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# Singapore Math® Publisher Marshall Cavendish Announces New Fact Fluency Workbook Series for Elementary Schools

Singapore Math® Fact Fluency for grades K to 5 helps students master and understand essential math facts that build the foundation of higher levels of math

TARRYTOWN, NY, Aug. 22, 2016 – Marshall Cavendish Education, publisher of Singapore Math® textbooks *Math in Focus*® and *Primary Mathematics*, introduced a new workbook series for grades K to 5 to sharpen students' conceptual understanding of and fluency in mathematics. *Singapore Math® Fact Fluency* targets these two critical elements of K-5 math learning. Each consumable, print-format student workbook is for one grade level and supports any math curriculum. The books are expected to ship by the end of September. Achieving fact fluency by the end of 5th grade requires more from students than memorization. Marshall Cavendish's approach to help students achieve fact fluency is based on the philosophy that number sense leads to fact fluency, and that fact fluency and higher-order thinking can be taught simultaneously. It aligns with the way the latest math standards are written. In July, Marshall Cavendish presented multiple workshops at the Staff Development for Educators (SDE) conference in Las Vegas, addressing the topic of teaching math fact fluency, among more than 30 other Singapore Math® related topics.

There is an important role that conceptual understanding and competency in solving basic facts play in securing fact fluency. The various practice strategies for students in the *Singapore Math® Fact Fluency* workbooks are more suitable and more effective methods than traditional math drills alone. Educators are invited to preview free digital sample chapters from the books at <a href="http://www.mceducation.us/fact-fluency">http://www.mceducation.us/fact-fluency</a>.

Singapore Math® Fact Fluency workbooks provide students with five types of practice opportunities:

- Fact Builder asks students to apply specific strategies that promote fluency.
- Fact Strategy Practice asks students to analyze problems and apply multiple problem-solving strategies.
- Apply and Build Knowledge asks students to synthesize and apply knowledge of fact strategies to real-world problems.
- Writing about Math asks students to evaluate and create new math thinking through movement, drawing, writing, or talking.
- Challenge Questions appear in some practices. These questions help students acquire readiness for future learning.

"Students don't develop the ability for automatic recall in their brain until they are eight to nine years old, which is about third grade. It happens in phases," said Susan Resnick, one of the *Singapore Math® Fact Fluency* authors. "First, students are building facts through counting numbers. Second is using known information to determine the answer of an unknown combination. Phase three is mastery, when they are efficient, fast and accurate in their production of answers. Students can't skip phase two to reach mastery, so this is an important area to focus on in helping them get there."

Place value is important to building fact fluency. The *Singapore Math® Fact Fluency* workbooks use visual diagrams to help students understand how to regroup tens and ones. Recognition and production are covered. Students learn to recognize first, then they can learn to produce something. In division, students learn to visualize how to shift numbers how many places to each side of the decimal.

The first step to building facts is skip counting by 2s, 3s, 5s and 10s. Students learn to use a number line chart. They look at a picture of real objects, something like different kinds of fruit in rows, to count how many or to multiply how many they see. Array models show something

representative, like circles, to present problems. An area model is more advanced and more abstract, asking students to count the area of an object, like small squares that make up a whole larger square of 25. *Singapore Math® Fact Fluency* teaches students to be flexible with multiplication and decimals.

Students learn building facts for division. They practice how to break up groups in a visual model to divide numbers. They learn to use a partitioning model that represents the whole.

Students who don't know their multiplication tables by 5<sup>th</sup> grade need a different approach to learn them. Students need strategies to build those facts from ones they already know. Then they are asked to explain their thinking.

In developing mastery, students don't need to practice all of their math facts, just the ones they don't know. They need to be able use higher-order thinking to explain their answers. The workbooks focus on flexibility and generalizing number relationships.

"Methods of teaching math have changed drastically. With more rigor at early grades, younger students need to know their math facts earlier and by second nature," said Vivian Cheng, Area Director US, at Marshall Cavendish Education. "Marshall Cavendish's new series of *Singapore Math® Fact Fluency* workbooks provide supplemental opportunities and activities for students to build, practice and understand those facts, so that they are successful in math and ready for more advanced math after 5<sup>th</sup> grade."

#### **Authors**

The *Singapore Math® Fact Fluency* series books were written by experts on elementary math education, who are also former teachers: Genevieve Collura, M.S. Ed. and Susan Resnick.

An elementary teacher in Brooklyn for nine years, Genevieve Collura now works as a school-based instructional coach. Genevieve also trains teachers and administrators in K-8 classrooms and institutes across the U.S., facilitating the implementation of the successful Singaporean instructional approach at the core of Marshall Cavendish's *Math in Focus*® curriculum. The curriculum intends for students to strengthen critical thinking and reach mastery of concepts, computational skills and problem-solving and its applications to real-life situations. She recently presented at the NCSM conference.

Susan Resnick, a career educator, has worked as an elementary, middle-school, and high-school math teacher, as well as a school principal and district math coordinator. Currently, Susan works in schools across the country and around the globe, teaching Singapore Math® strategies to students, teachers, coaches, and administrators.

## **Availability**

Singapore Math® Fact Fluency workbooks are available for ordering now in print format through Marshall Cavendish Education. The suggested purchase price for Singapore Math® Fact Fluency is \$99 for one 10-student pack of workbooks for any grade level, K through 5. Orders placed by Aug. 31 receive a 5% discount and free shipping. Recorded professional development online webinars for teachers on strategies to help students achieve fact fluency are also available for purchase at <a href="http://www.mceducation.us/fact-fluency-singapore-math">http://www.mceducation.us/fact-fluency-singapore-math</a>. Educators are invited to visit the company's online bookstore at <a href="http://shop.mceducation.us/39-singapore-math-fact-fluency">http://shop.mceducation.us/39-singapore-math-fact-fluency</a>, email <a href="mailto:customerservice@marshallcavendish.com">customerservice@marshallcavendish.com</a> or call (800) 821-9881 x337.

#### **Marshall Cavendish Education**

Marshall Cavendish Education (<a href="www.mceducation.us">www.mceducation.us</a>) is the authentic provider of Singapore Math® educational solutions. The company's holistic approach to learning and teaching is fundamentally changing math education in the United States by providing teachers

with the same pedagogy, curriculum, supplemental materials and digital resources that have put the company's Singapore students at the top of all global math performance studies.

For nearly 40 years, Marshall Cavendish Education has been a leading academic publisher of K-12 math textbooks, workbooks, and digital curricula, as well as a respected provider of professional development for educators. With headquarters in Singapore, Marshall Cavendish Education has been on a mission to revitalize math instruction in classrooms worldwide. The company's products have been adopted by educators and embraced by students in over 50 countries.

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