

At Chad Vale we have started to implement the Maths No Problem programme as our approach to teaching Maths (from September 2024). The reason we chose MNP is because problem solving is at the heart of mathematics; shifting the focus from rote learning to relational understanding.

What is Maths No Problem and Mastery?

Maths-No Problem! is a series written based on Singapore methods of teaching and the Mastery approach. Maths mastery is an approach to teaching that gives pupils a deep, long-term, secure and adaptable understanding of mathematics. Teaching for mastery differs in many key respects from more traditional methods, perhaps most fundamentally in the idea that 'Everyone a learner'. This inclusive approach and its emphasis on promoting multiple methods of solving a single problem builds self-confidence and resilience in pupils.

All Maths-No Problem! lessons have elements of the following:

- **Inclusivity:** Tasks and activities are designed to be inclusive for all pupils whilst providing components of challenge for more advanced learners.
- **CPA approach:** Where appropriate, pupils will be introduced to a concept using concrete resources (such as counters) and then move on to a pictorial representation followed by the abstract symbols and methods.
- **Problem-solving:** Tasks and activities encourage problem-solving skills where pupils are often asked to work together to come up with solutions.
- **Variation-** Questions and examples are varied to encourage pupils to recognise that there may be more than one method for solving a problem.

Lesson Structure

- **Exploration** - instead of 'Let me teach you...' as a starting point, children are encouraged to explore a problem themselves to see what they already know. At the beginning of each lesson in our school this exploration is referred to as the '**anchor task**'.
- **Structured discussion** - the teacher will lead a discussion with the children in order to organise the findings of the exploration, compare/contrast strategies and guide toward the most efficient strategy (or the one being learnt that day).
- **Questions** to challenge thinking – teachers use questioning throughout every lesson to check understanding. Children are also encouraged to question each other frequently throughout the lesson; this aids the development of independent learners and deepens their understanding. A variety of questions are used, such as: How do you know? Can you prove it? Are you sure? Is that right? What's the same/different about? Can you explain that? What does your partner think? Can you imagine? Questions are also used to challenge children who have grasped the concept. Children are expected to listen to each other's responses and may be asked to explain someone else's ideas in their own words, or if they agree/disagree etc.
- **Discussion and feedback** – pupils have opportunities to talk to their partners and explain/clarify their thinking throughout the lesson, but are expected to complete written work independently (unless working in a guided group with the teacher).