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Autore Yeh Cathery

Titolo Reimagining the Mathematics Classroom

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Altri autori (Persone) EllisMark W

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Sommario/riassunto

How can you maximize your students' learning as they engage in mathematics? What does the latest research reveal about developing mathematically strong and engrossing math instruction? Reimagining the Mathematics Classroom presents a comprehensive systems approach to examining mathematics teaching. It synthesizes and illustrates current research on the essential elements of mathematics teaching and learning, unpacking each component--the classroom physical space; mathematical discourse, tasks, assessments; and families and communities--and providing concrete practical strategies and tools teachers can apply directly to their work. In addition, tips on using technology to assess and enhance learning are embedded throughout the book. Reimagining the Mathematics Classroom delivers proven techniques and real classroom examples--written or videotaped--to address these and other important questions and concerns with which teachers grapple: How can I encourage collaborative problem solving during group work? How do I establish norms, routines, and ground rules for group and whole-class math discourse? How can I build on existing textbook problems to make them more rigorous, relevant, and accessible? What technologies help elicit and extend students' mathematical thinking? How do I assess students in their development of knowledge of procedures, concepts, and mathematical practices? How can I transform parental involvement to collaborative partnerships and joint engagement? Reimagining the Mathematics Classroom is a resource to explore individually, to share with a colleague, or to discuss as part of a study group. Professional development tools, such as those described below, are woven throughout the text, with supplementary materials (math problem worksheets, conversational prompts, purposeful questions, videos, and so forth available on NCTM's More4U website. Classroom cases in each chapter provide real-life scenarios of the research-based practices and guiding principles articulated in the chapter. Math examples from a range of grade levels focus on concepts that students have traditionally struggled to understand conceptually. Cases include reflection questions to guide in the analysis and

chapter ends with a bulleted list of strategies to help you follow through on that chapter's main theme in your own classroom. Reimagining the Mathematics Classroom is as practical as it is inspirational. It is sure to be a valuable addition to your professional library.

implementation of these ideas in your own teaching practice. Every