



Singapore Math Inc.®

An introduction to Singapore Maths

Singapore Maths is the generic name of the maths curriculum or syllabus that is created by the education ministry in Singapore for use in Singapore schools. As more and more people around the world became fascinated with the astounding success of Singapore students in mathematics, they began referring to Singapore's maths curriculum as simply Singapore Maths.

To help our children thrive in a fast-changing world, it is important to provide research based Mathematics education that will equip the child with the 21st century skills necessary for the globalised economy.

With a strong focus on problem-solving, the Singapore Maths curriculum involves the acquisition and application of Mathematics concepts and skills in a wide range of situations, including non-routine, open-ended and real-world problems. In this framework, the development of mathematical problem solving ability is dependent on five inter-related components: Concepts, Skills, Processes, Attitudes and Metacognition.

Facilitates Understanding of Key Concepts

The Concrete → Pictorial → Abstract approach enables pupils to encounter maths in a meaningful way and translate mathematical skills from the concrete to the abstract. This approach allows pupils to understand mathematical concepts before learning the formulaic expressions.

Develops Strong Conceptual Foundation in Mathematics

Model-drawing is an ingenious problem-solving strategy that has come to define the Singapore Mathematics pedagogy. Pupils are taught to visualise and construct bar models to help them make sense of word problems. Through the use of bar models as a visual tool, pupils quickly identify the mathematical concepts required, and solve problems efficiently.

Allows Deep Understanding of Topics

Each topic is covered in detail and taught to mastery. Immediately after new concepts are taught, pupils are engaged in a variety of mathematically-rich problems. This ensures that the focus is on pupils' deep understanding of each topic. The Singapore Maths approach is geared towards producing mathematical thinkers, and it does this by walking pupils through all the component parts of a problem before presenting them with a whole problem to solve.

Builds Strong Math Foundation through Spiral Progression

Spiral progression enables topics covered previously to be reviewed at higher grades and at increasing levels of difficulty. The introduction of new concepts is built upon the mathematical concepts pupils have learnt and mastered previously. It also allows for a review of important mathematical concepts while expanding on that foundation, ensuring a coherent and focused programme.

Promote Logical Thinking, Reflection and Communication

Metacognition refers to the ability to monitor one's own thought processes. In teaching pupils to be conscious of the strategies they use to accomplish a task, metacognition encourages pupils to think of alternative means of solving problems and promotes logical thinking.



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SINGAPORE MATHEMATICS CURRICULUM FRAMEWORK

