Table of Contents

Preface		. v
Part I A	n Introduction to Teaching Mathematical Modeling	. 1
Chapter 1.	What Is Mathematical Modeling?	3
Chapter 2.	Practices and Perspectives in Mathematical Modeling	11
Chapter 3.	Empowering Students through Action-Focused Critical Thinking	23
Chapter 4.	Building a Classroom Community to Support Mathematical Modeling	31
Chapter 5.	A Framework for Teaching Modeling	39
Part II T	he Four Big Ideas in Teaching Mathematical Modeling	47
Chapter 6.	Big Idea 1: Modeling Begins and Ends outside the Mathematical World	49
Chapter 7.	Big Idea 2: Modeling Deals with Situations That Are Open and Complex	59
Chapter 8.	Big Idea 3: Modelers Exercise Judgment	69
Chapter 9.	Big Idea 4: Modelers Decide When a Solution Is Good Enough	77
Part III	Including Mathematical Modeling in Your Teaching	83
Chapter 10.	Mathematical Modeling and the Elementary School Curriculum	85
Chapter 11.	Reflections from the Classroom	.91
Reference	es	99