

Book Study Guide for

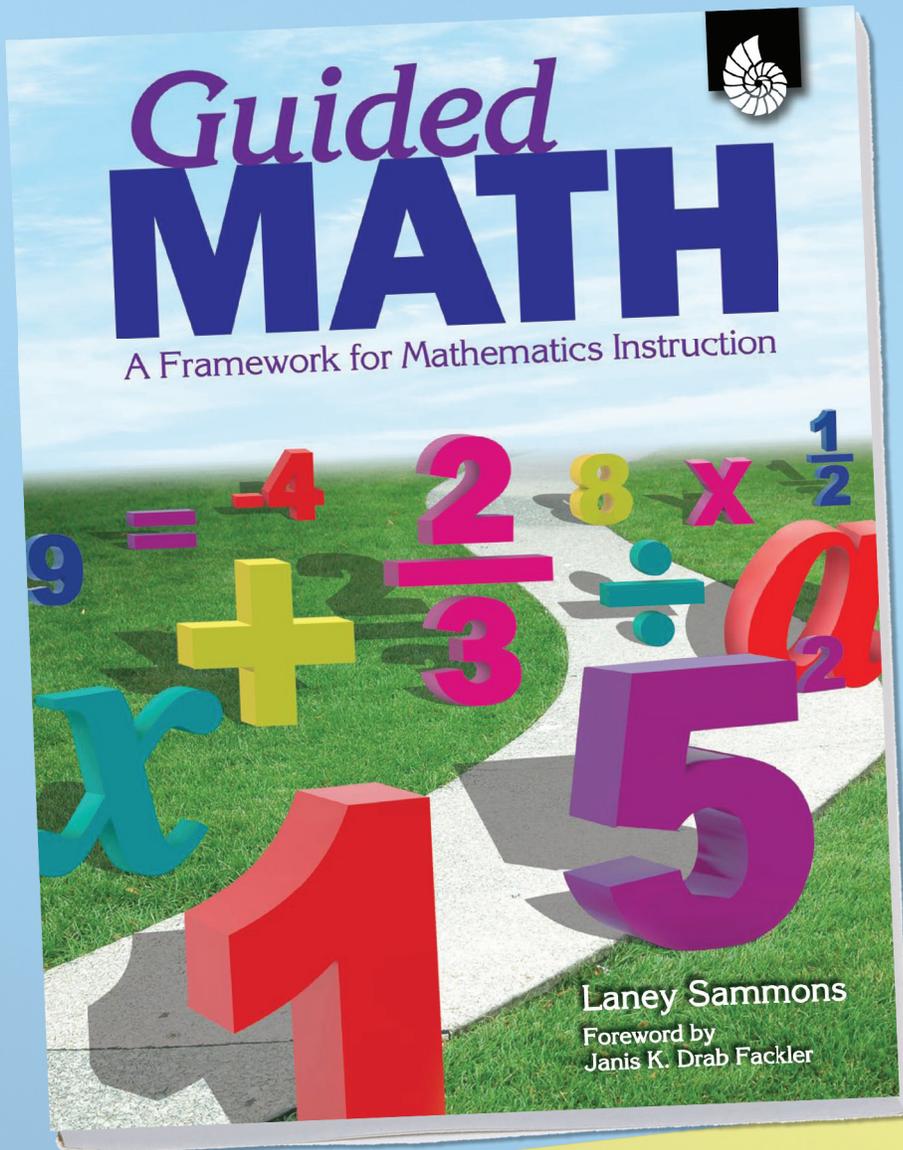


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Credits

Dona Herweck Rice, *Editor-in-Chief*; Lee Aucoin, *Creative Director*;
Don Tran, *Print Production Manager*; Sara Johnson, M.S.Ed., *Senior Editor*;
Corinne Burton, M.A.Ed., *Publisher*

Shell Education

5301 Oceanus Drive
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<http://www.shelleducation.com>

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Introduction

This guide is designed to be used with the book *Guided Math: A Framework for Mathematics Instruction* to help teachers differentiate mathematics instruction for all learners. The Guided Math method allows teachers to teach each group of students in their classrooms at instructional levels that maximize learning while at the same time establishing consistent routines and procedures in the classroom with ease.

Overview of Book Study Guide

This guide provides you with a road map as you make your way through *Guided Math: A Framework for Mathematics Instruction*. It supplements and extends the work completed in the professional book as a professional development tool. Each section contains a preview activity, an opportunity to respond to the text in the chapter, an opportunity to apply the information learned, and a suggestion for how to use the activity as evidence of demonstrated learning for new teacher induction programs or for documenting professional development hours. Finally, there are thought-provoking reflections to help teachers prepare for successful implementation. This guide provides engaging activities that can be used during a large group professional development session, in a smaller professional learning community, or as an individual. All of the activities are flexible enough to be covered in one session by assigning groups to each section and having them share their findings, or by spreading them out over a series of days with whole-group participation. The exercises may be adapted to suit your specific professional development situation.

Overview of Core Book

Guided Math: A Framework for Mathematics Instruction provides information for how to create a classroom environment for mathematics that supports learning, fosters mathematical thinking and understanding, and meets the needs of all students. The innovative approach to mathematics instruction incorporated in this resource follows many of the same teaching philosophies used with guided reading, a highly effective and well-respected method for teaching literacy. *Guided Math: A Framework for Mathematics Instruction* will show you how to effectively utilize small-group instruction, manipulatives, Math Workshop, and conferences while engaging all learners in connecting mathematics to their own lives.

Spend some time previewing *Guided Math: A Framework for Mathematics Instruction*. Look at the front and back covers, read the table of contents, and flip through the chapter snapshots. If you are working with a group, discuss what you think this book is about. Make predictions about your learning expectations.

Introduction *(cont.)*



Preview Activity

Write a response to each of the following prompts:

1. Describe one positive and one negative personal experience you've had with differentiating mathematics instruction.

2. Explain your familiarity with Guided Reading. How do you think Guided Math will work in your classroom?

Discuss the answers with the whole group. This book will provide you with strategies that you can use to differentiate mathematics instruction that will meet the needs of all students.

Chapter 1: Guided Math—A Framework for Mathematics Instruction



Preview Activity

Think about the way you were taught mathematics as a student. Compare your own instructional approach to teaching mathematics with how you were taught as a student.



Read and Reply

Read pages 15–31 of *Guided Math: A Framework for Mathematics Instruction* and answer the three questions listed under Review and Reflect on page 31. You may respond in the book or in your own journal or blog.



Apply It: Group

Read through pages 18–24 of *Guided Math: A Framework for Mathematics Instruction*.

- Which of these instructional components have you used in your classroom?

- What kinds of obstacles do you foresee in using these instructional components together?

- As a group, share aloud your experience, if any, of using small-group instruction during a class period. How did you and your colleagues manage small groups to make the experience successful for all students?

Chapter 2: Using Guided Math to Create a Classroom Environment of Numeracy



Preview Activity

Respond to the questions below. Make a T-chart on the board or a sheet of chart paper and compile the question responses from the group.

- What signs of mathematics instruction are evident in your classroom?

- How can you improve the environment of numeracy for the students in your classroom?



Read and Reply

There are many ideas listed in chapter 2 of *Guided Math: A Framework for Mathematics Instruction*, pages 33–66, for creating a numeracy-rich classroom. Which ones do you already use? Which ones could you begin to use with relative ease? Are there others that you could use that are not mentioned? Talk about these in your group and make notes of the new ideas presented.

Chapter 3: Using Math Warm-ups in Guided Math



Preview Activity

- In what ways have you used math warm-ups with your students?

- What is the hardest thing about using math warm-ups?

- Do you think that math warm-ups help improve mathematics skills? Why or why not?



Read and Reply

Read the information about math warm-ups in Chapter 3 of *Guided Math: A Framework for Mathematics Instruction*, pages 67–103. Reply to the question prompts on page 103. You may write in the book or in your own journal or blog.

Chapter 3: Using Math Warm-ups in Guided Math *(cont.)*



Apply It: Group

Any type of math warm-up can serve the purpose of reviewing key information. Use the following questions to discuss how math warm-ups can enhance mathematical understanding in your classroom.

- Think about the upcoming mathematical concepts your class will be learning. What are some math stretches that apply to these concepts that you can use to increase student understanding?

- If some of these math warm-ups don't present mathematics that is appropriate for your students, in what ways can you adapt them to better suit your students' needs?



Documentation and Evidence

Recommendation: Contact your professional learning community by email and ask them for math warm-up ideas. Begin by sharing the ideas that you use and have learned about in this chapter. Then, solicit ideas from your colleagues about what they use, how they use it, and how it helps their students. Build a wiki of math warm-up information that can be shared and updated by your professional learning community.



Reflection

In what ways can you improve the math warm-ups that you are already using or have thought about using?

Chapter 4: Using Guided Math with the Whole Class



Preview Activity

Make a T-chart that shows the advantages and disadvantages of using whole-group instruction. Look closely at the disadvantages that you listed. How can you address these challenges with different methods of grouping to increase student achievement in mathematics?



Read and Reply

Read through the sample mini lesson on pages 114–115. Do you see yourself teaching a lesson like this? Why or why not?



Apply It: Group

Review the Tips for Effective Mini Lessons listed on page 116. What is one other tip that you would add to the list? Discuss these new ideas with your group. Keep notes of the other ideas teachers suggest for future reference. Then, use the questions below for further discussion.

- How have you used mini lessons in your classroom?
- What are some effective ways that you have used games, music, and technology in your mathematics lessons?

Chapter 5: Using Guided Math with Small Groups



Preview Activity

- List some of the challenges that teachers face when using small groups in their classrooms.

- Describe your attitude toward using small groups during mathematics instruction and explain why you feel that way.



Read and Reply

Read the information about small-group instruction in Chapter 5 of *Guided Math: A Framework for Mathematics Instruction*, pages 133–181. Reply to the question prompts listed under Review and Reflect on page 181. You may write in the book or in your own journal or blog.

Chapter 5: Using Guided Math with Small Groups *(cont.)*



Apply It: Group

As a group, discuss the following two questions. Write notes on the lines below to help you with ideas you can use in your classroom.

- What kinds of assessments do you use to help you group your students? Were these forms of assessment effective? Why or why not?

- Review the characteristics of effective scaffolding on page 169. Have you ever designed a lesson that includes scaffolding as described here? Share your experiences.



Documentation and Evidence

Recommendation: As a group, plan a small-group activity that is scaffolded for the various needs in your classroom. Try it out in your classroom. Write down what worked well and what did not work very well. What could you change in the lesson to make it successful?

Chapter 6: Supporting Guided Math with Math Workshop



Preview Activity

- What does the term *Math Workshop* mean to you?

- Describe the ways in which you have used math centers in your classroom. Include in your description your successes and your challenges.

- It is more common to see math centers in elementary grades. In what ways can math centers be effective for secondary students?



Read and Reply

Read the information about Math Workshop in Chapter 6 of *Guided Math: A Framework for Mathematics Instruction*, pages 183–205. Reply to the question prompts listed under Review and Reflect on page 205. You may write in the book or in your own journal or blog.

Chapter 6: Supporting Guided Math with Math Workshop *(cont.)*



Apply It: Group

As a group, discuss the following questions. Write notes on the lines below to help you with ideas for things you can do in your classroom.

- In what ways can teachers work together to support the planning of Math Workshop?

- Review the Effective Uses for Math Workshop on pages 188–189. What activities do you believe will work best for you? Explain why.

- What are some ways you can enlist the help of assistant teachers, parents, or other professionals to make Math Workshop successful?

Chapter 6: Supporting Guided Math with Math Workshop *(cont.)*



Documentation and Evidence

Recommendation: Plan for one Math Workshop and implement it in your classroom. Write down the challenges and successes of the day. What can you do next time to avoid the pitfalls or challenges?



Reflection

Take time to visit a few other classrooms where Math Workshop is being implemented. What did you learn from watching how other teachers managed Math Workshop?

Chapter 7: Conferring with Students During Guided Math



Preview Activity

- How do you think your students will work independently during Math Workshop?

- What problems do you foresee arising during Math Workshop? How can you handle these problems?

- How will students get the answers that they need when you are busy conferring with other students? What plan will you have in place?



Read and Reply

Read the information about conferring with students in Chapter 7 of *Guided Math: A Framework for Mathematics Instruction*, pages 207–225. Reply to the question prompts listed under Review and Reflect on page 225. You may write in the book or in your own journal or blog.

Chapter 7: Conferring with Students

During Guided Math *(cont.)*



Apply It: Group

As a group, discuss the following questions. As others share their answers, write them down for future reference. Adding these ideas will help you as you prepare to implement Guided Math.

- In the past, how comfortable have you been conferring with students?

- Look at the steps listed on page 212 for conducting math conferences. What things do you already do, and what new things will you begin to do, to make conferring with students successful?

- What are some ways you can keep records of the information you glean from conferring with students?

Chapter 7: Conferring with Students During Guided Math *(cont.)*



Documentation and Evidence

Recommendation: Discuss with other teachers how you plan to confer with students. Take a few minutes to observe how other teachers do this with their students. Make notes of ideas that will work for you and your students. Then, implement these ideas with your class.



Reflection

Predict how conferring with students will improve their mathematical abilities. After a month of using this strategy, revisit this prediction and see if you were correct.

Chapter 8: Assessment in Guided Math



Preview Activity

- Up to now, what has been your rationale for assessing students?

- How do you think assessment can be used effectively in Guided Math?



Read and Reply

Read the information about assessment in Chapter 8 of *Guided Math: A Framework for Mathematics Instruction*, pages 227–244. Reply to the question prompts listed under Review and Reflect on page 244. You may write in the book or in your own journal or blog.



Apply It: Group

As a group, discuss the following questions. Write notes on the lines below to help you with ideas for things you can do in your classroom.

- When could you use checklists for quick assessment in your classroom?

- When could you use rubrics for quick assessment in your classroom?

- What other kinds of assessments do you use that would work well with Guided Math?

Chapter 9: Putting It Into Practice



Preview Activity

- In what ways can teachers collaborate to make the process of implementing Guided Math more manageable?

- In what ways do you predict that Guided Math will improve student achievement in your classroom?



Read and Reply

Read chapter 9, the final chapter in *Guided Math: A Framework for Mathematics Instruction*, pages 245–250. Reply to the question prompts listed under Review and Reflect on page 250. You may write in the book or in your own journal or blog.

Chapter 9: Putting It Into Practice *(cont.)*



Apply It: Group

Take a few minutes and discuss the following questions as a group. Make plans to support one another as you begin to implement Guided Math. Keep notes and reminders, using the lines below.

- How will Hyde's questions on pages 247–248 help you as you begin to implement Guided Math?

- In what ways is Guided Math still an overwhelming concept to implement? What can you do to overcome this feeling and begin to implement it?

- How does Regie Routman's quote on page 249 encourage you to use Guided Math?
