

# Acknowledgments

The development of the *Minnesota K-12 Mathematics Framework* is the result of the combined efforts of many persons. Many stakeholders have worked collaboratively toward improving mathematics and science education in Minnesota. We are grateful to the members of the Board of SciMath<sup>MN</sup>, under the direction of Cyndy Crist and Kristi Rollag Wangstad, for affirming the importance of this work and approving financial support for this effort.

Special thanks goes to Sharon Stenglein, Mathematics Specialist at the Minnesota Department of Children, Families, and Learning. In her role at MDCFL, Sharon was responsible for facilitating the work to delineate state standards for mathematics when the process of establishing graduation standards began. She has worked continuously since then to guarantee that the teachers of mathematics in Minnesota have had input into those standards and the revision process. Her vision for the *Framework* and her commitment to its implementation have been a source of inspiration and “quality improvement” in its development.

The *Framework’s* Leadership Team met three years ago to outline the present state of mathematics and science education in Minnesota and set goals that could be met in this state document. They have worked collaboratively since then to forge a common outline for both the mathematics and science documents and have continued to provide valuable input, direction, and guidance to both the process and the product.

Over one hundred thoughtful, talented, and committed K-16 educators from around the state participated in the difficult task of developing Chapter 3. During intense writing conferences, they brainstormed, argued and worked together to reach consensus on what K-12 Minnesota students should know and be able to do in mathematics. They then identified sample lessons that exemplified that vision. Their energetic conversations will continue to form the basis of the professional development work we do in the statewide dissemination work that continues.

Sharon Hessney and Michele Gage interviewed Minnesota citizens and highlighted their stories in the *Reality Checks: Mathematics in the Workplace* sections. Along with John Marshall, they also contributed the classroom vignettes to clarify the vision of the standards.

Over four hundred state and national reviewers contributed valuable and specific advice on final content revisions in Chapter 3. These comments challenged us to be more clear, concise, and specific and often identified some mathematical errors or miscommunications. Special thanks to John Marshall for his insightful review comments on these pages and his commitment to children.

The Minnesota Mathematics Best Practice Network is a group of teacher leaders, formed to provide professional development and personal support to Minnesota teachers. Many thanks to those Best Practice Teachers who have been involved in the *Framework’s* development, have participated in our pilot training sessions, and/or have made presentations themselves to disseminate the *Framework* in draft form around the state.

Thanks to Arnie Cutler, Executive Director of the Minnesota Council of Teachers of Mathematics, for providing personal oversight and support in the development process of both the *Minnesota Graduation Standards* and this *Framework*. Thanks to the Board of Directors of MCTM who provided official support for this document, and to the many MCTM members who worked on this project—as writers, reviewers, editors, and cheerleaders.

This project received daily support from SciMath<sup>MN</sup> staff:

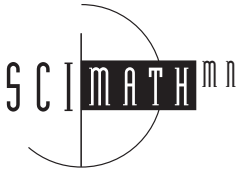
- As project manager, Anne Bartel initiated the writing conference format to develop the content of Chapter 3. This format fostered the professional conversations that translated into this policy work. Her vision for this project focused the work of many K-16 educators and her creative editing emptied many red pens as she worked with several writers and the Leadership Team to develop the remaining chapters.
- Vicki De Voss worked tirelessly to type, layout, and edit the entire review draft of Chapter 3. She also contributed to the drafts of several other chapters. Her remarkable organizational skills and her attention to details have been crucial in maintaining the consistent quality of these pages.
- Nancy Nutting contributed renewed energy to the project when she joined SciMath<sup>MN</sup> in the final two years of the Framework’s development. She challenged us to incorporate SciMath<sup>MN</sup>’s commitment to equity throughout this framework, wrote drafts of Chapter 4, oversaw the revision work, and managed the final last-minute details.
- Nancy Desmond’s careful and thorough work made Chapter 2: Best Practice research based yet readable and useful to busy classroom teachers. She also took on a major editing role in the last few, hectic months of this project, learning more than anyone would ever want to know about citing references.
- Deb Rose served as fiscal manager of the project and our right-hand assistant. We relied on her to handle a variety of tasks, from making conference and meeting room reservations to printing draft copies—all this while answering Frameworks-related phone calls and keeping the paper work organized. We are especially thankful for Deb’s sense of humor and personal support.
- Katie Bratsch, SciMath<sup>MN</sup>’s Communications Specialist, provided valuable assistance with complicated computer graphics, creative informational brochures, lengthy mailing lists, and communications with Don Schwert, our SciMath<sup>MN</sup> webmaster.
- Ed Hessler was our “adopted mathematician” who played a special role as our objective editor. His support of the development process, his insight into teaching and learning, and his friendship were invaluable to us.
- Kathleen Lundgren was a helpful sounding board, supportive friend, and inspired editor.
- Laurie Peterman was always one step ahead of us as she developed the parallel K-12 Minnesota Science Framework. She very willingly and generously offered us her insights as well as the rough drafts of the science document for our perusal.
- Bill Linder-Scholer, Executive Director of SciMath<sup>MN</sup>, maintained the vision of systemic reform and continually emphasized the role of the Framework in that vision throughout our work. His collaboration with the Graduation Standards Executive Committee and his networking with other state personnel were important factors in the endorsement of the Framework by the Minnesota Department of Children, Families and Learning and the Minnesota State Board of Education. We appreciate his ability to communicate our message so effectively throughout the state.

We would also like to express our appreciation for the cooperation we received from the cartoonists whose work introduces the sections of Chapter 3, from publishers whose tasks are included in the Sample Tasks within Chapter 3, and from persons who shared their personal stories of how mathematics is central to their jobs for the *Reality Checks: Mathematics in the Workplace* vignettes.

Finally, the creative graphics and layout work of Michael Hall and Debra Kelley and their staff transformed pages of text into a colorfully inviting and user-friendly document that clearly and coherently communicates our message.

Publication of this document is the culmination of three years of professional discussions, writing conferences, individual and group reviews, and editing sessions. This work has affirmed our belief in the power of collaboration. Those who have participated in this process are listed on the pages that follow. We offer apologies to anyone whose name was inadvertently omitted. The long list of names and the variety of participants' locations reflect that this policy document is truly a statewide effort. We thank all of the educators who gave generously of their time, their ideas, and their energy to create the *Minnesota K-12 Mathematics Framework*. We will continue to work together to turn this vision of mathematics education into a reality for all Minnesota children.

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## Graphic Design & Layout

**Hall Kelley, Inc.**  
Marine on St. Croix, Minnesota

