Focus in High School Mathematics: Reasoning and Sense Making for All Students

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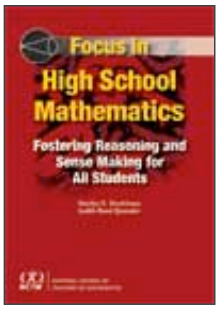
DESCRIPTION



Focus in High School Mathematics: Reasoning and Sense Making For All Students, edited by Marilyn E. Strutchens, and Judith Reed Quander, is a resource for secondary mathematics teachers, curriculum specialists, district administrators, and mathematics teacher educators that stresses excellence in mathematics education rests on equity. Focusing on particular aspects of the challenges of creating equitable mathematics experiences for all students, readers are urged to move beyond merely supporting generalities to enacting specific strategies. Six chapters in the book provide tasks, examples, and classroom vignettes that show how classrooms might be characterized by reasoning and sense making:

- Chapter 1 focuses on classroom experiences that made reasoning and sense making a core part of the classroom and how that changed the students in those classrooms.
- Chapter 2 provides recommendations for supporting mathematical reasoning and sense making for students who are learning English.
- Chapter 3 addresses the needs of students with disabilities in mathematics.
- Chapter 4 proposes strategies for working with gifted and talented students in both regular and advanced-placement courses.
- Chapter 5 urges readers to use data to close service, achievement, and opportunity gaps.
- Chapter 6 emphasizes the valuable contributions strong mathematics learning communities can make.

STAGE 1 LEADERSHIP DEVELOPMENT

Focus in High School Mathematics: Reasoning and Sense Making For All Students, edited by Marilyn E. Strutchens, and Judith Reed Quander, supports stage 1 development of specialists wishing to develop, model, and apply knowledge and strategies that reflect the importance of relevant, meaningful mathematics for all students. The overview of research on equity in mathematics education provides snapshots of important work on closing the opportunity gap. Various strategies and tasks for use with students are described and give information on effective practices for providing reasoning and sense making for all students. Chapter 6 describes several

high schools and their successful efforts at closing the opportunity gap through the efforts of the teachers and leaders in mathematics departments. The teacher community at Union High School successfully implemented instructional practices that increased the number of students taking higher-level mathematics classes and increased the number of students enrolled in 4-year colleges. Specialists might consider these strategies as a starting place for promoting equity. Key practices include:

- Developing and sharing instructional materials
- Communicating and reflecting on students and instruction
- Reinforcing the belief that all students can learn calculus
- Planning
- Rotating course assignments
- Making students the focus
- Classroom visits

Common elements shared by the high schools described in chapter 6 include these components of effective departments:

- Mathematics learning communities working collaboratively
- Rigorous curriculum with expectations for all students to succeed
- Pedagogical strategies designed to engage all students in meaningful mathematics

Leslie 3/30/12 12:17 PM

Comment [1]: I have been trying to make these kinds of lists consistent in capitalization, but this makes more sense without capitalization…Are there rules you would like to follow in decided when to capitalize in these lists and when to use this format?