

# Maths No Problem explained

## What is Singapore Maths?

Maths – No Problem, is an approach to teaching maths developed in Singapore.

Singapore established a new way of teaching maths following their poor performance in international league tables in the early 1980's.

The Singapore Ministry of Education, decided to take the best practice research findings from the West and applied them to the classroom with transformational results.

Based on recommendations from notable experts, Singapore maths is a combination of global ideas delivered as a highly-effective programme of teaching maths.

The effectiveness of this approach is demonstrated by Singapore's position at the top of the international benchmarking studies and explains why their programme is now used in over 40 countries including the United Kingdom and the United States.

## What is so great about Singapore Maths?

Problem solving is at the heart of mathematics. The focus is not on rote procedures, rote memorisation or tedious calculations but on relational understanding. Pupils are encouraged to solve problems working with their core competencies, such as visualisation, generalisation and decision making. In summary:

- Singapore consistently top the international benchmarking studies for maths teaching.
- It is a highly effective approach to teaching maths based on research and evidence.
- It builds students' mathematical fluency without the need for rote learning.
- It introduces new concepts using Bruner's Concrete Pictorial Abstract (CPA) approach.
- Pupils learn to think mathematically as opposed to reciting formulas they don't understand.
- Teaches mental strategies to solve problems such as drawing a bar model.

## How are lessons taught?

Concepts merge from one chapter to the next. Chapters are then broken down into individual lessons.

Lessons typically are broken into three parts and can last one or more days. Pupils master topics before moving on.

The three parts to a lesson are:

1. *Anchor Task* – the entire class spends time on a question guided by the teacher. The children are encouraged during this time to think of as many ways as possible to solve the question as possible.
2. *Guided Practice* – practice new ideas in groups, pairs or individually guided by the teacher.
3. *Independent Practice* – practice on your own. Once children have mastered the concept they use their reasoning and problem solving skills to develop their depth of learning.

## What impact will Singapore Maths have on our children?

- Children will have a greater conceptual understanding of number and calculation. They will be able to visualise and generalise more readily due to a more in-depth understanding.
- Struggling learners will be fully supported through accessing concrete equipment and use of visual models to support understanding.
- Confident learners will be challenged through exposure to unfamiliar problems, development of reasoning skills and by exploring multiple ways to manipulate numbers and solve problems.
- All learners will access teaching of content which matches the expectations of the new curriculum in England and be supported further, if needed, in order to access this. The resources match the expectations for formal written methods set out by the Government, alongside greater understanding.