

Math in Focus

Singapore Math
by Marshall Cavendish

Math in Focus—authentic Singapore math

What is *Math in Focus*?

Math in Focus is the U.S. Edition of Singapore's top-ranking math program. It follows the same scope, sequence, and pedagogy as its Singapore Edition, *My Pals are Here!*, but has been enhanced with the addition of a robust Teacher's Edition, differentiated components, and interactive technology.

What makes *Math in Focus* the authentic Singapore Math?

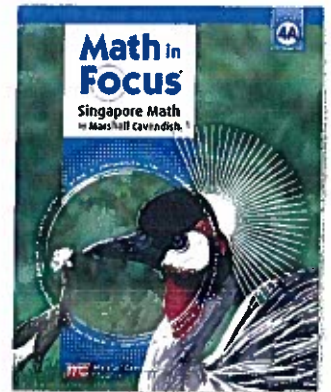
Math in Focus is published by Marshall Cavendish Education Singapore, the premier publisher of textbooks in Singapore, and distributed in the United States by Houghton Mifflin Harcourt. Both programs follow the pedagogical framework developed by the Singapore Ministry of Education: emphasizing concept mastery, a concrete-to-pictorial-to-abstract approach, metacognitive reasoning, and the use of model drawing to solve and justify problems.

How does *Math in Focus* differ from other programs that include Singapore "strategies"?

Singapore math is more than isolated strategies and model-drawing techniques. It is a carefully sequenced curriculum that has led Singapore students to international success.

What will *Math in Focus* bring to your classroom?

Math in Focus brings the authentic Singapore math pedagogy to U.S. classrooms, and is aligned with Common Core State Standards. *Math in Focus* is the mastery program for world-class math instruction and results in the U.S.



Aligned to the Common Core State Standards

Math in Focus addresses the full spectrum of Common Core State Standards. The Singapore math framework was one of 15 national curriculums examined by the committee, and it had a significant impact on the final standards compiled by the Common Core writers and contributors.

Specific areas of alignment include:

A Curriculum that is focused and coherent where concepts are taught to mastery

Math in Focus is organized to teach fewer topics in each grade, but to teach them thoroughly to mastery. When a concept appears in a subsequent grade, it is always at a higher level.

A focus on number, geometry, and measurement in the elementary grades

Math in Focus emphasizes number and operations in every grade, K–5, just as recommended in the Common Core State Standards. The textbook is divided into two books, roughly a semester each. Approximately 75% of Book A is devoted to number and operations, and

60–70% of Book B to geometry and measurement, where the number concepts are practiced, connected, and applied.

Content that is organized by big ideas, such as place value

Math in Focus is organized around place value and the properties of operations. The first chapter of each grade level (K–5) begins with place value.

Curriculum that includes both conceptual understanding and procedural fluency

Math in Focus' highly visual nature and consistent concrete-to-pictorial-to-abstract approach enable all students to understand both why procedures work as well as how to fluently apply them to solve problems.

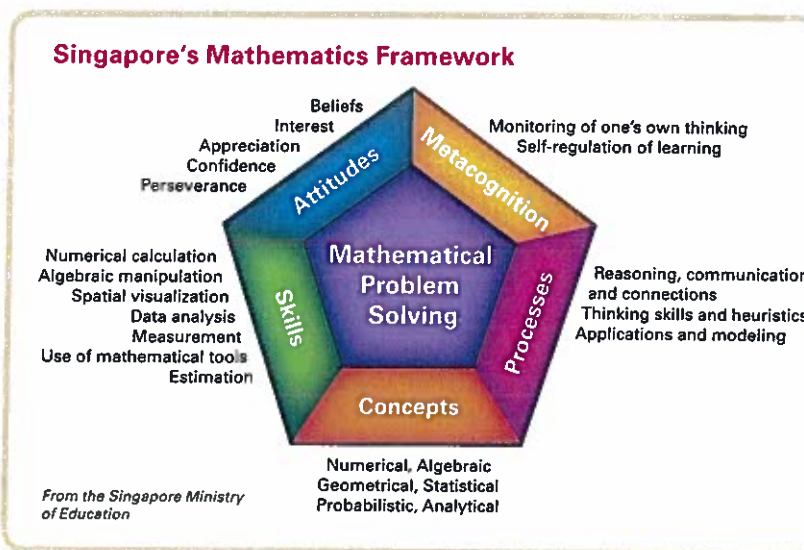
An emphasis on reasoning

Math in Focus is famous for its model drawing that enables students to solve problems, as well as justify their solutions.

COMMON
CORE

Behind the *Math in Focus* instructional success story.

- 1 **A focused and coherent syllabus.** *Math in Focus* introduces fewer topics in each grade, but teaches them to greater depth. Topics are taught to mastery, so they build from year to year across grade levels without repetition.
- 2 **A visual and balanced approach.** *Math in Focus* is highly visual, following a concrete-to-pictorial-to-abstract progression.
- 3 **A focus on number and operations.** *Math in Focus* is sequenced in a way that ensures students develop and maintain strong number sense. Students spend the majority of the first half of the year studying number. This provides the foundation necessary to move on to more complex and abstract thinking.
- 4 **An emphasis on problem solving using model drawing.** *Math in Focus* utilizes model-drawing strategies that help students solve both routine and non-routine problems.
- 5 **A recognition of the importance of attitudes and metacognition.** The Singapore Ministry of Education's mathematics framework emphasizes the importance of attitude and the ability to self-monitor while problem solving to achieve success in math. *Math in Focus* provides students with the tools they need to break down complex concepts and problems, which in turn develops positive attitudes.



SPOTLIGHTS ON SUCCESS

In Singapore

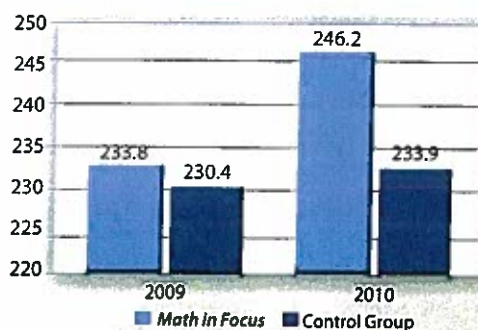
Singapore has been a top-performing nation on the Trends in International Mathematics and Science Study (TIMSS) for the past 15 years. Over 85% of the students in Singapore use Marshall Cavendish's *My Pals are Here! Maths*, which is the Singaporean version of *Math in Focus*. *Math in Focus* follows the same scope, sequence, and pedagogy, to help our students reach the same level of international success!

TIMSS 2007* Grade 4	
Hong Kong	607
Singapore	599
Chinese Taipei	576
Japan	586
Kazakhstan	549
Russian Federation	544
England	541
Latvia	537
Netherlands	535
Lithuania	530
United States	529
Germany	525
Denmark	523
Australia	516
Hungary	510

*<http://nces.ed.gov/timss>

In New Jersey

A study in Old Bridge, NJ, showed that students using *Math in Focus* improved more than 3 times the average improvement that occurred across the remaining students in the district on the NJ ASK state test. The improvement in mathematics achievement remained significant when researchers controlled for other predictors of academic performance, including teacher effects and student demographics.



Student Performance on NJ ASK Over Two Years (Scaled Scores)

*The Trends in International Mathematics and Science Study (TIMSS) provides reliable and timely data on the mathematics and science achievement of U.S. 4th- and 8th-grade students compared to that of students in other countries.