Books

For Students


Mr. Collins, a teacher at an inner-city school, decides to adapt a project to engage his students in mathematics. He had read about students at a California school who had built a tetrahedron so large—approximately 7 feet tall and consisting of 4,096 pieces—that it was featured in the Guinness Book of World Records. For Mr. Collins’s students to beat that record, they would have to add another level to the tetrahedron, meaning that they would need four times as many pieces. Initially, despite Mr. Collins’s enthusiasm, few students wanted to participate in the project. Readers are introduced to the students who did become involved with the project, each for his or her own unique reasons. Even a reluctant student, present in the classroom during the meetings only because he was serving detention, is drawn into the group. Individually and collectively, the students overcome many setbacks to complete the project.

This engaging story is written so that each chapter presents the thinking of one of the characters. Moving from one character’s thoughts to another and back again keeps the reader pressing on to see what happens. The book’s mathematics content is not significant. Although I enjoyed reading the book, I was taken aback by the illustrations of the characters; I found those of the African-American characters to be stereotypical.—Jane Hunt, Macdonald Intermediate School, Fort Knox, KY 40121.


Math and My World II is a series whose purpose is to focus on the presence of mathematics in real-world situations. Through high-interest topics such as sports, space, animals, time, construction, and music, Walsh seeks to demonstrate that mathematics is found in many areas of students’ daily life. The Math and My World II series should not replace the upper elementary mathematics textbook. The series attempts to integrate language arts, science, and mathematics into children’s books to supplement the mathematics program.

The Math and My World II series could be used as a resource in the classroom library or as an opening activity for an integrated unit focused on mathematics, science, and language arts. However, the books have many weaknesses. First, the mathematical, scientific, and grammatical errors—which are numerous and blatant—promote confusion and lead to many misunderstandings in these subjects. For example, in Animal Math (p. 6), the author states: “Just to make things easier, drop the million.” This comment, which is repeated several times throughout the series, can lead students to believe that the concept of a million is not relevant, and this belief can impede their understanding of the use of zero in place value. There is a big difference between 230,000,000 and 230 and between 65,000,000 and 65.

Second, the books are written in such a way that the students are not active participants in the instructional approach or the mathematics process. All that is required of them is to read the narrative; the problems are completed for them. Third, these books are not problem based, and thus the students have no reason or incentive to explore the mathematical concepts within each of the scenarios. The only sound reason for solving many of these problems is simply to perform the algorithm; as a result, I believe a great opportunity has been missed.

All the books need more pictorial representations of the concepts and the topics discussed. Often, for examples of mathematics and science at work that are given in the text, no visual representations of the solutions are provided. For example, when the author is discussing Khafre’s pyramid, a picture should be included. In addition, the series should be more closely coordinated with NCTM’s Principles and Standards and make greater use of technology.

I do not recommend these books to anyone in the educational community.—Diane McElwain, eighth-grade mathematics and science teacher, Barberton City School District, Barberton, OH 44201.

Prices on software, books, and materials are subject to change. Consult the suppliers for the current prices. The comments reflect the reviewers’ opinions and do not imply endorsement by the National Council of Teachers of Mathematics.
Lulú, the title character of *La limonada de Lulú*, is a precocious young girl who follows her sister and friends around as they make lemonade for a competition. The mathematics is presented in a natural and clever manner that can be easily understood by kindergarteners and at the same time expands the knowledge of older students. This story is well presented and developed.

¡Ya era hora, Max! tells about Max, who is learning how to tell time by using an analog watch or clock. He struggles with this concept but eventually is successful. This engaging story could be applicable to children trying to learn the difference between telling time by using an analog watch or clock and telling time by using a digital one. The translation is appropriate and accurate, and the graphics and suggested activities included at the end add another effective dimension to the book. I would recommend this book for this age level without hesitation.—Enrique Ortiz, University of Central Florida, Orlando, FL 32816.

**For Teachers**

**From NCTM**

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Teachers Engaged in Research: Inquiry into Mathematics Classrooms is a four-volume series. This volume focuses on research that corresponds with prekindergarten–grade 2, the first grade-level band of NCTM’s *Principles and Standards for School Mathematics* (2000). Written for teachers and teacher educators, the topics of the nine studies, conducted throughout the United States and Canada, reflect the Standards. Each volume contains the series foreword as well as an individual introduction, which includes a table presenting an overview of the studies, their grade level, the mathematical content, the context, and the research topic addressed.

This overview of the studies is immensely helpful in identifying which ones might be of interest to the reader. Throughout the foreword and the introduction, the editors stress the importance of the teacher as researcher and the necessity of sharing evidence-based practices that support and
encourage those in the field. Some of the studies include the methodology and directions so that they can be replicated or revised. Although the volume title mentions prekindergarten, none of the studies’ reported results relate to prekindergarteners; however, the findings of studies relating to kindergarteners might be applicable to younger children. Reading formal research studies can be somewhat arduous, but many of these include graphics that facilitate comprehension. I recommend this volume for practitioners interested in action research as well as for a mathematics book discussion group.—Patricia Richwine, educational consultant, Brick, NJ 08724.


This volume in the Teachers Engaged in Research series features articles by classroom teachers and teacher educators detailing their experiences in researching their inquiry-based teaching of mathematics. The twelve chapters cover topics such as division of fractions, multiplicative and algebraic reasoning, problem solving, subtraction strategies, and probability. The chapters document these researchers’ insights regarding collaboration as well as development and implementation of strategies focused on student learning and understanding.

The series achieves a stated purpose: to “illustrate what it looks like when mathematics teaching and learning are informed by research and evidence” (p. xv). Using specific examples of their struggles and actions in this self-critical examination of their teaching, these classroom teachers show how to conduct such research and demonstrate its benefits to students, teachers, and researchers. The teachers note the importance of planning for and implementing questioning in instruction, purposeful student writing, challenging and engaging tasks,
collaboration, and student discourse. One, Jennifer Segebart, states, “From my role as an action researcher, I better understand my role as a teacher” (p. 142).

Samples of student work strengthen the articles, illustrating the development of students’ understanding. The only drawback is the photocopy quality, which is difficult to read. Classroom anecdotes, teachers’ comments on their interactions, and data effectively illustrate the methodology.

This easy-to-read volume is, despite some typographical errors, useful for classroom teachers and teacher educators in encouraging action research and providing examples of how mathematics teaching can be changed and how collaboration can benefit researchers and practitioners.—Dianne Goldsby, clinical associate professor and fellow, Texas A&M University, College Station, TX 77863-4232.


This yearbook, useful to teachers of grades pre-K–12, provides activities and lessons for teachers to use with their students as well as information that can be used as professional development for teachers.

This volume is divided into three parts. Part 1, Learning about Data and Chance, contains articles that address ways in which teachers can help students make sense of the world using data; understand variability and quantify uncertainty; plan and design studies to use with data collection; draw valid conclusions from data collected; and use different technologies as tools. This section also examines various assessments of student learning that teachers will need. Part 2, Reasoning with Data and Chance, includes articles related to what and how we teach to develop students’ ability to think statistically. Part 3, Reflecting on Issues Related to Data and Chance, discusses questions raised about the nature of statistics, the relationship between statistics and mathematics, and the consequences for the classroom.

One strength of this book is the wide audience that can benefit from its lessons, activities, and discussions. Some lessons integrate the curriculum with other subject areas, such as health and social studies. An accompanying CD offers support materials for many of the articles. Teachers who purchase this book will find many helpful lessons and ideas that they can use to teach data and chance both to their students and in a professional development setting.—Sarah Pullie, Latta Elementary School, Latta, SC 29565.