

Agenda


Overview of our Resource – MIF

- Philosophy
- Methodology
- Student Experience

Breakout Session Themes

- Bar Modeling
- Fact Acquisition
- Mental Math Strategies
- Place Value
- Problem Solving
- Digital Resources
- Math Content


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Teach math as a vehicle for teaching thinking

“Mathematics is an excellent vehicle for the development and improvement of a person’s intellectual competence in logical reasoning, spatial visualization, analysis and abstract thought.”

-Singapore MIE Math Syllabus

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Common Standards


Building on the excellent foundation of standards states have laid, the Common Core State Standards are the first step in providing our young people with a high-quality education. It should be clear to every student, parent, and teacher what the standards of success are in every school.

[Learn more »](#)

“For over a decade, research studies of mathematics education in high performing countries have pointed to the conclusion that the mathematics curriculum in the United States must become substantially more focused and coherent...[and] address the problem of a curriculum that is a **“mile wide and an inch deep.”**”

-Common Core State Standards

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Methodology





Singapore's Methodology

Focus and Depth

A comparison from the American Institute for Research:


	NO. OF CHAPTERS	NO. OF LESSONS	AVG PAGES PER LESSON
Singapore Math	18	34	15
Typical American Program	29	157	4

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Singapore's Methodology

Interlocking Concepts and Skills



Draw on Solid Prior Knowledge → **the WHY** / **Concept Building** / **Skill Building** / **the HOW** → Foreshadow Specific Future Concepts

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Singapore's Methodology

Clear Visuals and Use of Models

The diagram illustrates the progression of mathematical understanding through three stages:

- Concrete:** Represented by two fraction blocks, a green $\frac{2}{3}$ block and a purple $\frac{1}{3}$ block, with a plus sign between them.
- Pictorial:** Represented by a bar model divided into three equal parts. The first two parts are green and the third part is purple, representing the same addition.
- Abstract:** Represented by the mathematical equation $\frac{2}{3} + \frac{1}{3} = 1$.

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Singapore Framework

The Singapore Framework is a house-shaped diagram with five main components:

- Attitudes:** The top-left roof section.
- Metacognition:** The top-right roof section.
- Skills:** The left side of the house.
- Processes:** The right side of the house.
- Concepts:** The base of the house.

In the center of the house is a box labeled **Mathematical Problem Solving**.

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Levels of Mastery

The ability to apply concepts to novel situations.

The ability to apply concepts in problem solving situations.

The ability to perform computations without the support of concrete materials.

The ability to perform computations with the support of concrete materials.



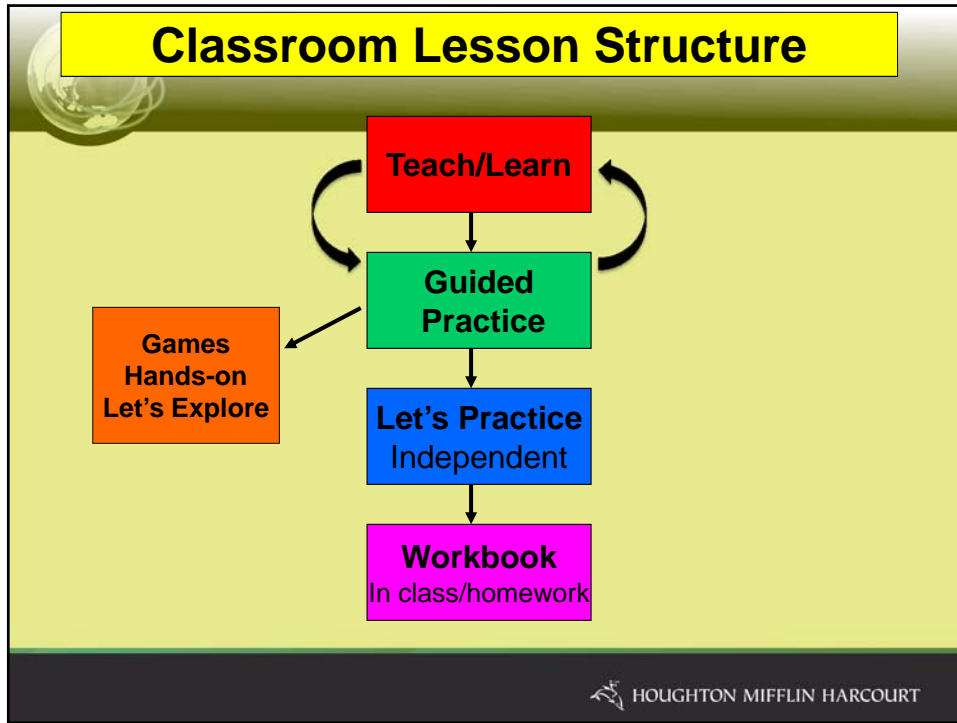
What Should We Expect?

Classroom

Home

Beyond





CHAPTER 1 Numbers to 1,000

Practice 1 Counting

Write the numbers shown.

Example

1.

2.

Name: _____

CHAPTER 1 Numbers to 1,000

Worksheet 1 Counting

What is the number shown by the base ten blocks? Write the number in words.

1.

Count on by ones.
Use base-ten blocks to help.

2. 28, 29, _____, 31, _____

Count on by tens.
Use base-ten blocks to help.

3. 22, 32, _____

Name: _____ Date: _____

2. Five children play a game of pinball. How many points does each of them score? Read the clues. Then fill in the blanks.

Clues

- Kelly scores 590 points.
- Steven comes in last.
- Tammy scores 100 points less than 930.
- Gina misses a shot worth 100 points, so she does not score 650 points.
- Elle is one of the players.

Pinball Challenge
Hall of Fame

Name	Score
_____	830
_____	284
_____	125
_____	550
_____	590

2 Chapter 1 Numbers to 1,000

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Beyond Math in Focus

- Ability to Apply Mathematics
- Ability to Reason Algebraically
- Ability to Persevere



Parent Support

**How can we help your child be
successful at home?**



SCHOOL to HOME

Connections

Chapter 2 Addition up to 1,000

Dear Family,

In this chapter, your child will learn to add numbers up to 1,000. Some of the skills your child will practice are:

- using place-value charts to add numbers with and without regrouping
- solving real-world addition problems

Activity Use Grids to Add

As children start working with greater numbers, they must be able to use the vertical form correctly to add. Write the numbers 278 to 281 on a sheet of paper. On another sheet of paper, draw a grid like the one shown.

	2	7	8
+	2	7	9
	5	5	7

- Ask your child to use the grid to add two numbers at a time, for example, $278 + 279$, or $278 + 280$, and so on.
- Ask your child to find the two numbers which give the greatest number and the least number when added. (Adding the two greatest numbers, 280 and 281, gives the greatest sum and adding the two least numbers, 278 and 279, gives the least sum.)

Vocabulary to Practice

This place-value chart shows the number 326.


Number	Hundreds	Tens	Ones
326	3	2	6

To regroup numbers when adding, you change:

- 10 ones to 1 ten
- 10 tens to 1 hundred

For example,

$$\begin{array}{r} 11 \\ 277 \\ + 354 \\ \hline 631 \end{array}$$

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Social Media

 singaporemathblog.com

 <http://www.facebook.com/mathinfocus>

 twitter.com/singapore_math



The screenshot shows the Singapore Math website with a search bar, navigation menu (HOME, SCHOOL, BLOGGERS, ETECH, EVENTS, MATH NEWS, MIF TALKS, RESEARCH, THINK CENTRAL, VIDEO), and a featured article titled "New Survey: How Do You Assess Math Understanding in Kindergarten?" by telhainer (@at-port). A "Math in Focus The Singapore Approach" logo is also visible.

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Online Components




Subject:

Grade:

Resources

 Math in Focus Teacher eBook G5	 Math in Focus Teacher eBook G2	 Math in Focus Student Workbook eBook, G1	 Math in Focus Teacher eBook G4
 Math in Focus Teacher eBook G1	 Math in Focus Teacher eBook G3	 Math in Focus Teacher eBook GK	 Math in Focus Pupil eBook, G5
 Math in Focus Pupil eBook, G2	 Math in Focus Pupil eBook, GK	 Math in Focus Pupil eBook, G4	 Math in Focus Pupil eBook, G3



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