

Natural Maths

Core Belief: At Renmark North Primary School we work to create independent learners. Natural Maths is the program that we use to teach mathematics at our school. We believe that it is vital for students to have strategies for mental computation and to develop the ability to work through problem solving situations.

Natural Maths lessons should be structured in the following way.

- 1) Mental Routine
- 2) Problematised situation or explicit teaching
- 3) Reflection

Mental Routine:

The purpose of a mental routine is to develop strategies that will lead to a deep understanding of particular skills. The routine should reflect what the current topic is and have an entry level for all students. The mental routine should be comprised of closed, open and flip questions which should challenge students and remind students of the current concepts being taught.

A mental routine is to be done at the beginning of all lessons and should be somewhat repetitive from lesson to lesson to ensure understanding and consistency.

A mental routine should typically last for around 5-10mins. The mental routine can be teacher or student led and students are encouraged to use others' knowledge.

A mental routine will contain key vocabulary of the topic being taught. It is important for students to learn the correct vocabulary i.e. **subtraction** rather than **take away**.

Problematised situations:

Students will use the STAR model to solve problematised situations.

S- Sort out

T- Think about

A- Action

R- Reflect on

Teachers will present their classes with at least 2 problematised situations a week. These situations are real life problems that students can relate to, find engaging and attempt to solve. Problematised situations should have multiple entry points and also a range of possible answers. The focus of a problematised situation is the process rather than the final answer.

Explicit teaching:

Explicit teaching is vital when teaching mathematical skills and concepts which are required to be taught by the Australian Curriculum achievement standard.

Reflection

The reflection should occur at the end of the lesson with at least 10 minutes to go. It is probably the most important part of the lesson, as students use their mathematical language to explain what they have done, see that there are many strategies for solving problems, and that some are more effective than others. It is also a time when a teacher can formalise a particular idea, concept or process and scaffold students to the next level.

Top 5

The Top 5 should be created with the achievement standard in mind, by the teacher, so that the lesson's intent is always clear. Students should be aware of the Top 5 and they should be displayed in the classroom and in the students' books. The Top 5 must be achievable, and students will be assessed against these during the unit and at the end.

Conferencing

The teacher should aim to conference 2-3 students per lesson about their Maths learning. This can be recorded either as anecdotal notes or in the students' workbooks.