

Foreword

I was recently working with a group of fifth-grade teachers who were struggling with the question of how to help their students perform better for the state tests. Since the new state tests require a student to do more than operations and computations, the teachers were faced with a serious problem: How would they teach students better problem-solving skills? In addition, the state required that students justify their reasoning process in relation to getting the answer to the problem. In other words, students were going to have to apply what they were learning and be thoughtful about their procedures.

As we discussed possible instructional strategies, one teacher suddenly had an insight, “You mean that I will have to give as much time to teaching mathematics as I have been giving for reading and writing?” Another instantly added, “I guess we will have to think about this as we do the writing process. We will need to know when to do mini-lessons, provide problem-solving time, and how to integrate the math with our other core subjects.”

Voilà—Diane Ronis’s book that provides theory and practice. She carefully grounds her pedagogy in the current understanding of how the brain operates and multiple intelligences. She then provides rich classroom examples with management tools to move teachers immediately into practice. I wish I had had her book when I was meeting with those fifth-grade teachers!

We are all confronted with the enormous pressures that our new learning standards have placed on us. We can no longer be satisfied with the fact that students are able to compute. We are now asking the far more complex question: How can they show us what they can do when they are faced with a situation in which they are uncertain exactly what to do? This question, although more difficult to measure, is all about the lifelong learning skills we desire for children growing up in an age of information.

In this information age, our populace will need to be able to understand statistics, understand probability, read graphs, and fundamentally have a much greater mathematical literacy than we previously required. This book helps us make a transition from a 45-minute math period to developing students who can think mathematically.

—Bena Kallick