

Teaching maths for mastery

The whole class works through the programme of study at the same pace with ample time on each topic before moving on. Ideas are revisited at higher levels as the curriculum spirals through the years.



Differentiated activities

Tasks and activities are designed to be easy for pupils to enter while still containing challenging components. For advanced learners, the textbooks also contain non-routine questions for pupils to develop their higher-order thinking skills.

Problem solving

Lessons and activities are designed to be taught using problem-solving approaches to encourage pupils' higher-level thinking. The focus is on working with pupils' core competencies, building on what they know to develop their relational understanding, based on Richard Skemp's work.

Concrete, Pictorial, Abstract (CPA) approach

Based on Jerome Bruner's work, pupils learn new concepts initially using concrete examples, such as counters, then progress to drawing pictorial representations before finally using more abstract symbols, such as the equals sign.



Variation

The questions and examples are carefully varied by expert authors to encourage pupils to think about the maths. Rather than provide mechanical repetition, the examples are designed to deepen pupils' understanding and reveal misconceptions.

International research

By incorporating established learning research into a highly effective approach, Singapore has become a "laboratory of maths teaching". The Primary Maths Series is founded on the international research of Piaget, Dienes, Bruner, Skemp and Vygotsky and has been tested and refined over the last 30 years in Singapore.

UK evidence

The **MNP Primary Series** was assessed by the DfE's expert panel, which judged that it met the core criteria for a high-quality textbook to support teaching for mastery. As a result, the Maths – No Problem! Primary Series are recommended textbooks for schools on the mastery programme.

The Primary Series is one of the few textbooks that complies with the UK's high-quality textbook guidance published by the National Centre for Excellence in Teaching Mathematics (NCETM).

Source: NCETM Maths Hubs Textbooks Project Year 1 Report, September 2015

