

Essential Understanding and more

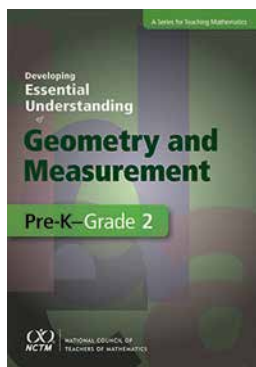
Books

From NCTM

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Developing Essential Understanding of Geometry and Measurement, Pre-K–Grade 2

E. Paul Godenberg, Douglas H. Clements, Barbara J. Dougherty, and Rose Mary Zbiek, 2014. Foreword by Henry Kepner. 90 pp., \$35.95 paper. ISBN 978-0-87353-665-3. Stock no. 13793. National Council of Teachers of Mathematics; <http://www.nctm.org>



Why do we give a name to a 90 degree, or right, angle but not to other specific angles? What might students understand or misunderstand about a rectangular array? NCTM's *Developing Essential Understanding of Geometry and Measurement: Pre-K–Grade 2* answers questions that we never realized we wanted answered.

Pre-K–Grade 2 answers questions that we never realized we wanted answered.

As teachers of mathematics, we believe that we have an understanding of our students' misconceptions and misunderstandings, but how well can we really understand their thinking if our own understanding is lacking or if we have not considered all possible levels of their conceptual understanding—or lack thereof—when we present material? The authors answer questions that we must consider as teachers to

deepen our own understanding of the concepts as well as how our students see mathematics.

Reading this book and reflecting on the material presented before planning mathematics instruction would be beneficial for all pre-K–grade 2 teachers. After reading the book, they should be better equipped to guide their students in building the conceptual understanding that is required in these grade levels and for future grade levels. It would be of immense benefit for teachers if this book had an accompanying resource complete with tasks and problems that might be used along with each big idea.—*Sydney Margaret Holbert, Mississippi College, Clinton, Mississippi.*

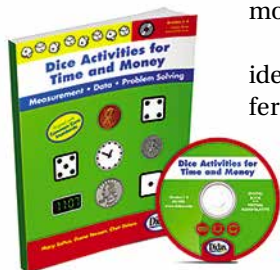
From other publishers

Dice Activities for Time and Money

Mary Saltus, Diane Neilson, and Chet Delani, 2014. Grades 1–3, 116 pp. \$16.95 paper. ISBN 978-1-58324-655-9. Didax; <http://www.didax.com>

Dice Activities for Time and Money offers reproducible measurement activities relating to time and money for students in grades 1–3 and includes a CD containing a digital version of the book with virtual manipulatives. This publication begins with recommendations for the teacher as to the usage of the activities and offers a table matching the activities to their corresponding Common Core State Standards for Mathematics. Users of the publication should exercise caution, however, when using this table to align the activities to their particular grade, as the information given in the table contains omissions that could lead to the loss of valuable instruction.

The activities for time that are offered in this book ask students to find and write the time in intervals of an hour, a half-hour, ten minutes, and five minutes. Additional time activities



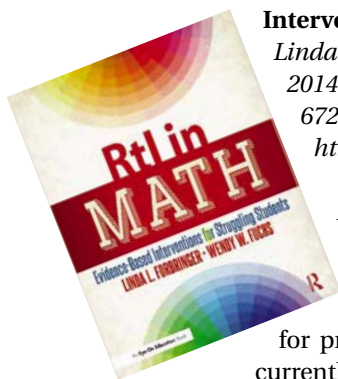
require students to measure time intervals in increments that range from one hour to one minute. The activities for money involve counting coins, selecting coins to represent a specific value, exchanging coins, and subtracting money.

The leveled activities for each topic are identical in nature, which easily allows for differentiation in the classroom. The activities would work best during small-group or center-based learning time. Some of the reproducible activities require students to record their work; many rely on students to monitor their own accuracy as well. To ensure that students are making progress with their learning, the latter type of activities would work best in small groups with a teacher.

This book offers straightforward activities that can be valuable for teaching students the basic foundational skills relating to money and time. I would not recommend this book, however, for teachers who are looking for activities that will extend the learning of their students through the use of a variety of thinking and problem-solving activities.—*Karen Quigley, Community Day Charter Public School, Lawrence, Massachusetts.*

RtI in Math: Evidence-Based Interventions for Struggling Students

Linda L. Forbringer and Wendy W. Fuchs, 2014. 304 pp., \$42.95 paper. ISBN 978-1-596-67254-3. Routledge Taylor & Francis Group; <http://www.routledge.com>



Authors Forbringer and Fuchs focus on the critical aspects of providing response to intervention (RtI) for struggling math students. Writing for practitioners who desire to teach or are currently teaching math learners, the authors supply several examples to help those in the targeted audience reflect and exercise their own critical and creative thinking skills. Of eleven chapters, ten are dedicated to helping the target audience digest the information. For instance, chapter 2 focuses on five specific steps to follow when using assessments to make instructional decisions.

The main strength of this book is its ability to simplify complex math instructional strategies. So many instructional strategies are necessary

to work with diverse learners, and this book does a great job of breaking this information into manageable chunks. For instance, in chapter 5, about explicit instruction, the authors take readers through an explicit instruction lesson to see how it is done. Adding some reflection opportunities to the book would improve it. Chapter 11 would be the appropriate chapter, so that readers can have a plan in place to use these strategies.

Without reservation, I think that this book should be purchased because it is a resource that links both theory and practice to providing effective math interventions in the twenty-first-century mathematics classroom.—*Alicia Holland, University of Phoenix–Tempe.*

STEM Integration in K–12 Education: Status, Prospects, and an Agenda for Research

Margaret Honey, Greg Pearson, and Heidi Schweingruber, editors, 2014. 180 pp., \$47.00 paper. ISBN 978-0-309-29796-7. The National Academies Press; <http://www.nap.edu>

Science, Technology, Education, and Mathematics (STEM) education has received increasing attention recently, and interest is growing in the integration of STEM in K–grade 12 classrooms. The Committee on Integrated STEM Education was charged with developing a research agenda that would likely lead to positive outcomes of integrating STEM education. This publication is the result of a two-year study in which the committee identified existing approaches to integrated STEM education and reviewed the greater impact on students from student awareness, engagement, interest, motivation, and achievement in STEM-related fields. In addition, integrated STEM approaches use real-world situations and problems. Throughout the book are examples of programs and projects illustrating STEM concepts being reviewed and discussed.

The committee makes recommendations for stakeholders, designers of integrated STEM education, assessment developers, and researchers to design a robust integrated STEM K–grade 12 education. The primary audience is education researchers, but the book may be useful to teachers and school leaders supportive of STEM education. I would not recommend this book for the classroom teacher.—*Janet Stramel, Fort Hays State University, Hays, Kansas.*

For students

Mouse Math: A Mousy Mess

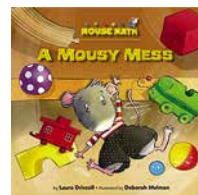
Laura Driscoll, 2014. Ages 4–6, 32 pp., \$7.95 ea. paper. ISBN 978-1-75765-647-2; Kane Press; <http://www.kanepress.com>

Albert the mouse, his sister Wanda, and their friend Leo are visiting the people's playroom. Mom warns them not to leave a mess. When exploration of the neatly sorted toys results in a "mousy mess," Wanda goes to find help, leaving Albert and Leo to sort the mixed-up toys. Using such attributes as color, size, and way of moving, the two friends create groups and clean up the room.

Providing opportunities to explore multiple ways of sorting objects, the storyline in

A Mousy Mess allows readers to explore sorting and categorizing with real-world connections. In addition, the inclusion of a predicament when a toy fits into several categories allows readers to explore how objects possess multiple attributes.

Hearing this story, a group of four- and five-year-olds were drawn to the colorful, detailed illustrations of Albert and his escapade. Language and pictures helped the children comprehend the text, and the plot offered opportunities to engage in conversation about the subject matter. Overall, this is an entertaining story that captures the attention of novice to seasoned sorters.—Jennifer Ward, University of South Florida–Tampa.



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