



## Help for non-English speakers

If you need help to understand the information in this policy please contact Rosebud Primary School office on 5986 8274.

**‘We approach maths knowing we may not find the answer straight away, but thinking about it is fun!’**

## Victorian Curriculum Mathematics Rationale

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.

Number, measurement and geometry, statistics and probability are common aspects of most people’s mathematical experience in everyday personal, study and work situations. Equally important are the essential roles that algebra, functions and relations, logic, mathematical structure and working mathematically play in people’s understanding of the natural and human worlds, and the interaction between them.

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.

## Aims

The Mathematics curriculum aims to ensure that students:

1. develop useful mathematical and numeracy skills for everyday life, work and as active and critical citizens in a technological world
2. see connections and apply mathematical concepts, skills and processes to pose and solve problems in mathematics and in other disciplines and contexts
3. acquire specialist knowledge and skills in mathematics that provide further study in the discipline
4. appreciate mathematics as a discipline – its history, ideas, problems and applications, aesthetics and philosophy

## At Rosebud Primary School we think Great Mathematics Learners are students who...

Have **GROWTH** Mindsets

- o Mistakes help us learn!
- o We are flexible and open to trying new things
- o We take risks
- o We know there is more than one way to solve a problem

Are **CREATIVE** and **IMAGINATIVE**

- o We explore maths
- o We investigate and use trial and error
- o We problem solve
- o We can show our learning in more than one way

Are **REFLECTIVE**

- o We think about our learning and how we approach a task
- o We set goals
- o We are proactive

Can **LINK** ideas and make **CONNECTIONS**, then **APPLY** their knowledge

- o We think about our own experiences and apply this to our learning
- o We make connections across the Mathematics curriculum
- o We use the Learning Intentions and Success Criteria to gauge our own learning
- o We discuss learning with others
- o We can apply what we have learnt in new situations

Can **ASK QUESTIONS**

- o We are confident to ask if we don't understand
- o We collaborate and share ideas with our teachers and peers
- o We are interested in what we are learning and want to find out more

## Structure at Rosebud Primary School

At Rosebud Primary School, all Foundation to Grade 6 students have 4 x 100 minute numeracy blocks per week, including a 100 minute problem solving session. Across all of our cohorts, numeracy is time-tabled at the same time to allow for fluid groupings.

Year level teams plan collaboratively (200 minute timetabled shared APT each week)

A Maths Specialist has been employed to work throughout the school assisting in these year levels where required, working with students who require intervention or extension in Mathematics in Grade 1-6.

Our Maths Specialist at Rosebud:

- o Attends two planning days with staff from each year level to discuss student growth and learning, as well as assist in the development of termly planners, weekly planners and day to day lessons
- o Has ongoing conversations with all staff regarding student growth and ways to assist every learner
- o Provides PD to staff and ensures they have the resources required to support the teaching and learning of their students
- o Ensures a consistent approach in the way we teach maths from F – 6
- o Works with staff to understand and use their assessment effectively to enhance student learning

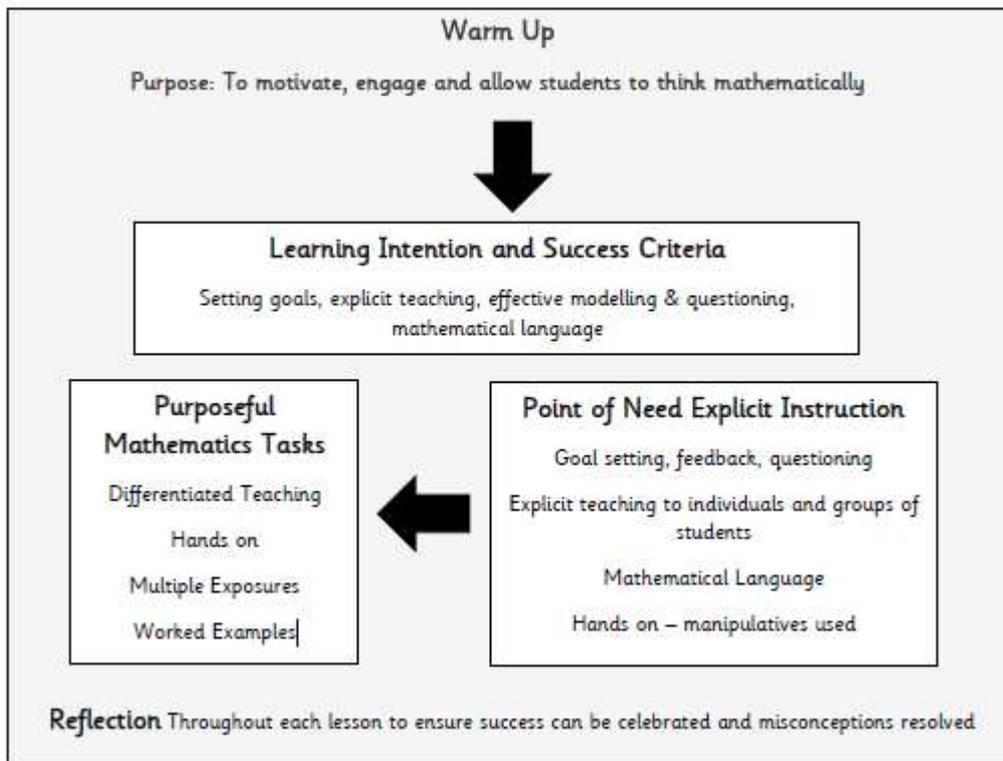
A consistent approach to Mathematics is important from F – 6. We have a strong focus on ensuring all lessons are structured to cater for the individual needs of all students. This includes our initiative to ensure we provide flexible learning spaces to promote learning for all students across the school.

We expect teachers to include the appropriate Victorian Curriculum links, language, Learning Intentions and Success Criteria, warm up games, a teacher focus group, independent groups and reflection in their lesson planning (evident in weekly planners). We strive to ensure a mixture of games, ICT (Study Ladder), explicit teaching, individual tasks and reflection are all included in our planning, with a strong focus on using manipulatives. We believe students learn best through the hands on approach and when they actually understand the how and why of a certain skill.

We believe assessment should only be used if it is meaningful and provides teachers and students with information to improve their learning. The whole school assessment we use are PAT Maths (F-6), ODT (3-6), Essential Assessment and our own Rosebud Primary maths assessment (F-6) as well as teacher observations.

We have a Mathematics Professional Learning Team with membership from all of the cohort learning teams, headed by our Maths Specialist. This team focusses on whole school maths initiatives as well as provides an avenue to discuss learning challenges and successes across the school. This network of people are our 'maths experts' who support their year level teams and are the first point of call regarding the maths curriculum.

We continue to build our knowledge of mathematics and ensure we are up to date with all the current initiatives through internal and external professional development. We align and set targets based on our Annual Implementation Plan and continue to support each-other to ensure we are an exemplary mathematics school.



### Our maths lessons will include:

Lesson Intention/Success Criteria: Discussed and shared with the class (linked to the curriculum)

Warm Up: Number related warm up activity to engage

Demonstrating: Showing, describing and modelling mathematics using appropriate resources and visual displays

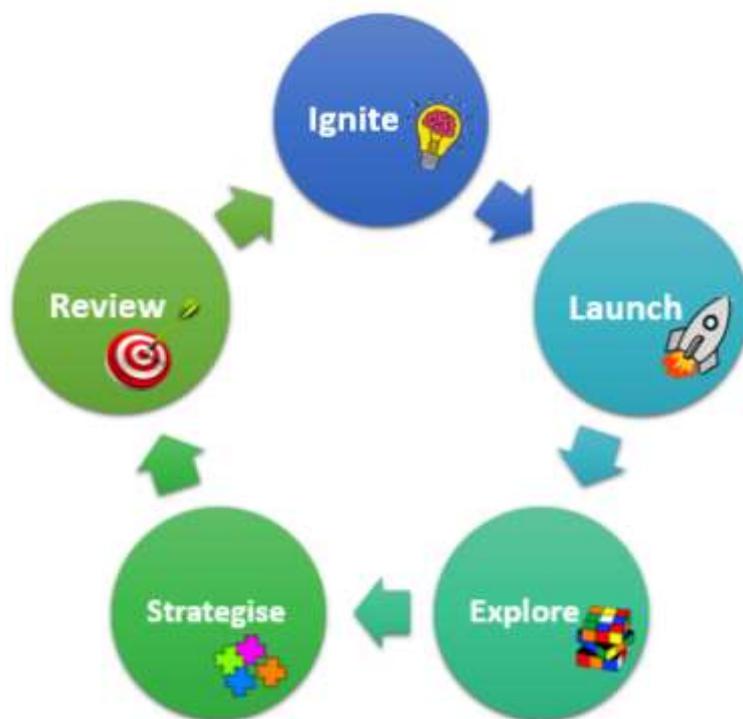
Explaining & Illustrating: Accurate, well-paced explanations pitched at the correct level of individual student needs based on differentiated, triangular assessments

Questioning & Discussing: Allowing students to discuss and share their responses and responding constructively in order to take forward their learning, using open and closed questions

Consolidating & Evaluating: Maximising opportunities to reinforce and develop what has been taught, evaluating student responses, identifying mistakes and using them as positive teaching points

Summarising & Reflection: Discuss student's justifications of methods and resources used, review the mathematics that have been taught and challenge students to develop higher order thinking skills

Rosebud Primary School uses a whole school maths **instructional model** to ensure all key elements of a successful maths lesson are included in each lesson from Foundation to year six.



#### **Ignite –**

A fluency game to stimulate students' thinking. Based solely on number skills and thinking, using one or more of the four operations to build student fluency in number.

#### **Launch –**

In an Explicit lesson, the Launch is teacher-led. It will include worked examples, unpacking key language, introducing or revisiting a skill or process at student point of need. Teaching strategies may include telling a story, "I do" "We do" demonstrations, anchor charts, fishbowl modelling, images, examples, step-by-step, links to previous learning, reviewing prior knowledge. In a Problem Solving lesson, the Launch is student-led. Students are provided with detailed information that outlines the question they are to solve. Students ask questions and seek to unpack the task so that they are clear on the problem solving strategies available to them. In a Challenging Task lesson, the Launch provides the context of the lesson only. Students receive a prompt and teachers stay silent, allowing students 5 minutes to 'wobble' with the task while encouraging persistence. During all lessons, clear and high expectations are set for students and their learning.

#### **Explore –**

Practise using explicitly taught skills or embark on a journey of discovery through a problem solving or a challenging task. All activities use a variety of resources and concrete materials. Real life context is a strong theme while providing opportunities for multiple exposures. Tasks are independent or collaborative, open-ended or closed, with skills that connect to student prior knowledge and build on previous foundations of mathematical skill. Teachers take the opportunity to formatively assess, provide specific feedback and set individual learning goals at the point of need.

#### **Strategise –**

Students are empowered to use metacognitive strategies, thinking about their own thinking. They take control of their learning, reasoning to justify chosen strategies and learning approaches. Teacher effective questioning that probes thinking and prompts students to justify is demonstrated, such as What worked? How do you know? What did not work? How did you change your strategy? What may be more efficient? We address any misconceptions. Teachers

carefully select students to share based on the level of thinking and strategies shown, present to peers in order of strategies that most people understand through to more complex thinking.

#### Review -

Celebrate the successes from the session. Refer back to Learning Intention and Success Criteria. To promote student agency, students may help design the Success Criteria. Together, teachers and students may set or revise individual learning goals linked with multiple exposures.

#### POLICY REVIEW AND APPROVAL

Policy last reviewed	02/2022
Consultation	S/C
Approved by	S/C
Next scheduled review date	02/2026