

# Young Mathematicians at Work PreK– Grade 3 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.

## Addition and Subtraction Minilessons



In *Addition and Subtraction Minilessons*, clips of real teachers conducting effective minilessons in real classrooms show you how these short, focused sessions can build big mathematical thinking in young learners.

These video clips support and extend the teaching throughout *Contexts for Learning Mathematics' Investigating Number Sense, Addition, and Subtraction* (Grades K-3).

ISBN 978-0-325-00675-8 / 0-325-00675-X / 2004 / \$49.50

## Taking Inventory: The Role of Context



In *Taking Inventory*, K-1 students inventory materials in their classroom, along the way, developing number sense, counting strategies, and the big ideas underpinning place value. The Resource Package helps teachers examine children's numeric thinking; investigate their strategies; and analyze how they model their classroom mathematically.

These video clips show the teaching and investigations in *Organizing and Collecting: The Number System* from *Investigating Number Sense, Addition, and Subtraction*.

ISBN 978-0-325-00672-7 / 0-325-00672-5 / 2004 / \$49.50

## Exploring Ages: The Role of Context

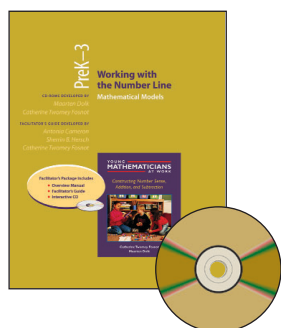


In *Exploring Ages*, Grade 3, students explore addition and subtraction through the lens of ages, building new understandings and strategies and learning concepts like removal, missing addends, and constant difference as they solve problems that reflect their natural curiosity.

These video clips show the teaching and investigations in *Ages and Timelines: Subtraction on the Open Number Line* from *Investigating Number Sense, Addition, and Subtraction*.

ISBN 978-0-325-00676-5 / 0-325-00676-8 / 2004 / \$49.50

## Working with the Number Line: Mathematical Models

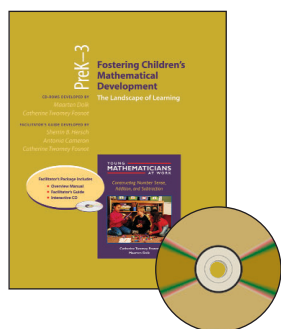


In *Working with the Number Line*, students construct a number line, initially as a model to represent a measurement situation, and then as a model to represent their computational strategies. Eventually, the students begin to use the model as a tool for thinking. The Resource Package helps teachers examine children's numeric thinking; investigate their strategies; and analyze how they model their world mathematically.

These video clips support and extend the model development throughout *Contexts for Learning Mathematics' Investigating Number Sense, Addition, and Subtraction* (Grades K-3).

ISBN 978-0-325-00673-4 / 0-325-00673-3 / 2004 / \$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 early number, addition, and subtraction. 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 Number Sense, Addition, and Subtraction* (Grades K-3).

ISBN 978-0-325-00674-1 / 0-325-00674-1 / 2004 / \$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)