technological world
- See connections and apply mathematical concepts, skills and processes to pose and solve problems in mathematics and in other disciplines and contexts
- Acquire specialist knowledge and skills in mathematics that provide for further study in the discipline
- Appreciate mathematics as a discipline – its history, ideas, problems and applications, aesthetics and philosophy.

3. Guidelines

a. Victorian Curriculum

Within the Victorian Curriculum, Mathematics is organised by the three strands of:

- Number and Algebra
- Measurement and Geometry
- Statistics and Probability

Each strand is organised by substrands. These sub-strands group content descriptions under an appropriate concept, which provides a focus and a clear sequence for the development of related concepts and skills both within strands and across levels.

b. Planning, Assessment and Reporting

The planning of Mathematics at Malvern Central School is supported by scope and sequence documents which are based upon the Victorian Curriculum. The proficiencies of Understanding, Fluency, Problem Solving and Reasoning are fundamental to learning mathematics and working mathematically, and are applied across all three strands Number and Algebra, Measurement and Geometry, and Statistics and Probability.

Planning within year level Professional Learning Communities is an integral part of the teaching and learning process. This follows the steps of:

- Gathering and analysing student data
- Planning for improvement and differentiated student needs
- Teaching and learning
- Assessment and reporting (as outlined in the MCS Assessment and Reporting Policy)

4. Implementation

a. Timetabling

The teaching of Mathematics is timetabled to occur in every classroom for a minimum of one hour per day, five days per week. This teaching may be inclusive of and make explicit connections to other areas of the curriculum, this assists in promoting important connections between Mathematics and the real world. Malvern Central School's Mathematics Instructional model is based on the DET *Pedagogical Model*, that:

- Defines what students should learn, and the associated progression or continuum of learning
- describes how students will be taught and supported to learn
- describes student progression in learning

b. Planning and Lesson Structure

The planning of Mathematics at Malvern Central School is supported by a Scope and Sequence document and Essential Learning document which is based on the Victorian Curriculum - Mathematics. School planning at Malvern Central School is based on the Professional Learning Community (PLC) structure, which involves teams of teachers working collaboratively to improve student learning outcomes. Our Instructional Model for Mathematics is based on the DET Pedagogical Model which follows the cyclical process of:

- Engage
- Explore
- Explain
- Elaborate
- Evaluate

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Malvern Central School Mathematics Instructional Model

	Behaviours	Actions
Engage *Number sense*	- Build a rich and engaging learning environment that stimulates student learning	- Short, sharp, engaging number activity - Activate previous learning - Whole, partnered or small group games - IWB/TV videos and interactive games
Explore *Whole class focus*	- Establish visible Learning Intentions and Success Criteria - Activate prior learning of maths concepts	- Teacher sets expectations - Share LI/SC on TV/whiteboard - Students retell what success will look like for them
Explain *Explicit teach*	- Unpack mathematical language - Explicitly teach relevant knowledge, concepts and skills - Monitor student progress	- Anchor chart - Worked examples, explicitly modelled and explained - Use of concrete materials to model strategies
Elaborate *Group or independent work*	- Use enabling and extending prompts - Harness questioning for feedback	- Rich learning tasks - Games - Use of manipulatives - Purposeful practice
Evaluate *Summary and reflection*	- Brief teacher reflection to make the key learning explicit - Collect evidence of students demonstrating the Learning Intention - Provide students with individual feedback - Support students to reflect on their own learning using the Success Criteria	- Rubrics/checklist - Student self-reflection against success criteria - Exit tickets - Teacher brief summary of main idea

c. **Assessment and Reporting**
The assessment and reporting of Mathematics is conducted in line with the Assessment and Reporting Schedule which is reviewed and produced by the School Improvement Team (SIT) in conjunction with the Mathematics Curriculum Team. Each semester, families are provided with a student report document which assesses the student's progress against the three content strands. In addition, a student portfolio is shared, which demonstrates their learning and individualised learning goals. As part of the Assessment and Reporting timeline, moderation sessions occur each semester for Mathematics.

5. **Related websites**
   a. **Victorian Curriculum**
   https://victoriancurriculum.vcaa.vic.edu.au/mathematics/introduction/rationale-and-aims
   b. **Mathematics Companion**
   http://fuse.education.vic.gov.au/Resource/ByPin?Pin=N7NDQC&SearchScope=All
   c. **VCAA**
   https://www.vcaa.vic.edu.au/Pages/HomePage.aspx
   d. **ACARA**
   https://www.acara.edu.au/
   e. **DET**
   https://education.vic.gov.au
   f. **Mathematics Teaching Toolkit DET**
   https://www.education.vic.gov.au/school/teachers/teachingresources/discipline/maths/Pages/mathsteachingtoolkit.aspx

6. **Related policies**
   a. **Teaching and Learning Policy**
   b. **Assessment and Reporting Policy**

7. **Policy evaluation**
This revised policy will be reviewed in line with the school's new Strategic Plan in 2019.