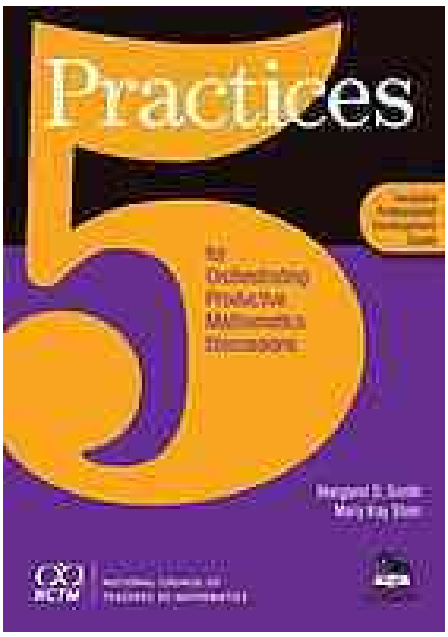

5 Practices for Orchestrating Productive Mathematics Discussions

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Includes professional development guide.

5 Practices for Orchestrating Productive Mathematics Discussions Details

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From Reader Review 5 Practices for Orchestrating Productive Mathematics Discussions for online ebook

Fred says

Discourse is not an accident. This book will help you create meaningful mathematical discussions in you classroom.

Mandy Robek says

Enlightening ideas to consider with scenarios for you to process.

Richard says

It took me forever to realize that, while I really enjoy *theory*, I'm not very good at learning theory in the absence of practical examples. My "aha!" moments tend to come grudgingly when I have to put the jigsaw together without the picture on the front of the fox, as it were. Sorry, weak analogy.

This is, I think, why I burned out on mathematics back in my school years. Math up through trigonometry was sufficiently intuitively practical that I just loved it (it is even telling that I seem to have slept through what was taught on hyperbolic functions), but my calculus teacher, as brilliant as she was, taught the subject with a spiritual orientation. I distinctly remember her encouraging us to close our eyes and imagine the loneliness of zero during the lesson on limits. *She* had her eyes closed, blissful and enraptured, while all her students looked at each other in wide-eyed bewilderment. I tried again as a senior, but tragically my second calculus instructor decided over Christmas that he had to go help his relatives in Argentina protest the coup, and never returned.

I compounded the mistake by trying to be a math major at university, but it just kept getting more abstract and boring. I probably would have failed my final quarter of differential equations if my roommate hadn't been in the same class, and warned me when tests were coming. Switching to computer science was a life-saver.

Oh, anyway — this book. Designing a lesson plan is a lot less abstract than university-level math, but I still struggled with seeing how to apply the theory to the actual classroom.

This book is, frankly, brilliant at the fairly small thing it sets out to do: design lessons in such a way as to encourage students to participate in their own learning, and that of their peers. It combines the step-by-step theory with walk-throughs of examples using that framework.

The key is to, during lesson planning, anticipate where students will stumble, make mistakes, and otherwise show signs of struggle, and design the lessons to use what might otherwise be problems as a scaffold. Anticipating is only the first of the titular Five Practices, but it is the critical lead-in.

Short and sweet: buy this book! Or, if you're in science land, I'm sure the parallel text by the same author is

just as good: *5 Practices for Orchestrating Task-Based Discussions in Science.*

Julieann says

The ideas in this book are true to the changing world of teaching math. I feel that this book would be excellent for secondary teachers. I teach first grade. There were not any primary examples used in this book. Thus it is hard for me to picture how these practices would look in a primary classroom.

Nate Hochmuth says

Provides a framework for teaching math more closely aligned to the CCSS Math Practice Standards. It provides a way to plan lessons to better teach students how to problem solve, instead of teaching students examples that they can imitate later. It provides ways for teachers to plan for discussion of problems in order to help students gain understanding of the intended mathematical ideas. Lots of good insight in how to plan tasks and prepare for multiple methods(both correct and incorrect) and how to incorporate student's methods in a presentation to the class so that all students may benefit from seeing how mathematical ideas are connected.

Nicole says

If you want to effectively use rich mathematical tasks In your classroom, this is the book to read! Most of the examples in this book are for upper grades, so if you teach Early years, stretch your thinking by applying the important ideas to your grade level. Find a colleague or two and work through it together.

Adam says

There's a movement in modern-day mathematics teaching that promotes problem-based lessons. It's a movement away from the mini lesson, in which a teacher models a skill and students practice it to mastery. Problem-based learning instead starts with an open-ended problem, to which students apply their own strategies to arrive at a solution, and it all ends in a carefully orchestrated discussion.

It's the "discussion" part of a problem-based lesson that is the most daunting to me. And since this book is currently topping NCTM's best-seller list, I know I'm not alone. Along the discussion vein, this book has a lot going on. The 5 Practices provide a solid framework for considering the elements that go into a strong discussion. And the Thinking Through a Lesson Protocol (TTLP) gives me a concrete way to implement the 5 Practices into a lesson.

Perhaps the most frustrating part of problem-based discussions is that they seem to be based more off research than reality. Where are the teachers that lead these discussions? This is where the book most excels: it provides the actual dialogue from class discussion case studies. I want more of these; Smith and Stein surely must be holding out on us. But the ones they do provide offer a much needed lens into these elusive discussions.

A solid, timely professional resource for teachers pursuing problem-based learning. For more on problem-based learning, check out Van De Walle's Elementary and Middle School Mathematics. The two resources complement each other nicely.

Precious says

I love this book!
I am excited to implement the practices in my classroom.
Short and easy read that is full of practical practices to enrich instruction in a Standards-based classroom.

Andy Rodriguez says

Solid advice but not many specific examples for different levels of math. I wish they had a library of tasks for elementary, middle, and high school to read.

Sandi Mascio says

Well-organized quick read to support math teachers in leading productive, focused discussions.
