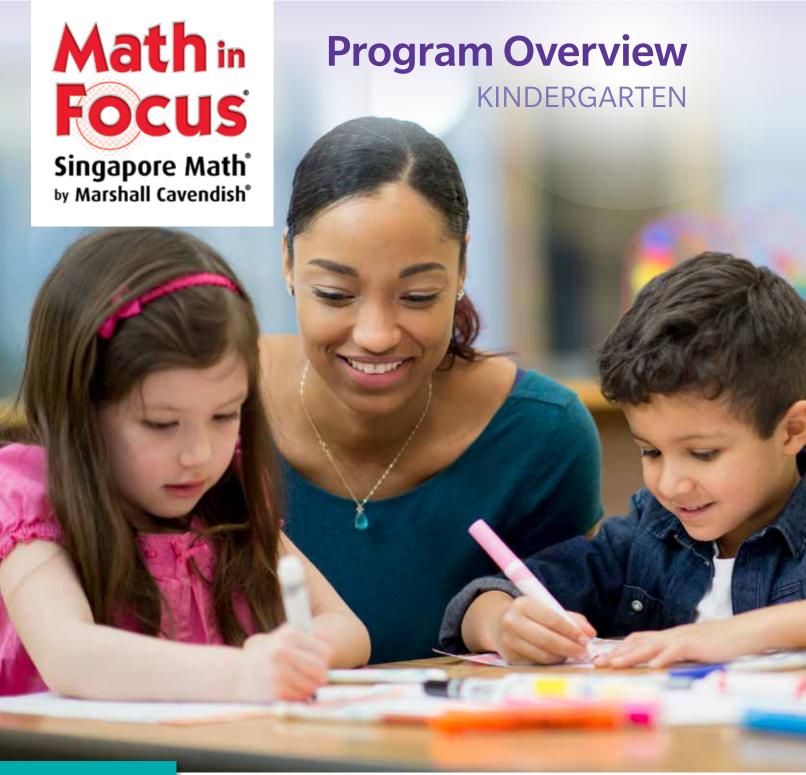
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FLIP OVER for Grades 1–5!

International Results. Proven Pedagogy. Engaged Students.



TIMSS 2015* Grade 4 Singapore 615 Hong Kong SAR Korea 608 Chinese Taipei 597 593 Japan Northern Ireland 570 564 **Russian Federation** 549 Norway Ireland 547 England 546 546 Belgium-Flemish Kazakhstan 544 Portugal 541 **United States** 539 Denmark 539

Trends in International Math and Science Study (TIMSS)

Since the Trends in International Math and Science Study (TIMSS) began in 1995, Singapore has consistently ranked at the top. The table displayed here shows the top countries from the most recent report, with Singapore ranked 1st and outperforming the United States by 79 points.

*timss2015.org/timss-2015/mathematics/student-achievemen

For online evaluation, visit **www-k6.thinkcentral.com**.

Click Evaluators Click Here. Click Register.
 Enter the Access Word: NLMIFK5. Click Next.

3. Enter your contact information. Click Register.

4. Select a role (e.g., teacher). Click Log in.

OECD Programme for International Student Assessment (PISA)

In 2015, Singapore participated in the PISA study, which assesses 15-year-olds in industrialized countries. Singapore not only ranked 1st, but also scored significantly above the international average of 490 with a score of 564, while the United States scored below the average with a score of 470.

**oecd.org/pisa/pisa-2015-results-in-focus.pdf

Singapore	564
Hong Kong	548
Macao	544
Taiwan	542
Japan	532
China	531
Korea	524
Switzerland	521
Estonia	520
Canada	516
Netherlands	512
Denmark	511
Finland	511
Slovenia	510
Belgium	507
Germany	506
Poland	504
Ireland	504
Norway	502
Austria	497
New Zealand	495
Viet Nam	495
Russia	494
Sweden	494
Australia	494
France	493
United Kingdom	492
Czech Republic	492
Portugal	492
International Average	490
Italy	490
Iceland	488
Spain	486
Luxembourg	486
Latvia	482
Malta	479
Lithuania	478
Hungary	477
Slovak Republic	475
Israel	470
United States	470

Singapore Math^{*}
by Marshall Cavendish^{*}

Focus

Math in

 $gapore\,Math^{\circ}\,is\,a\,trade mark\,owned\,by\,Singapore\,Math^{\circ}\,Inc.\,and\,Marshall\,Cavendish\,Education\,Pte.\,Ltd$

factor to their success. Now, U.S. students also have the

Cavendish®, the U.S. edition of Singapore's most widely

opportunity to benefit from the same approach with

Math in Focus®: Singapore Math® by Marshall

used elementary and middle school program.

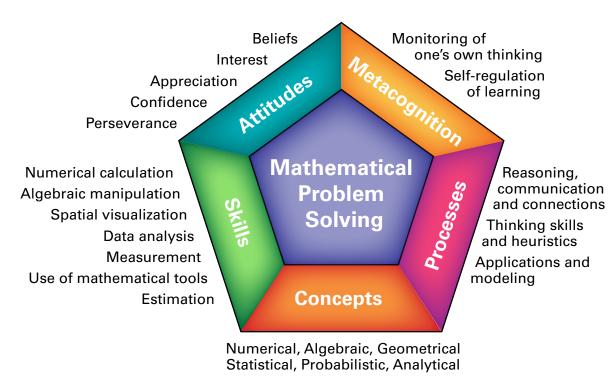
Focus on mastery with an effective, research-based pedagogy

It's all about problem solving.

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Additionally, a key differentiator for Singapore Math® is its focus on attitudes and metacognition. In order for students to excel, they must develop positive attitudes about math, have the confidence to persevere, and have the ability to monitor their own thinking. This sets the stage for international achievement.

Singapore Math® Framework

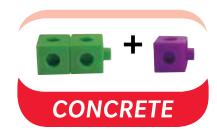


From the Singapore Ministry of Education

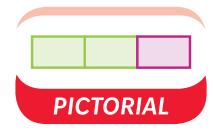
Build understanding with

CONCRETE-PICTORIAL-ABSTRACT LEARNING

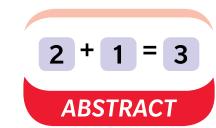
Numbers and symbols can be confusing when you don't have a grasp of what they actually mean. Singapore Math® teaches concepts using a concrete-pictorial-abstract learning progression to anchor learning in real-world, hands-on experiences.



Concepts are introduced through hands-on experiences with manipulatives.



Students visualize the concept and represent it pictorially through models like number bonds and bar models.



Students only use abstract numbers and symbols when they have enough context to understand what they mean.

Choose the complete solution for **U.S. classrooms**

Math in Focus®, the U.S. edition of Singapore's most widely used program, offers you a seamless solution. Robust print and technology resources provide everything you need to develop students' foundational understanding.





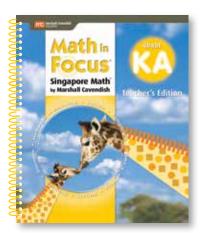
The complete curriculum includes resources for:

- ✓ Easy Planning
- ✓ Instruction and Practice
- ✓ Differentiated Instruction, including Rtl and Enrichment
- ✓ Assessment
- ✓ Online Tools and Instructional Resources

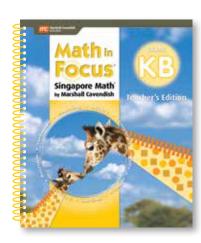
Extra Practice

Kindergarten Components

Everything you need to support and engage young learners

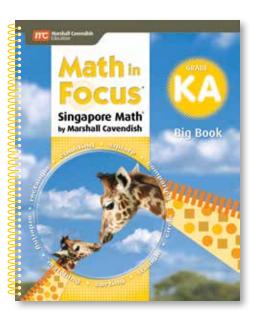


Teacher's Edition A



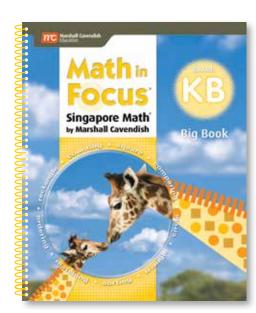
Teacher's Edition B

Wraparound **Teacher's Editions**A and B include Chapter
Overviews with math background,
cross-curricular connections,
differentiation resources, a planning
guide, assessment and remediation,
point-of-use lesson support, math
talk, best practices, checks for
understanding, and more!



Big Book A

The **Kindergarten Big Books** are colorfully illustrated and engaging. They are used during core instruction for investigation, meaningful discussion, and application of concepts.



Big Book B



Student Books A, Parts 1 & 2

The direct correlation of the **Big Book** and the **Student Books** allows for age-appropriate and mathematically sound practice, assessment, and development of problem-solving and thinking skills.

Additional learning activities, found in the Teacher's Edition, complete the instructional sequence for each lesson.



Student Books B, Parts 1 & 2

Differentiation Resources

Available as print blackline masters and online

Extra Practice provides additional problems and activities for struggling and on-level students.

Enrichment provides advanced students opportunities to extend and apply concepts, skills, and strategies.

Additional Resources

STUDENT ACTIVITY CARDS

Cardstock sets of domino cards, numeral cards, and more allow students to easily manipulate pictorial and symbolic representations of quantity, shape, and other attributes.

TEACHER ACTIVITY CARDS

Demonstration-size duplicates of the Student Activity Cards.

1

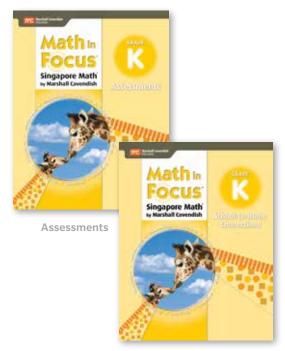


ASSESSMENTS

"Paper-and-pencil" assessments for every chapter provide a clear picture of individual progress. Corresponding interviewstyle assessments provide an alternative assessment opportunity that allows students to interact with the teacher and actively demonstrate understanding.

SCHOOL-TO-HOME CONNECTIONS

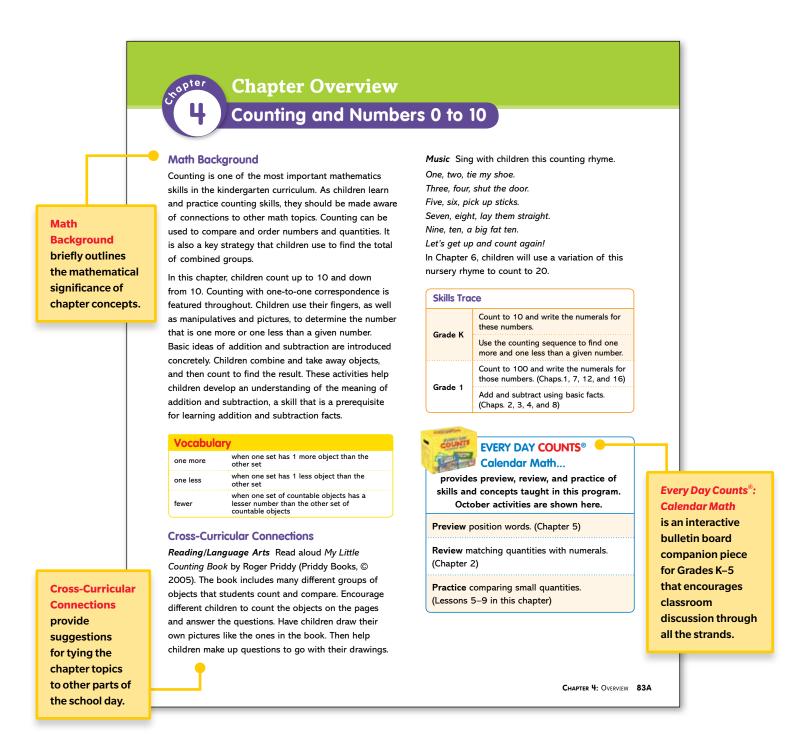
School-to-Home Connections contain parent involvement letters in English and Spanish. These communications provide "do at home" activities aligned to curriculum and key learning objectives for each chapter.



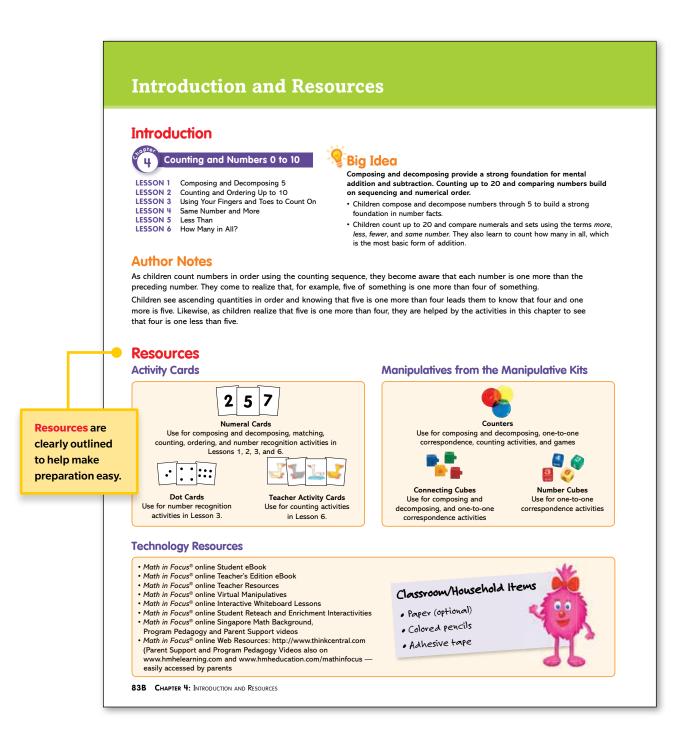
School-to-Home Connections

Easy Planning

Chapter Overviews in the Teacher's Edition highlight the math concepts and skills covered in each chapter.

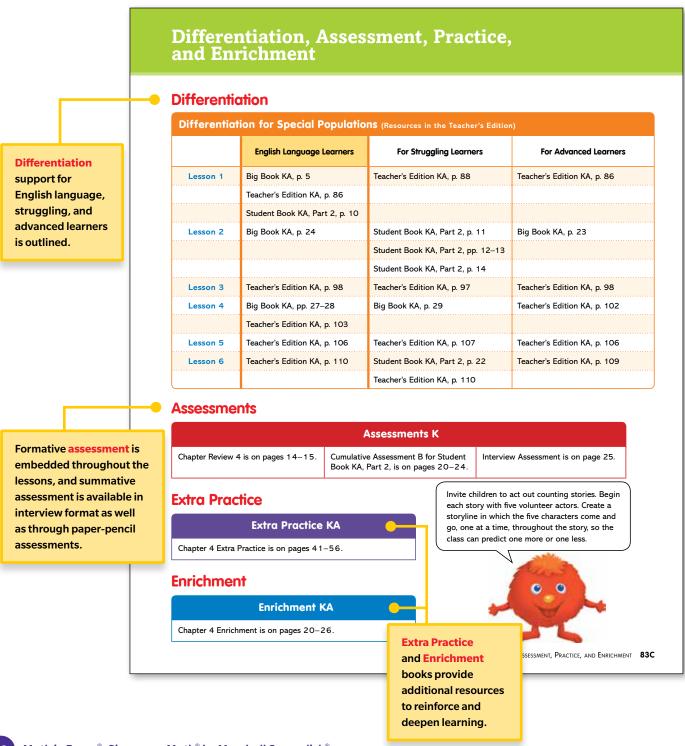


The Introduction and Resources section identifies the Big Ideas, author notes, and resources supporting the instruction.



Easy Planning

The range of Differentiation, Assessment, Practice, and Enrichment resources for each chapter are highlighted in the Teacher's Edition.



Chapter Planning Guides make it easy to prepare for lessons.

Planning information is clearly outlined for each lesson at the beginning of the chapter.

Chapter Planning Guide

Chapter 4 - Counting and Numbers 0 to 10

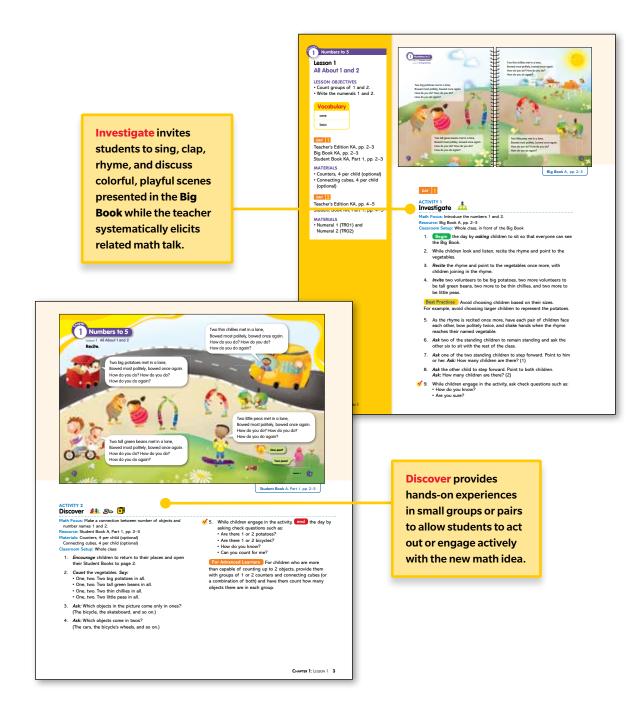
Lessons	Pacing	Instructional Objectives	Vocabulary	Resources	Materials
Lesson 1 Composing and Decomposing 5	4 days	Composing numbers through 5. Decomposing numbers through 5.		• Teacher's Edition KA, pp. 84–89 • Big Book KA, p. 5 • Student Book KA, Part 2, pp. 9–10 • Extra Practice KA, pp. 41–44	Student Numeral Cards 2–5, 2 set: Counters, 10 Paper, 1 sheet per child (optional) Connecting cubes, 30 per group and 30 for teacher (15 yellow and 15 blue) Counters, 5 per group Counters, 5 per child (optional) Colored pencils, 1 box per child
Lesson 2 Counting and Ordering Up to 10	3 days	Review counting and one-to-one correspondence. Pair number names with numerals. Order numbers 0 to 10. Understand the concept of one more.	• one more	Teacher's Edition KA, pp. 90–95 Big Book KA, pp. 23–24 Student Book KA, Part 2, pp. 11–15 Extra Practice KA, pp. 45–47	Teacher Numeral Cards 0–10 Student Numeral Cards 0–10, 3 sets Student Numeral Cards 0–10, 1 set per pair (optional) Colored pencils, 1 box per child Connecting cubes, 8 per child (4 yellow and 4 blue) (optional) Numeral 1 (TR01), Numeral 2 (TR02), Numeral 3 (TR03), Numeral 4 (TR05), Numeral 5 (TR06), Numeral 6 (TR08), Numeral 7 (TR09), Numeral 8 (TR10), Numeral 9 (TR12), and Numeral 0 (TR13) (optional)

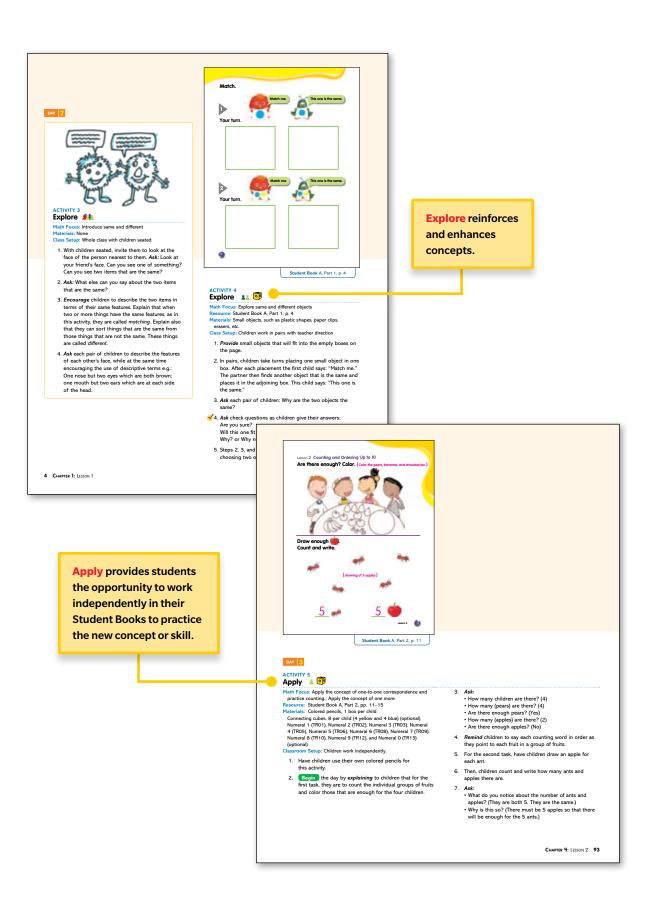
83D CHAPTER 4: PLANNING GUIDE

to develop mastery.

Investigate-Discover-Explore-Apply (IDEA)

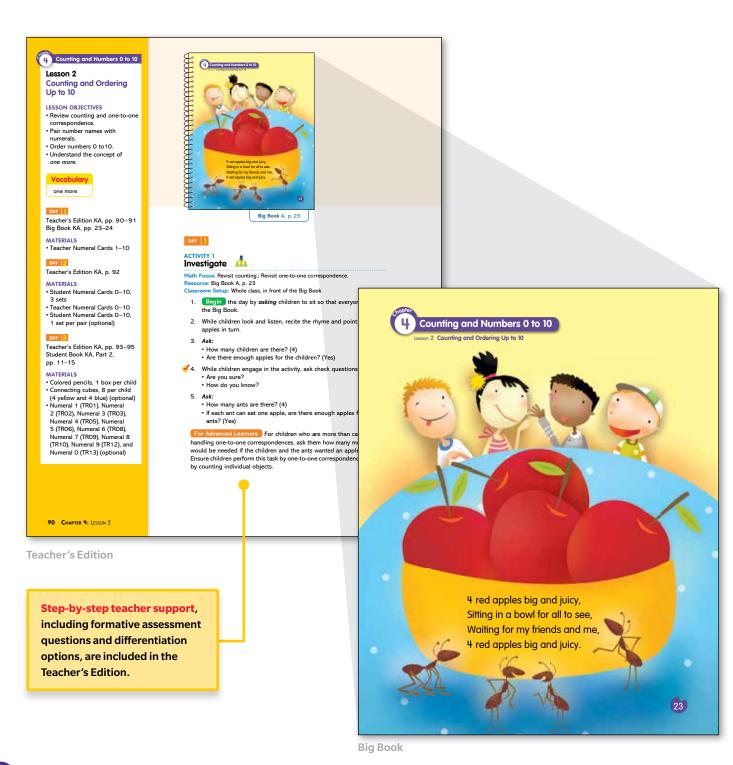
Math in Focus Kindergarten gives students opportunities to investigate, discover, explore, and apply solutions to math problems. Students learn to use numbers to make connections and realize the relationships among them in real-world situations.





A closer look at Chapter 4, Lesson 2

Investigate uses the Big Book to introduce concepts in an engaging, interactive way.

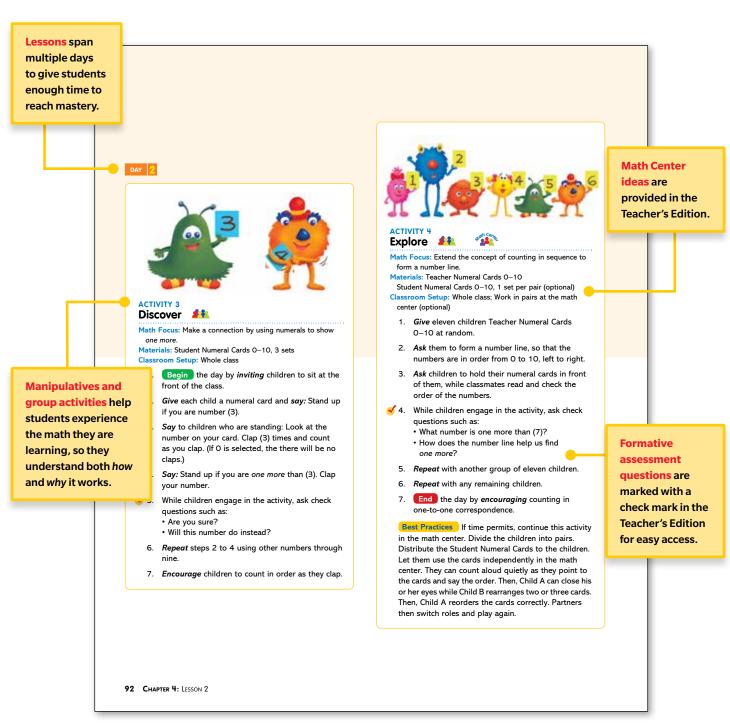


I went to the shelves and what did I see? One pumpkin, Two potatoes, Three onions, Four cabbage, Five beans, Six peppers, Seven lettuce A second Investigate activity extends and Eight mushrooms, deepens learning. Nine tomatoes, Ten carrots, And up on the shelf, A nice round bagel for me! **Big Book** Investigate 🚣 Math Focus: Revisit the counting sequence; Introduce one more.
Resource: Big Book A, p. 24
Materials: Teacher Numeral Cards 1–10
Classroom Setup: Whole class, in front of the Big Book How many mushrooms are there?(8) · Which vegetable has one more? (Tomatoes 9. While children engage in the activity, ask check questions 1. While children look and listen, recite the rhyme and point Math Talk, found throughout such as:
• What number is one more than (5)? What number is one more than (5)?
How can you tell?

In the Encourage children to use one more when describing the vegetables. For example, ask:
Which vegetable has one more than mushrooms? (There is one more tomato than mushrooms).
How are these sets different? (This set has one more.) 2. Ask one child at a time to count the vegetables and hold the Teacher's Edition, up the corresponding numeral card beside each set promotes discussion and Encourage counting, saying the number words in order as they point to each vegetable. deepens understanding. 11. End the day by repeating steps 8 to 10 for the How many beans are there? (5)
 How many peppers are there? (6) 5. Hold up numeral cards 5 and 6. 6. Ask: When we count, does the number 6 come 7. Explain to children that this means that 6 is one more than 5, therefore there is one more pepper than bean CHAPTER 4: LESSON 2 91

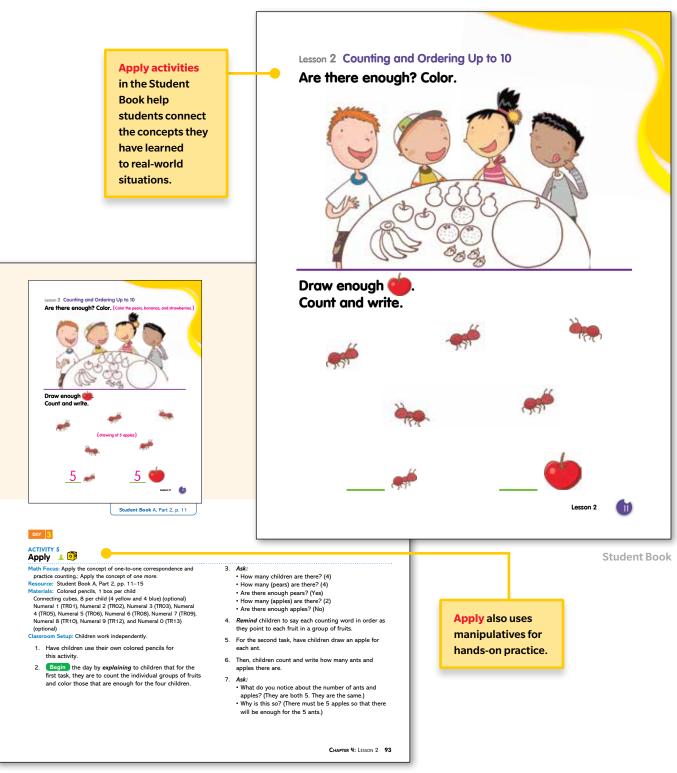
Teacher's Edition

After students are introduced to new concepts through Investigate activities, they then deepen their understanding and reinforce their learning through Discover and Explore.



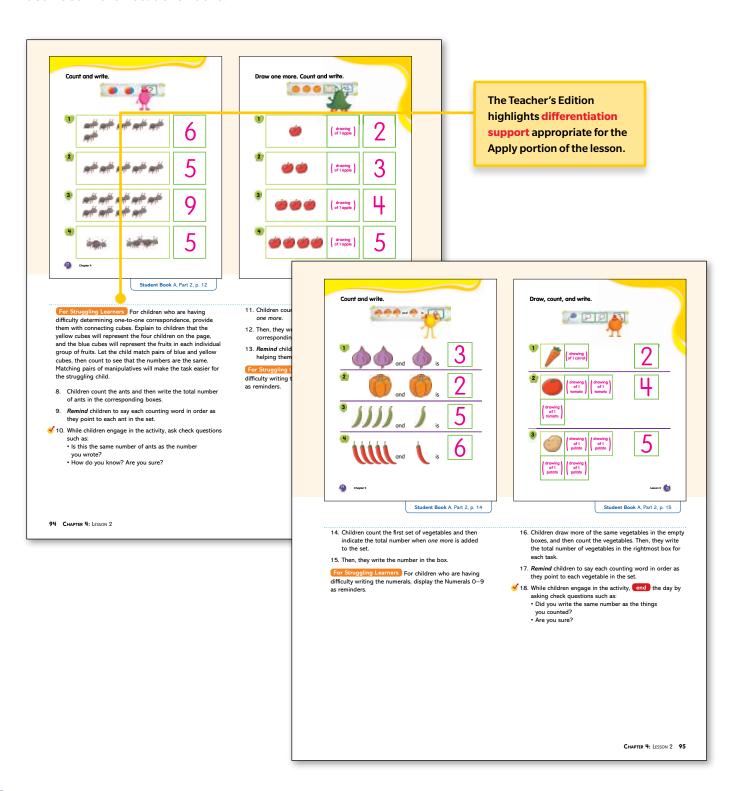
Teacher's Edition

Students apply their learning in their write-in Student Books.



Teacher's Edition

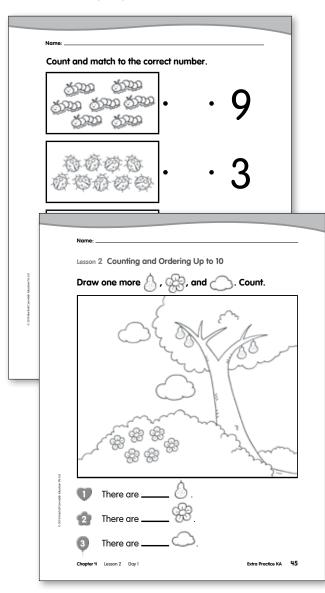
Students continue to apply their understanding through multiple activities in their Student Books.



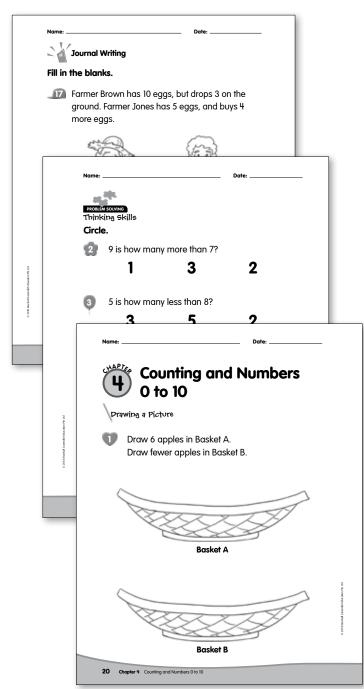
Differentiated Instruction

In addition to differentiated instruction suggestions embedded in the Teacher's Edition, additional resources are available for teachers to support students who need additional practice or those who are ready for a challenge.

EXTRA PRACTICE

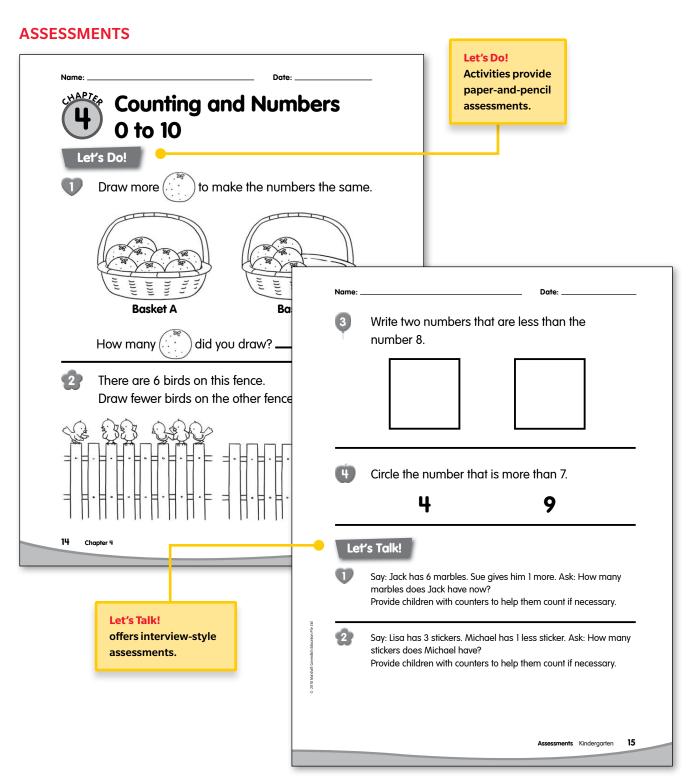


ENRICHMENT



Assessment

Formative assessment support is available throughout the Teacher's Edition. Summative assessment resources are available in the Assessments book.



Authors

Kindergarten Program Author

DR. PAMELA SHARPE

Dr. Pamela Sharpe has been involved in training teachers in both Singapore and the United Kingdom for 38 years and has also played a major role in setting up early childhood programs in Singapore. She was formerly an associate professor at the National Institute of Education, Nanyang Technological University, Singapore. She is currently a part-time lecturer there, as well as a consultant for early childhood programs and early childhood intervention programs.

Dr. Sharpe specializes in teaching both high-ability children and children who have problems in mathematics at the preschool level. Her research includes studying the adjustment patterns of children in transition from preschool to primary school, as well as identifying and assessing preschool children with special needs. Dr. Sharpe has also been deeply involved in the development of the preschool mathematics curriculum in Singapore.

Kindergarten U.S. Consultant

PATSY F. KANTER

Patsy F. Kanter is an author, teacher, and math consultant. Until 1997, Kanter was the Lower School Math Coordinator and Assistant Principal at Isidore Newman School in New Orleans, Louisiana, for 13 years where she developed and implemented a hands-on activity-based math program. Kanter is the senior author of numerous supplemental math programs including

Afterschool Achievers: Math Club K-5 and Summer Success®: Math K-8, and co-author of Every Day Counts: Calendar Math K-6 and Every Day Counts: Partner Games K-6.

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Caroline Goodnight

Grade 4 Teacher Helen Carr Castello Elementary School Elk Grove, CA

Shelly Gufert

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Curriculum Program Specialist Broward County, FL

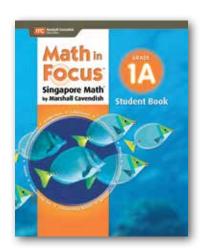
Jeanette Valore

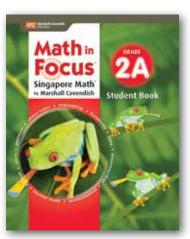
Grade 4 Math and Science Teacher St. Anthony of Padua Catholic School The Woodlands, TX

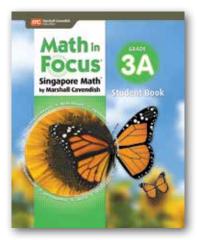
Melissa Walsh

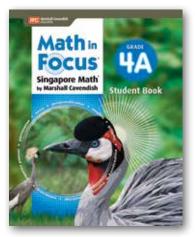
Elementary Math Coach Baldwin-Whitehall School District Pittsburgh, PA

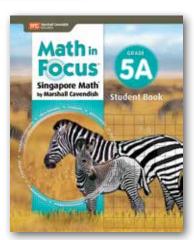
Flip me over!









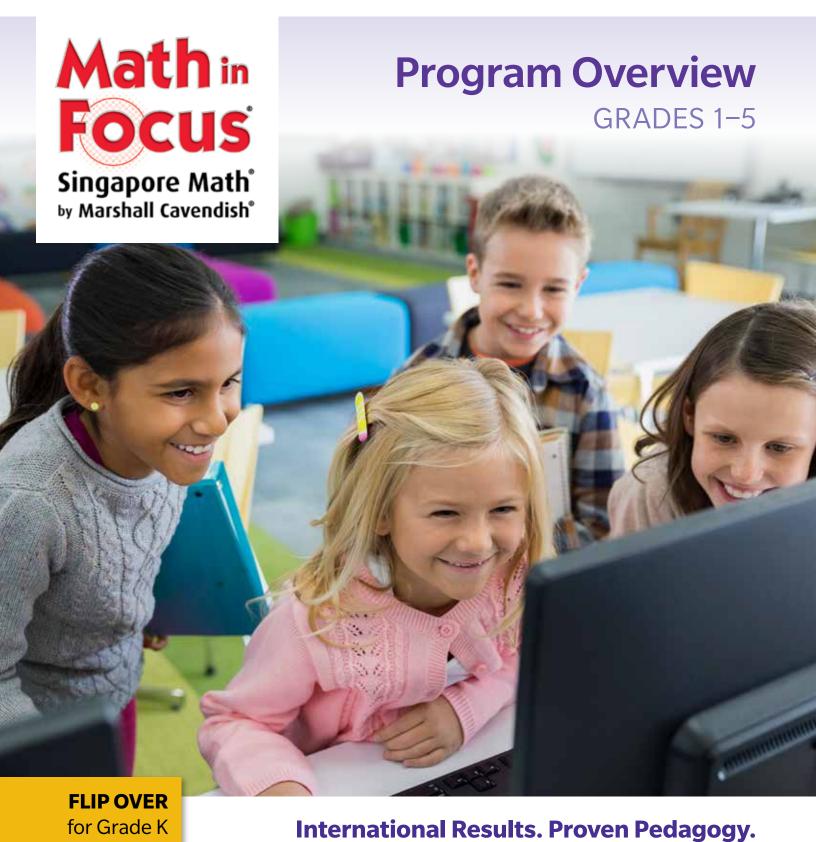


...to learn more about Math in Focus!

Grades 1–5 Program Overview
Classroom Manipulative Kits
Technology
Table of Contents



Engaged Students.





opportunity to benefit from the same approach with Math in Focus[®]: Singapore Math[®] by Marshall Cavendish[®], the U.S. edition of Singapore's most widely used TIMSS 2015* Grade 4 618 **Singapore** elementary and middle school program. 615 Hong Kong SAR Korea 608 Chinese Taipei 597 593 Japan Northern Ireland 570 Russian Federation 564 549 Norway Ireland 547 546 England 546 Belgium-Flemish Kazakhstan 544 Portugal 541 **United States** 539 Denmark 539

Math in Focus
Singapore Math

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**oecd.org/pisa/pisa-2015-results-in-focus.pdf

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*timss2015.org/timss-2015/mathematics/student-achievement

PISA Mathematics Scale 2015** **Singapore** 548 Hong Kong 544 Macao Taiwan 542 532 Japan China 531 Korea 524 Switzerland 521 520 Estonia 516 Canada 512 Netherlands Denmark 511 Finland 511 510 Slovenia 507 Belgium 506 Germany 504 Poland Ireland 504 502 Norway 497 Austria New Zealand 495 495 Viet Nam 494 Russia 494 Sweden 494 Australia France 493 **United Kingdom** 492 492 Czech Republic 492 Portugal 490 Italy 490 488 Iceland 486 Spain 486 Luxembourg Latvia 482 479 Malta 478 Lithuania 477 Hungary 475 Slovak Republic 470 Israel **United States**

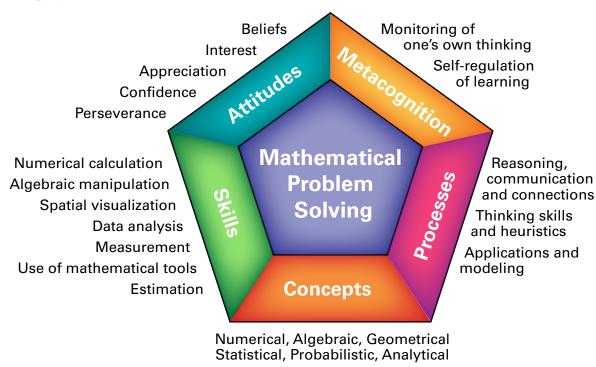
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Singapore Math® Framework

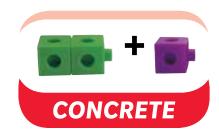


From the Singapore Ministry of Education

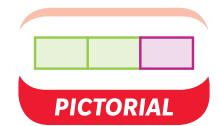
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CONCRETE-PICTORIAL-ABSTRACT LEARNING

Numbers and symbols can be confusing when you don't have a grasp of what they actually mean. **Math in Focus** teaches concepts using a concrete–pictorial–abstract learning progression to anchor learning in real-world, hands-on experiences.



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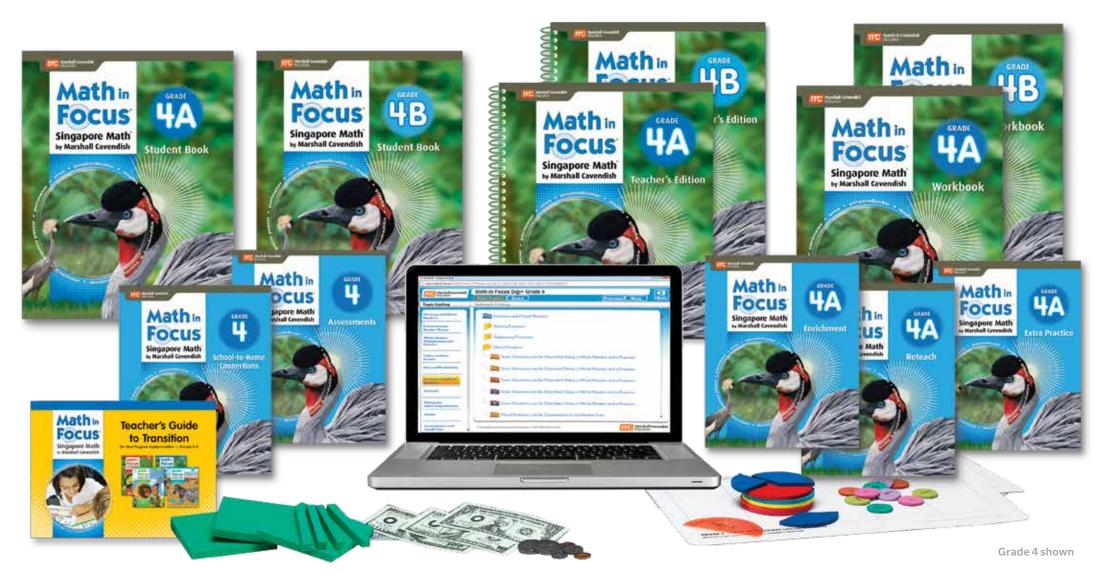
Students **visualize** the concept and represent it pictorially through models like number bonds and bar models.



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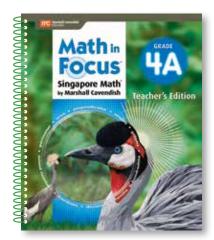
The complete curriculum includes resources for:

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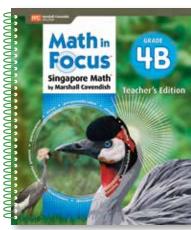
Print Components

Everything you need to help all students engage and succeed!

Workbook A

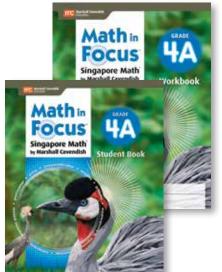


Teacher's Edition A

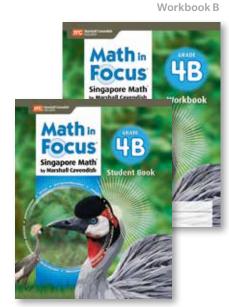


Teacher's Edition B

Wraparound **Teacher's Editions**A and B contain complete program support, including Chapter Overviews with math background, cross-curricular connections, differentiation resources, planning guide, assessment and remediation, common error alerts, best practices, checks for understanding, and more!



Student Book A

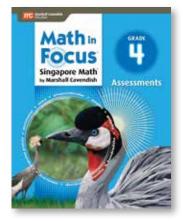


Student Book

Student Books and Workbooks

are designed to work together.
The Student Books focus on learning, classroom teaching, and discussion.
The Workbook problems are assigned for independent work.

Assessments



ASSESSMENTS

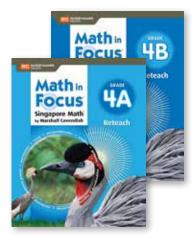
Diagnostic chapter pretests help teachers plan instruction. Chapter tests in test-prep format provide formal assessment opportunities. Benchmark, Mid-Year, and End-of-Year Assessments provide further measures of students' mastery of concepts. There are a variety of question formats—multiple choice, short answer, and extended response.

*Grade 4 covers shown

Differentiation Resources

FOR ENGLISH LANGUAGE LEARNERS

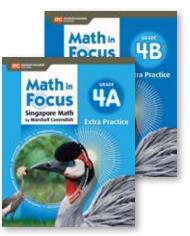
The powerful mathematical models and visual aspect of **Math in Focus** mean the entire program is inherently accessible to English language learners. Additionally, the Teacher's Edition provides point-of-use suggestions for facilitating instruction for English language learners.



Reteach A & B

FOR STRUGGLING LEARNERS

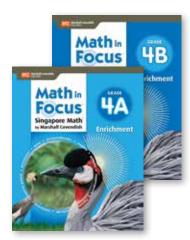
Reteach provides more exposure to concepts for those students who need more time to master new skills or concepts.



Extra Practice A & B

FOR ON-LEVEL STUDENTS

Extra Practice pages correlate directly to the Workbook practices. Put on Your Thinking Cap! questions provide more practice on both nonroutine and strategy-based questions.



Enrichment A & B

FOR ADVANCED STUDENTS

Enrichment exercises of varying complexity provide advanced students opportunities to extend learning.

ADDITIONAL COMPONENTS

School-to-Home Connections contains parent involvement letters in English and Spanish. These communications provide "do at home" activities aligned to the curriculum.

The **Teacher's Guide to Transition (Grades 2–5)** provides a map to help transition students into the **Math in Focus** program. The classroom teacher can easily scan through the skills and concepts presented in prior years to identify background knowledge necessary for student success.



Teacher's Guide to Transition

Technology

Enhance the learning experience in the classroom and at home!

Flexible, engaging online tools and content help students learn and track progress while offering ease of access and a personalized experience.

TEACHER EXPERIENCE



Online Teacher's Edition eBooks

Provide online access to the Teacher's Editions.

Online Workbooks (Grades 1-5)

Teachers can access PDFs of all of the Student Workbook pages.

Online Big Book eBooks (Grade K)

The Big Book eBooks provide online access to the Kindergarten Big Book content. Ideal for projection or on an interactive whiteboard.

Math in Focus Online Assessment Generator

(Grades 1-5)

Create unlimited online customized tests and practice sets for students. Teachers can choose from multiplechoice, short-response, and extended-response problems using any computer with an Internet connection.

Teacher's Guide to Transition (Grades 2–5)

This resource provides math background information for teachers to address key concepts from a Singapore Math® perspective. Teaching strategies and student skill worksheets are also provided to fill student prerequisite knowledge gaps. This resource is also available online.



Online Videos and Podcasts for Teachers

Learn more about Singapore Math® with online videos and podcasts. Teachers can access math background videos and author podcasts. Parents can learn more about Singapore Math® and how to help their children succeed.

Online Teacher Resources

Printable PDFs of:

- > Reteach (Grades 1-5)
- > Problem of the Lesson (Grades 1-5)
- > Extra Practice
- > School-to-Home Connections
- > Enrichment
- > Assessment
- > Additional resources

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STUDENT EXPERIENCE

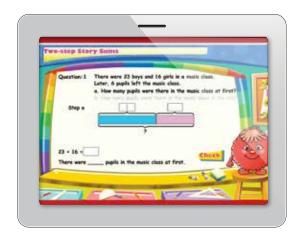
Online Student Book eBooks

Provide online access to the interactive student ebooks.



Online Virtual Manipulatives

Students can interact with the **Math in Focus** manipulatives online, at school, and at home. Includes Singapore Math® place value, number bonds, and bar modeling tools.



Online Student Interactivities

(Grades 1-5)

Bring Singapore Math® to life with fun, interactive online tutorials, activities, and quizzes—a great way to differentiate instruction and to practice at home!

Singapore Math® Bar Models for iPad® App*

(Grades 2-5)

Practice bar modeling on your iPad!

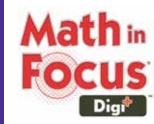
*Available in the App Store



NEW!

Math in Focus® DIGI+™

(Grades 1-5)



Your one-stop resource for interactive teaching and learning tools!

Math in Focus® Digi+™ is an online curriculum designed to complement the core materials of the Math in Focus program, using the same pedagogical principles of the Singapore Math® approach. *Math in* Focus Digi+ combines multimedia technology with instructional strategies to offer an engaging teaching and learning experience!



Key Features of Math In Focus Digi⁺ include:

- Lessons that contain all seven components of any Math in Focus lesson: Pretest, Teach, Learn, Guided Learning, Practice, Posttest, and Intervention.
- Intervention solution: Math in Focus Digi+allows teachers to easily identify students who need help and assign lessons based on results.
- Thousands of multimedia resources that animate math concepts in an engaging way to develop deeper understanding.
- Assessment: Pretests and posttests can be assigned, delivered, and automatically graded to save time and support remediation.
- Built-in Interactive Whiteboard features that let teachers write notes and highlight important parts of the lesson.

Manipulative Kits

Everything you need to promote student mastery

30-STUDENT KITS

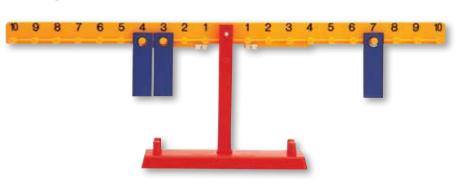
These comprehensive kits provide everything a classroom will need to implement the Math in Focus program.

30-Student Kits	Gr K	Gr 1	Gr 2	Gr 3	Gr4	Gr 5
Attribute block trays	9 sets	10 sets	12 sets			
Balance bucket	6	3				
Base 10 thousand cube			3	6		
Base 10 hundred flats		30	90	90	30	
Base 10 rods		300	600	600	150	
Base 10 units		600	600	600	300	
Clock		1	1	1		
Coin set	3 sets	6 sets	6 sets	3 sets	3 sets	
Color number cubes	96	36	36	36	36	36
Counters	1,125					
Craft sticks		3,000	3,000	3,000	3,000	3,000
Decahedra dice			30	45	30	
Dice	36		18	18		
Dual scale rulers			36	36		
Flexible plastic rulers						30
Fraction circles				6 sets	6 sets	
Geoboards				30	30	
Geometric solids	108	84	72			27
Geometry sets					30 sets	
Liter volume cube						10
Math balance		3				
Measuring pitchers			18	18	18	
Paper clips	720					
Paper money		6 sets	6 sets	3 sets	3 sets	
Penny sets	3 sets					
Place value chips					3 sets	3 sets
Place value strips				30		
Protractors					2 sets	2 sets
Scales			4	3		
Snap cubes	900	1,800	600	600		900
Spinners		30	30	30	30	30
Tape measures			30	30	30	30
Transparent counters		1,500	750	750	750	750

Also available separately:

MATH BALANCE

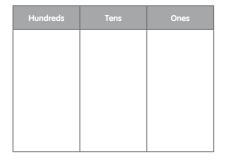
Included in Grade 1 Core and 30-Student kits; available separately to enhance any K-2 math center.



STUDENT WHITEBOARDS

Grades 1-5

Convenient wipe-off boards help students solve and show practice problems. They are packaged in sets of five.



PLACE VALUE MATS

Grades 1-5

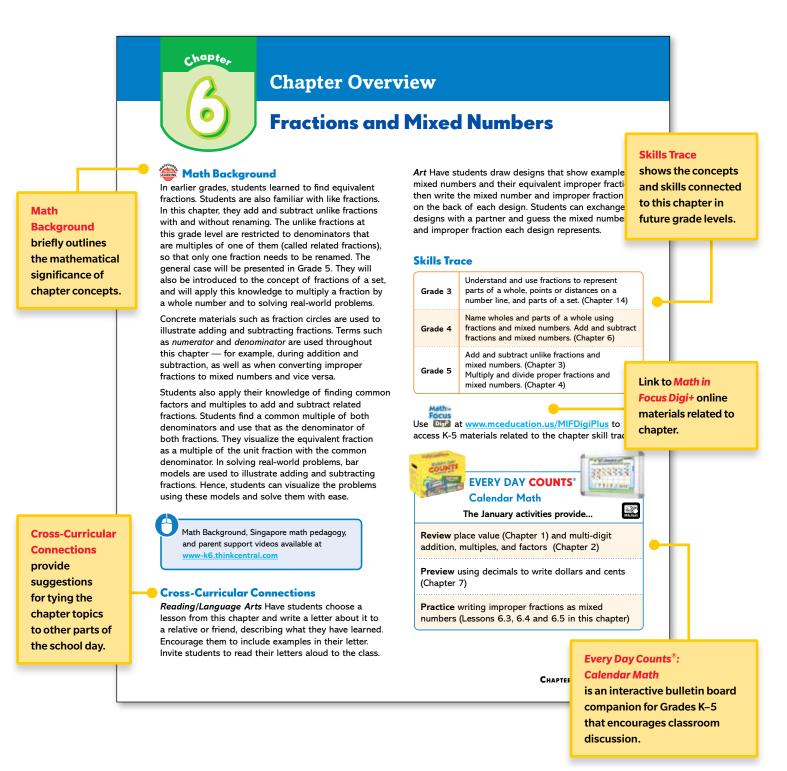
Large place value mats allow students to interact with place value materials at their desks or at a math center.

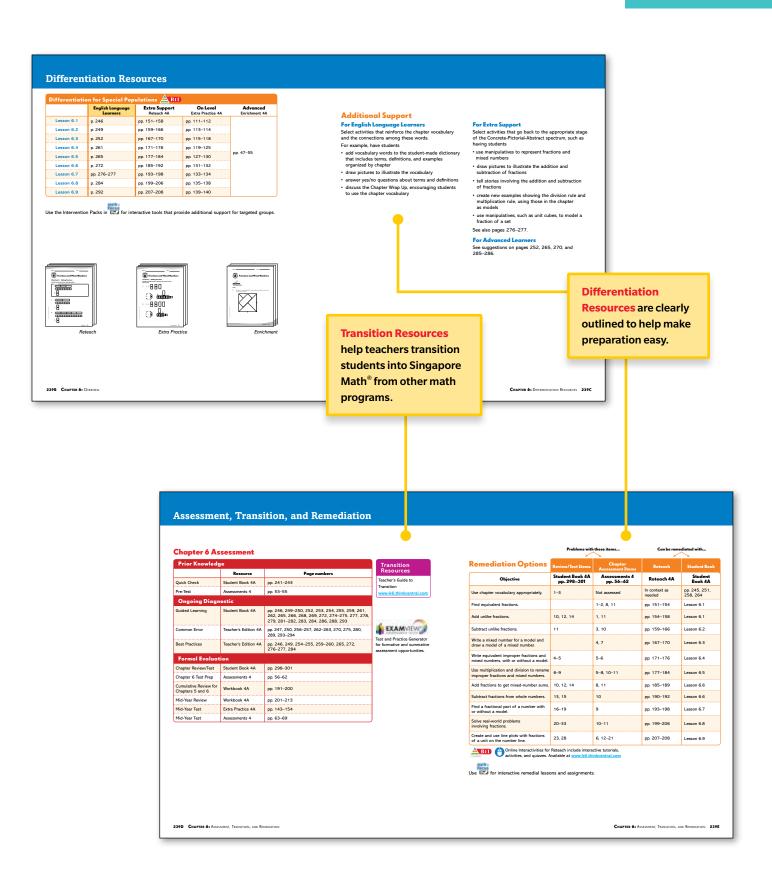




Easy Planning

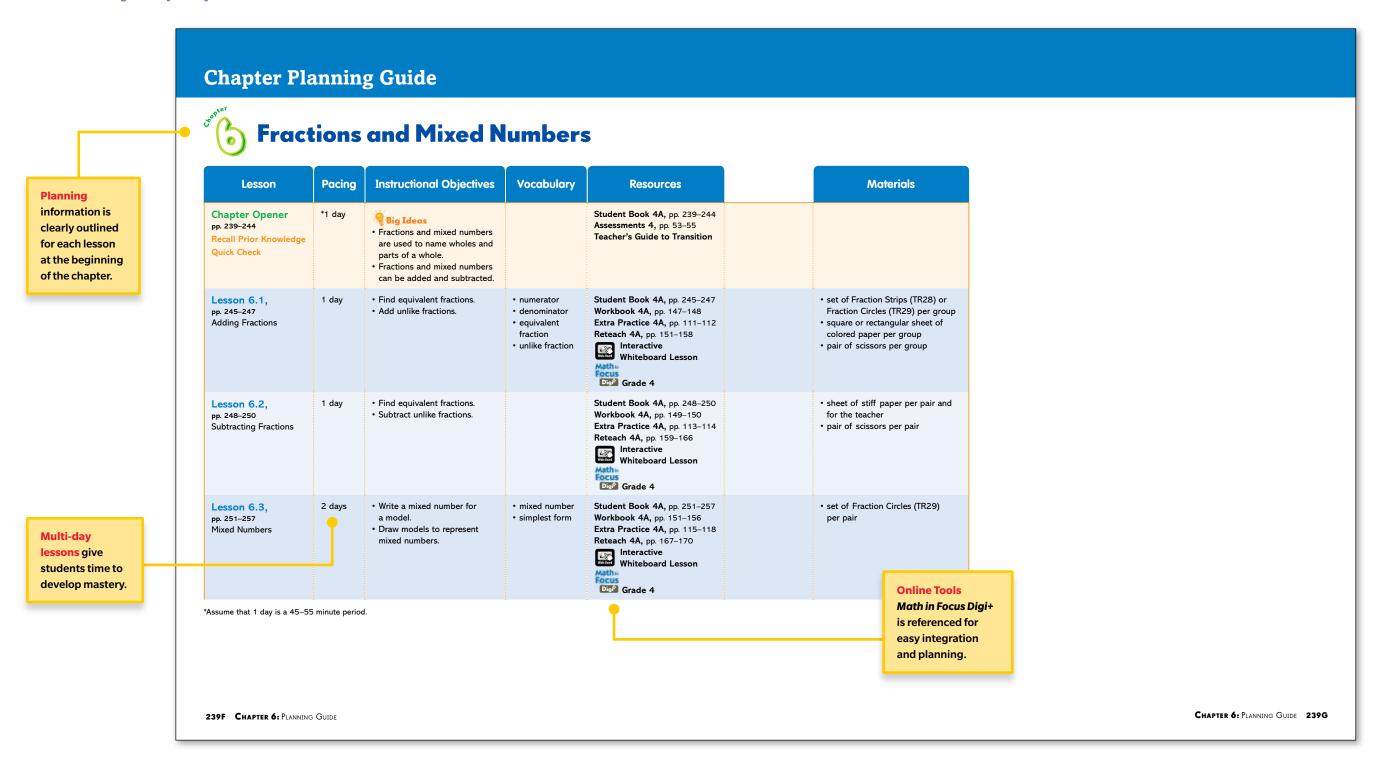
Chapter Overviews in the Teacher's Edition highlight the math concepts and skills covered in each chapter.



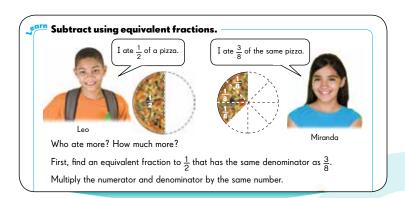


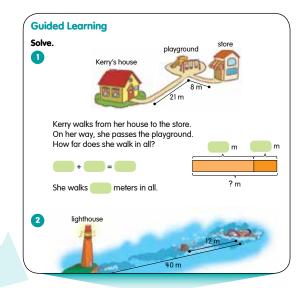
Easy Planning

Chapter Planning Guides in the Teacher's Edition make it easy to prepare for lessons.



Math in Focus follows a consistent lesson structure that incorporates hands-on activities and explorations to promote mastery.





Whole-group direct instruction presents mathematical concepts in a straightforward visual format with frequent use of manipulatives and models.

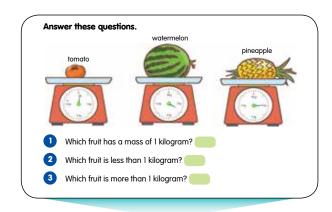
Guided Learning

Teacher-directed practice in small and large groups allows students to check their understanding while working with some guidance.

Build understanding with

CONCRETE-PICTORIAL-ABSTRACT LEARNING

Numbers and symbols can be confusing when you don't have a grasp of what they actually mean. Singapore Math® teaches concepts using a concrete-pictorial-abstract learning progression to anchor learning in real-world, hands-on experiences.



ON YOUR OWN

Go to Workbook A: Practice 2, pages 149-150

Let's Practice

Independent practice consolidates learning and prepares students to be successful on homework assignments.

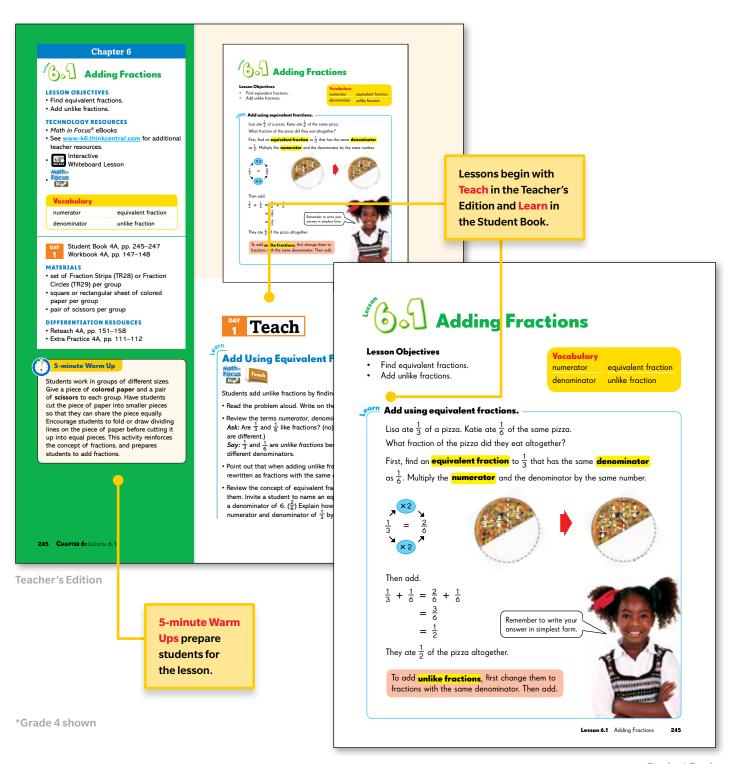


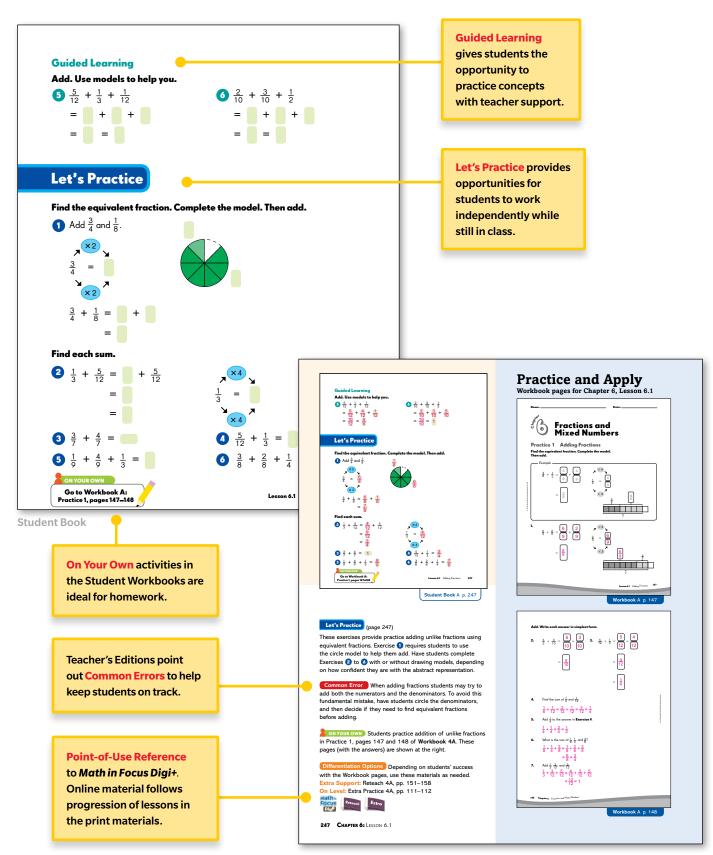
Independent work in class or at home directs students to Workbook pages.

> Other activities you will see throughout the lesson:

- Put on Your Thinking Cap!
- Problem Solving
- Hands-On Activities
- Math Journal
- Let's Explore!
- Games

Each lesson begins with Learn, where new concepts are introduced and modeled.



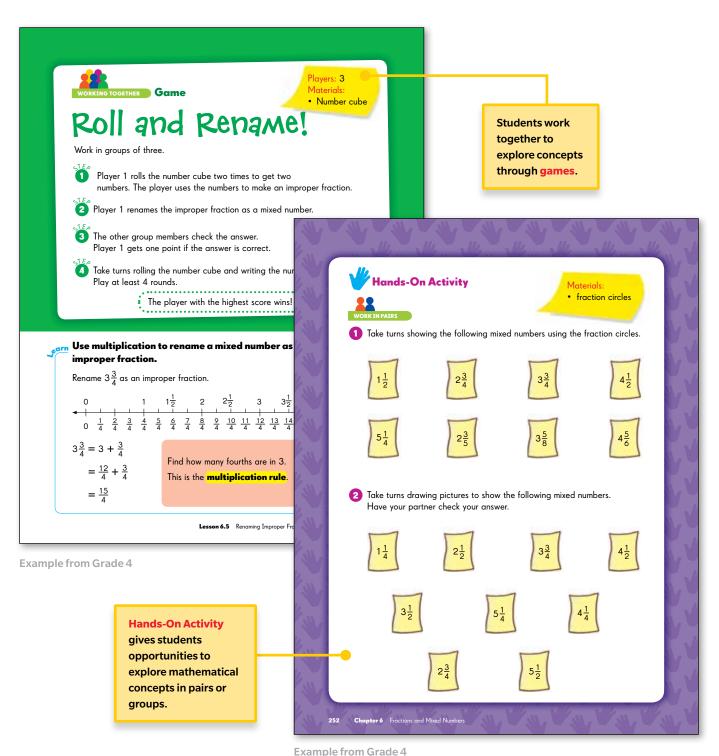


Teacher's Edition

Let's Explore! extends learning to increase

Activities to Deepen Learning

Games and activities provide hands-on and collaborative learning experiences to develop students' understanding.

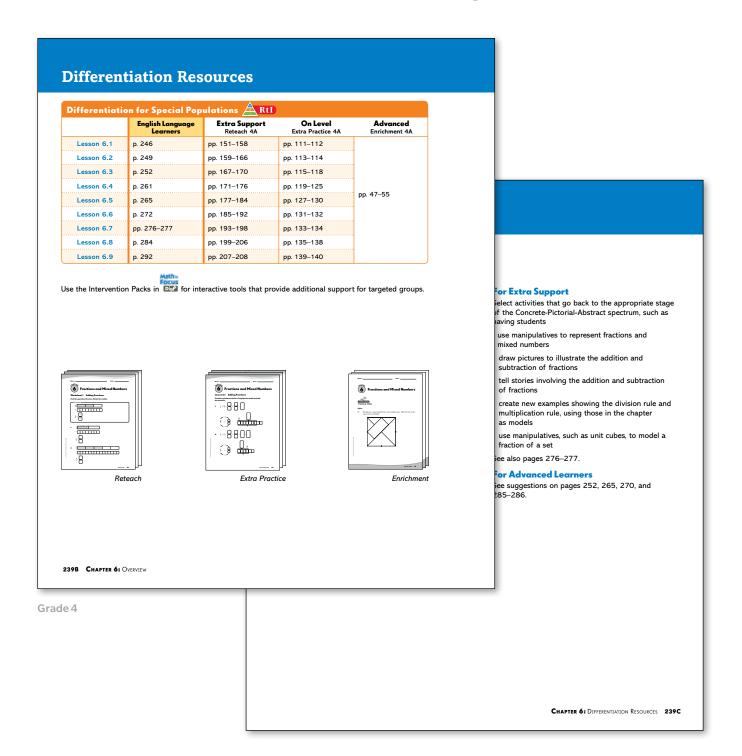


Q Let's Explore! mastery. 1 Without solving, do you think the sum of $\frac{1}{3}$ and $\frac{3}{8}$ is less than 1? 2 Do you think the sum of $\frac{5}{9}$ and $\frac{6}{11}$ is greater than 1? Why do you think so? Students explain their 3 Can you tell if the sum of $\frac{5}{11}$ and $\frac{4}{7}$ is greater than or less than 1? reasoning and construct viable arguments in Math Journals. Math Journal One of the three models shows the sum of $\frac{1}{2}$ and $\frac{1}{2}$. The other two models are incorrect. CRITICAL THINKING SKILLS Put On Your Thinking Cap! and Identify the correct one of the three. PROBLEM SOLVING Explain why the other two are incorrect. 2 Jessie had a whole graham cracker. Minah had only part of another graham cracker. Jessie gave $\frac{1}{4}$ of her graham cracker to Minah. In the end, both girls had the same fractional part of **Example from Grade 4** What fraction of a graham cracker did Minah have at first? **Put on Your Thinking** Cap! problems at the Here are 2 equal bars to Work backward to find show that both of them had the fraction of the araham end of each chapter an equal portion of a cracker Minah had at first. challenge students to apply learning in nonroutine situations. Go to Workbook A:

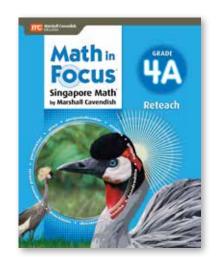
Example from Grade 4

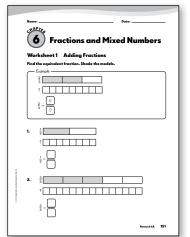
Differentiated Instruction

Differentiation Resources for all levels are outlined in the Teacher's Editions for seamless integration.



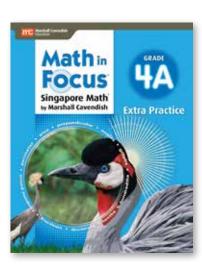
Resources for all levels:

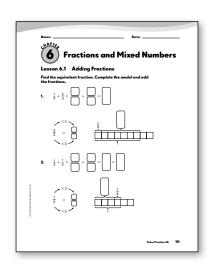




STRUGGLING LEARNERS

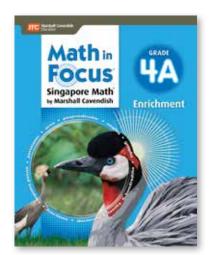
Reteach offers additional support for struggling students. Resources are available for every lesson.

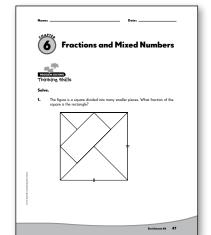




ON-LEVEL LEARNERS

Extra Practice is ideal for solidifying understanding for on-level students. Resources are available for every lesson.



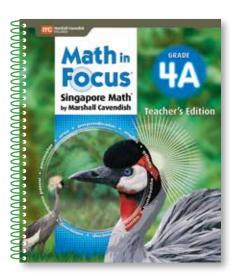


ADVANCED LEARNERS

Enrichment offers challenging problems to extend learning. Resources are available for every chapter.

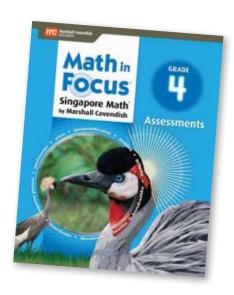
Assessment

Prepare students for rigorous assessments with tests that evaluate and assess true mastery and flexible thinking.



Formative assessment is supported throughout the **Teacher's Edition** through Quick Checks and Guided Practice.

The **Assessments** book, available in print and online, provides summative assessments including pretests, chapter tests, and benchmark tests.



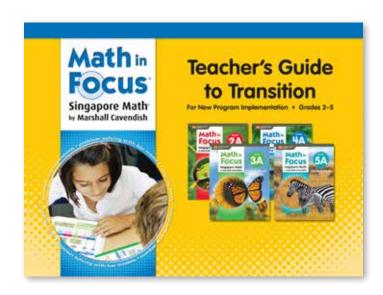
Math in Focus Online Assessment Generator

(Grades 1–5)

Create unlimited online customized tests and practice sets for students. Teachers can choose from multiplechoice, short-response, and extended-response problems using any computer with an Internet connection.

Transition

Fill prerequisite knowledge and skill gaps for a seamless transition to Singapore Math®.



The **Teacher's Guide to Transition**: **Grades 2–5** provides math background information for teachers to address key concepts from a Singapore Math® perspective. Teaching strategies and student skill worksheets are also provided to fill student prerequisite knowledge gaps. This resource is also available online.



ONLINE ASSESSMENT

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Chapter 14 Surface Area and Volume

Authors

Program Authors

DR. FONG HO KHEONG, LEAD AUTHOR GRADES 1-5

Dr. Fong Ho Kheong is an associate professor and the head of the math and science department of the Emirates College for Advanced Education in Abu Dhabi, United Arab Emirates. He was involved in training mathematics teachers in the National Institute of Education, Nanyang Technological University, Singapore, for 25 years. He is the founding president of the Association of the Mathematics Educators, Singapore.

Dr. Fong specializes in teaching both high-ability students and students who have problems in mathematics. His research work includes diagnosing students with mathematical difficulties, teaching thinking to solve mathematical problems, and applying psychological theories for the teaching and learning of mathematics. His experience in curriculum development has led him to innovate the use of the model drawing approach to tackle challenging problems. He is the consultant and principal author of Marshall Cavendish's *My Pals Are Here! Maths* series, which is currently being used by 80% of the primary schools in Singapore.

CHELVI RAMAKRISHNAN

Chelvi Ramakrishnan has been teaching for 25 years and has authored primary mathematics books since 1997.

BERNICE LAU PUI WAH

Bernice Lau Pui Wah has been teaching for 36 years in primary and secondary schools. She has authored primary mathematics books since 1997.

MICHELLE CHOO

Michelle Choo has been teaching in Singapore for 20 years, including five years in the Gifted Education Program. She has been writing primary mathematics books for the past 12 years and also conducts math review classes and workshops on the use of problem-solving skills and strategies.

GAN KEE SOON

Gan Kee Soon has been an inspector of schools, a principal of a secondary school, and a lecturer at the National Institute of Education, Nanyang Technological University, Singapore. There, for 22 years, he trained and supervised primary mathematics teachers.

U.S. Consultants

ANDY CLARK

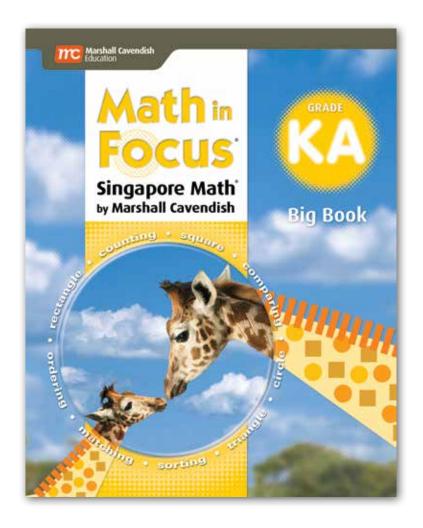
Andy Clark was the math coordinator for Portland Public Schools in Portland, Oregon, where he was previously an elementary and middle school teacher. Clark is co-author of Every Day Counts: Calendar Math, Every Day Counts: Algebra Readiness, Every Day Counts: Partner Games, and Summer Success: Math.

DR. RICHARD BISK

Dr. Richard Bisk is a professor in the mathematics department at Worcester State College. For over 30 years, he has taught a wide array of mathematics courses and has focused on improving the mathematical understanding of teachers. He has provided professional development using the Singapore Math® materials since 2000.

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Flip me over!



...to learn more about Math in Focus!

Kindergarten Program Overview