

MATHEMATICS TEACHER RESOURCES

National Council of Teachers of Mathematics

- **Principles and Standards for School Mathematics**, ISBN 0-87353-480-8: a resource and guide for all mathematics educators of students in pre-kindergarten through 12. The recommendations in it are grounded in the belief that all students should learn important mathematical concepts and processes with understanding. This is an excellent resource for mathematics discussions for a community of learners.
- **A Research Companion to Principles and Standards for School Mathematics**, ISBN 0-87353-537-5: a resource guide based on research about the nature of mathematics, student learning, instructional practice, assessment practice, and teacher development.

About Teaching Mathematics by Marilyn Burns, Math Solutions Publications, ISBN 0-941355-25-X: a book about teaching for understanding that engages students actively in their mathematics learning. The book provides teachers with the direction and assistance needed to implement instruction that develops students' mathematical confidence and competence. It helps teachers to examine how children learn mathematics, develops a positive attitude toward and an interest in mathematics, teaches mathematics with problem solving as the primary focus and helps establish a classroom environment that supports children's learning of mathematics.

Adding It Up-Helping Children Learn Mathematics, National Academy Press, ISBN 0-309-06995-5: a book divided into topics that comprise the mathematics curriculum from pre-kindergarten to eighth grade. Some of the topics are: Looking at Mathematics and Learning; the State of School Mathematics in the US; the Strands of Mathematical Proficiency; and Developing Proficiency with Whole Numbers, Other Numbers and Beyond Number. Another topic is Developing Proficiency in Teaching Mathematics. The National Academy of Sciences, the National Academy of Engineering, the Institute of Medicine and the National Research Council have supported this book.

Pearson Education

- **Elementary and Middle School Mathematics Teaching Developmentally**, by John A. Van De Walle, ISBN 0-205-38689-X: a textbook describing the fundamental core of effective teaching of mathematics that combines an understanding of how children learn, how to promote that learning by teaching through problem solving, and how to plan for and assess that learning on a daily basis. Chapters provide perspectives on trends in mathematics education and the process of doing mathematics and develop the core ideas of learning, teaching, assessment, and planning. It also discusses additional perspectives on mathematics for special children and the role of technology are also discussed.
- **Teaching Secondary and Middle School Mathematics**, by Daniel J. Brahier, ISBN 0-205-46261-8: a textbook designed to provide the reader with the total picture of the multifaceted art of teaching. It exposes the reader to the philosophy of several reform curriculum projects funded by the National Science Foundation. This textbook features a mixture of researched-based theory, vignettes, and discussions of very practical issues of teaching mathematics at the secondary and middle school levels. It

is divided into five units: What Does It Mean to “Do,” “Teach,” and “Learn” Mathematics?, The Mathematics Curriculum, Teaching Mathematics, Assessment in Mathematics, and Meeting Individual Student and Teacher Needs.

Key Concepts in Mathematics Strengthening Standard Practice in Grades 6-12, Pearson SkyLight, by Timothy J. McNamara, ISBN 1-4029-2665-0: a resource comprised of a compilation of in-service workshops, conference presentations, college seminars, and other direct input from experienced and highly esteemed educators. It is a classroom-ready collection of engaging lessons and activities aligned with the *Principles and Standards for School Mathematics* (2000).

Classroom Instruction that works, ASCD, by Robert J. Marzano, Debra J. Pickering, and Jane E. Pollock, ISBN 0-87120-504-1: a book that contains nine broad research-based teaching strategies that have positive effects on student learning. The authors provide statistical effects sizes for each strategy and show how these translate into percentile gains for student achievement. Each chapter presents extended classroom examples of teachers and students in action, models of successful instruction, and many tools to help teachers plan and implement the strategies in their own classroom.