

# Young Mathematicians at Work Grades 3–5 Resource Packages

## OVERVIEW

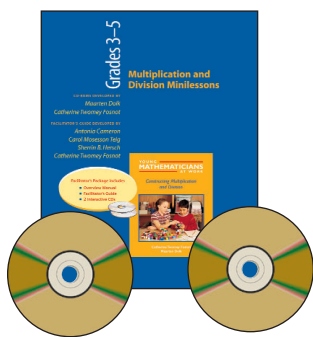
In their *Young Mathematicians at Work* series, Catherine Twomey Fosnot and Maarten Dolk described Mathematics in the City, an innovative project where teachers helped young children construct a deep understanding of number and operations in a math workshop environment. Now they and two colleagues from 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.

## Multiplication and Division Minilessons

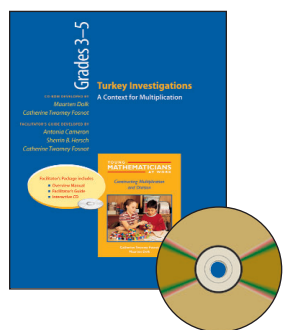


In *Multiplication and Division Minilessons*, clips of teachers conducting effective minilessons in real classrooms show you how these short, focused sessions can build big mathematical thinking in young learners. (2CD-ROMs)

These video clips support and extend the teaching throughout *Contexts for Learning Mathematics' Investigating Multiplication and Division* (Grades 3-5).

ISBN 978-0-325-00776-2 / 0-325-00776-4 / 2005 / \$65.00

## Turkey Investigations: A Context for Multiplication

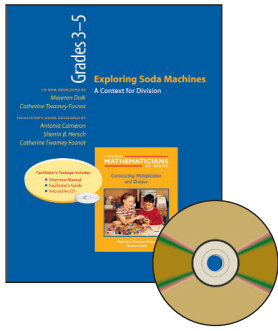


In *Turkey Investigations*, your workshop participants will observe third graders as they begin to construct ideas about multiplication. Exploring contexts of weights and measures over three days, the children invent strategies such as repeated addition on the number line, doubling and halving, and using ratio tables. Teachers will discover what a valuable tool real-life contexts are for building a solid foundation in multiplication.

These video clips show the teaching and investigations in *The Big Dinner: Multiplication with the Ratio Table* from *Investigating Multiplication and Division*.

ISBN 978-0-325-00774-8 / 0-325-00774-8 / 2005 / \$49.50

## Exploring Soda Machines: A Context for Division

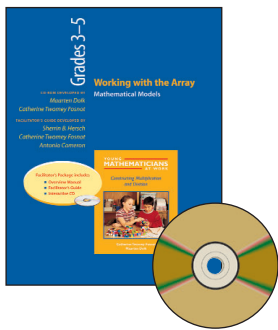


In *Exploring Soda Machines*, fourth graders construct some of the big ideas related to division, including the connection between partitive and quotative division and the inverse relationship between multiplication and division. By studying the use of carefully crafted problems designed both to generate a range of solution strategies and to highlight the power of arrays and other models for division, teachers will discover what a valuable tool real-life contexts are for building a solid foundation in division.

These video clips show the teaching and investigations in *The Teacher's Lounge: Place Value and Division* from *Investigating Multiplication and Division*.

ISBN 978-0-325-00772-4 / 0-325-00772-1 / 2005 / \$49.50

## Working with the Array: Mathematical Models

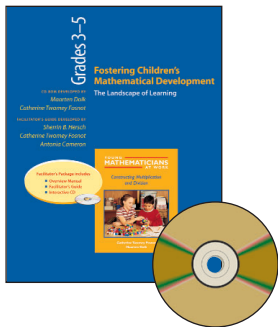


In *Working with the Array*, fourth graders construct some of the big ideas related to surface area and volume, making connections between multiplication's commutative and associative properties and uncovering landmark division strategies like halving and factoring. By studying the use of carefully crafted problems designed both to generate a range of solution strategies and to highlight the power of arrays and other models for multiplication and 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 Multiplication and Division* (Grades 3-5).

ISBN 978-0-325-00778-6 / 0-325-00778-0 / 2005 / \$49.50

## Fostering Children's Mathematical Development: The Landscape of Learning



*Fostering Children's Mathematical Development* focuses on short video clips from interviews, routines, minilessons, games, and investigations. The clips provide opportunities for teachers to observe, analyze, and discuss critical moments in children's development, and then to build a landscape of the ideas, strategies, and models of multiplication and division. 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 Multiplication and Division* (Grades 3-5).

ISBN 978-0-325-00780-9 / 0-325-00780-2 / 2005 / \$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)