

# CONTENTS

Preface.....	v
<b>PART I Change.....</b>	<b>1</b>
1. Transitioning to Common Mathematics Standards: Computational Fluency in the K–5 Curriculum .....	3
<i>Dawn Teuscher, Barbara J. Reys, Shannon Dingman, and Amanda Thomas</i>	
2. Implementing a New National Curriculum: A Japanese Public School’s Two-Year Lesson-Study Project .....	13
<i>Akibiko Takahashi and Thomas McDougal</i>	
3. Learning Trajectories for Interpreting the K–8 Common Core State Standards with a Middle-Grades Statistics Example.....	23
<i>Alan P. Maloney, Jere Confrey, Dicky Ng, and Jennifer Nickell</i>	
4. Allowing Students to Take the Lead in Mathematical Investigations.....	35
<i>Lisa B. Warner, Roberta Y. Schorr, and Steven J. Warner</i>	
5. The Effect of Instruction on Developing Autonomous Learners in a College Statistics Class.....	45
<i>Hope Marchionda, Summer Bateiha, and Melanie Autin</i>	
6. Flipped Classrooms and Task Engagement: Beyond Portable Lectures.....	55
<i>Jeremy F. Strayer and Brandon R. Hanson</i>	
<b>PART II Problem Solving.....</b>	<b>65</b>
7. Creating a Classroom Culture That Encourages Students to Persist on Cognitively Demanding Tasks .....	67
<i>Doug Clarke, Anne Roche, Peter Sullivan, and Jill Cheeseman</i>	
8. Developing Strategic Competence by Teaching Using the Common Core Mathematical Practices.....	77
<i>Jennifer M. Sub and Padmanabhan Seshaiyer</i>	
9. Increasing Access to Mathematics through Locally Relevant Curriculum.....	89
<i>Janine T. Remillard, Caroline B. Ebby, Vivian Lim, Luke T. Reinke, Nina Hoe, and Emily Magee</i>	
10. Using Rich Tasks to Promote Discourse .....	97
<i>Denise A. Spangler, JiSun Kim, Dionne Cross, Hulya Kilic, F. Asli Iscimen, and Diana Swanagan</i>	
<b>PART III Reasoning, Explaining, and Discourse .....</b>	<b>105</b>
11. Supporting Writing with the Student Mathematician Discourse Framework.....	107
<i>Tutita M. Casa</i>	

12.	Situating Expansions of Students' Explanations in Discourse Contexts .....	119
	<i>Jeffrey Choppin</i>	
13.	Multimodal Communication: Promoting and Revealing Students' Mathematical Thinking .....	129
	<i>Gwendolyn Moffett, Kristen Malzahn, and Mark Driscoll</i>	
14.	Teacher Discourse Moves: Supporting Productive and Powerful Discourse .....	141
	<i>Michelle Cirillo, Michael D. Steele, Samuel Otten, Beth A. Herbel-Eisenmann, Kathleen McAneny, and Jamila Q. Riser</i>	
15.	Promoting Mathematical Reasoning through Critiquing Student Work .....	151
	<i>Catherine Bénéteau, Sarah K. Bleiler, and Denisse R. Thompson</i>	
<b>PART IV Seeing Structure and Generalizing.....</b>		<b>161</b>
16.	Using Classroom Evidence to Inform and Improve Teaching .....	163
	<i>Christine M. Phelps, Felice S. Shore, and Sandy M. Spitzer</i>	
17.	Exploring Functions in Elementary School: Leveraging the Representational Context .....	171
	<i>Darrell Earnest</i>	
18.	Research-Based Modifications of Elementary School Tasks for Use in Teacher Preparation .....	181
	<i>Jennifer M. Tobias, Dana Olanoff, Amy F. Hillen, Rachael M. Welder, Ziv Feldman, and Eva Thanheiser</i>	
19.	Increasing Proficiency Levels of Mathematical Practices.....	193
	<i>Janet Hart Frost and Jacqueline Coomes</i>	
<b>PART V Assessment for Teaching and Learning .....</b>		<b>203</b>
20.	Mathematical Practices: Small Changes in Assessments = Big Benefits.....	205
	<i>Patricia D. Hunsader, Denisse R. Thompson, and Barbara Zorin</i>	
21.	Student Mathematicians Developed through Formative Assessment Cycles .....	215
	<i>Nicole Rigelman and Kellie Petrick</i>	
22.	Using Research to Inform Formative Assessment Techniques .....	229
	<i>Michelle Stephan, George McManus, and Robin Deblinger</i>	
23.	Making Mathematical Errors Springboards for Learning .....	239
	<i>Wendy S. Bray and Rossella Santagata</i>	
24.	Embedded Field Experiences as Professional Apprenticeships.....	249
	<i>Thomas E. Hodges and Heidi Mills</i>	