

Young Mathematicians at Work Grades 5–8 Resource Packages

OVERVIEW

In their *Young Mathematicians at Work* series, Catherine Twomey Fosnot and Maarten Dolk described Mathematics in the City, an innovative project where teachers helped young children construct a deep understanding of number and operations in a math workshop environment. Now they and two colleagues from the project have developed a 21st-century approach that provides pre- and inservice teachers with an interactive, video-based, digital context for inquiry into the teaching and learning of mathematics.

Designed for workshop leaders and college instructors, each Resource Package consists of three valuable components:

- ☀ A **CD-ROM** (developed by Maarten Dolk and Catherine Twomey Fosnot) that offers users a multi-media learning environment for professional development on topics ranging from instruction to assessment, and that stimulates action, reflection, and discussion with dynamic video clips, children's work samples, and interviews with students and teachers
- ☀ A **Professional Development Overview Manual** that provides general advice on teaching in a digital environment
- ☀ A **Facilitator's Guide** (developed by Antonia Cameron, Sherrin B. Hersch, Lynn Tarlow, Suzanne Werner, Bill Jacob, Carol Teig, and Catherine Twomey Fosnot) specific to the CD-ROM that includes suggestions for using the video clips; sample dialogue from field-tested sites; facilitation tips; and more. System Requirements for CD-ROM

Through these resource packages users also are able to study teachers at work: designing rich contexts for problem solving; listening to, questioning, and interpreting students' thinking; drawing connections between mathematical ideas and strategies; and, ultimately, developing a vibrant mathematical community.

Minilessons for Operations with Fractions, Decimals, and Percents



In *Minilessons for Operations with Fractions, Decimals, and Percents*, clips of teachers conducting effective minilessons in real classrooms show you how these short, focused sessions can build big mathematical thinking in young learners. (2CDs)

These video clips support and extend the teaching throughout *Contexts for Learning Mathematics' Investigating Fractions, Decimals, and Percents* (Grades 4–6).

ISBN 978-0-325-00902-5 / 0-325-00902-3 / 2006 / \$65.00

Exploring Playgrounds: A Context for Multiplication of Fractions



In *Exploring Playgrounds*, seventh graders construct some of the big ideas related to multiplying fractions, making connections between the commutative property of multiplication and the relationship between fractional parts and a changing whole. By studying the use of carefully crafted problems designed both to generate a range of solution strategies and help children generalize strategies from one problem to all fractions, teachers will discover what a valuable tool real-life contexts are for building a solid foundation in mathematics.

These video clips show the teaching and investigations in *Exploring Parks and Playgrounds: Multiplication and Division of Fractions* from *Investigating Fractions, Decimals, and Percents*.

ISBN 978-0-325-00904-9 / 0-325-00904-X / 2006 / \$49.50

Sharing Submarine Sandwiches: A Context for Fractions



In *Sharing Submarine Sandwiches*, fifth graders construct some of the big ideas related to fractions, making connections between fair sharing, partitive division, and the relationship between numerators and denominators. By studying the use of carefully crafted problems designed both to generate a range of solution strategies and help children generalize strategies from one problem to all fractions, teachers will discover what a valuable tool real-life contexts are for building a solid foundation in mathematics.

These video clips show the teaching and investigations in *Field Trips and Fund-Raisers: Introducing Fractions* from *Investigating Fractions, Decimals, and Percents*.

ISBN 978-0-325-00898-1 / 0-325-00898-1 / 2006 / \$49.50

Working with the Ratio Table: Mathematical Models



In *Working with the Ratio Table*, sixth graders construct some of the big ideas related to fractions, making connections between ratios and equivalence and uncovering landmark division strategies like comparison through common denominators. By studying the use of carefully crafted problems designed both to generate a range of solution strategies and to highlight the power of ratio tables and other models for division, teachers will discover what a valuable tool real-life contexts are for building a solid foundation in mathematics.

These video clips support and extend the teaching throughout *Contexts for Learning Mathematics' Investigating Fractions, Decimals, and Percents* (Grades 4–6).

ISBN 978-0-325-00896-7 / 0-325-00896-5 / 2006 / \$49.50

Fostering Children's Mathematical Development: The Landscape of Learning



Fostering Children's Mathematical Development focuses on short video clips from classroom situations, providing opportunities to observe, analyze, and discuss critical moments in children's development, and then to build a landscape of the ideas, strategies, and models of operations with fractions, decimals, and percents. The Resource Package helps teachers examine children's thinking; investigate their strategies; and analyze how they model their world mathematically.

These video clips support and extend the learning and strategy development throughout *Contexts for Learning Mathematics' Investigating Fractions, Decimals, and Percents* (Grades 4–6).

ISBN 978-0-325-00900-1 / 0-325-00900-7 / 2006 / \$49.50

MacIntosh

PowerPC Processor
G3/233Mhz (or higher)
System 9.2 (or higher)
64 MB RAM (more recommended)
SVGA Color Display (or better)
4X CD-ROM Drive (or faster)

Windows/PC

Pentium II Processor
266Mhz (or higher)
Windows 98 (or higher)
64 MB RAM (more recommended)
SVGA Color Display (or better)

4X CD-ROM Drive (or faster)

Sound Card

16-bit Flash™ Player and Acrobat Reader®

Quicktime 6.0 (or higher)