

P R E F A C E

On September 12, 2006, the National Council of Teachers of Mathematics released *Curriculum Focal Points for Prekindergarten through Grade 8 Mathematics: A Quest for Coherence* to encourage discussions at the national, state, and district levels on the importance of designing a coherent elementary mathematics curriculum focusing on the important mathematical ideas at each grade level. The natural question that followed the release of *Curriculum Focal Points* was “How do we translate this view of a focused curriculum into the classroom?”

Focus in Grade 1, one in a series of grade-level publications, is designed to support teachers, supervisors, and coordinators as they begin the discussion of a more focused curriculum across and within prekindergarten through eighth grade, as presented in *Curriculum Focal Points*. Additionally, teacher educators should find it useful as a vehicle for exploring mathematical ideas and curriculum issues involving the first grade mathematics curriculum with their preservice teachers.

The members of the planning and writing team, all active leaders in mathematics education and professional development, created this grade-level book as a framework for individual or group experiences in which teachers deepen their understanding of the mathematical ideas they will be teaching. This book describes and illustrates learning paths for the mathematical concepts and skills of each grade 1 Focal Point, including powerful representational supports for teaching and learning that can facilitate understanding, stimulate productive discussions about mathematical thinking, and provide a foundation for fluency with the core ideas. We also discuss common student errors and misconceptions, reasons the errors may arise, and teaching methods or visual representations to address the errors. Because learning paths cut across grades, we have included some discussion of related Focal Points at prekindergarten and kindergarten so that we can describe and clarify prerequisite knowledge in grade 1 that contributes to later understandings.

Whether you are working with your colleagues or individually, we hope you will find the discussions of the learning paths, representations, and lines of reasoning valuable as you plan activities and discussions for your students and as you strive to help your students achieve the depth of understanding of important mathematical concepts necessary for their future success.

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PREFACE TO CURRICULUM FOCAL POINTS FOR PREKINDERGARTEN THROUGH GRADE 8 MATHEMATICS

As states and local school districts implement more rigorous assessment and accountability systems, teachers often face long lists of mathematics topics or learning expectations to address at each grade level, with many topics repeating from year to year. Lacking clear, consistent priorities and focus, teachers stretch to find the time to present important mathematical topics effectively and in depth.

The National Council of Teachers of Mathematics (NCTM) is responding to this challenge by presenting *Curriculum Focal Points for Prekindergarten through Grade 8 Mathematics: A Quest for Coherence*. Building on *Principles and Standards for School Mathematics* (NCTM 2000), this new publication is offered as a starting point in a dialogue on what is important at particular levels of instruction and as an initial step toward a more coherent, focused curriculum in this country.

The writing team for *Curriculum Focal Points for Prekindergarten through Grade 8 Mathematics* consisted of nine members, with at least one university-level mathematics educator or mathematician and one pre-K–8 classroom practitioner from each of the three grade bands (pre-K–grade 2, grades 3–5, and grades 6–8). The writing team examined curricula from multiple states and countries as well as a wide array of researchers' and experts' writings in creating a set of focal points for pre-K–grade 8 mathematics.

On behalf of the Board of Directors, we thank everyone who helped make this publication possible.

Cathy Seeley
President, 2004–2006

National Council of Teachers of Mathematics

Francis (Skip) Fennell
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A C K N O W L E D G M E N T S

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The final product reflects the editorial expertise of Ann M. Butterfield, NCTM senior editor, and the design expertise of Randy White, NCTM production manager.