

**Meeting:** 1003, Atlanta, Georgia, SS 2A, AMS-MAA-MER Special Session on Mathematics and Education Reform, I

1003-97-233            **Judith T. Sowder\*** ([jsowder@sciences.sdsu.edu](mailto:jsowder@sciences.sdsu.edu)), CRMSE, 6475 Alvarado Road, Suite 206,  
San Diego, CA 92120. *Helping future elementary teachers Reconceptualize Mathematics.*

Prospective elementary school teachers often need to reconceptualize mathematics rather than to review it. Instructional materials developed at San Diego State University (to be published by Freeman Press) provide prospective and practicing elementary teachers opportunities to develop a deep understanding of mathematics, as recommended in *The Mathematical Education of Teachers*. We have selected and developed topics and problems that exemplify mathematical reasoning and problem solving. "Sense-making" is the dominant theme, with regular expectations including explanations and justifications. The course content is sufficient for three semester courses but can be tailored to two courses. State frameworks and credentialing tests were considered while refining these materials. Course materials have been piloted numerous times at various institutions. We also provide instructors with assistance in developing the interactive teaching strategies recommended in MET and we will provide a CD with videos and information for a seminar course for instructors of courses for teachers. I will provide examples of the materials and of instructor assistance we offer. The courses also provide a foundation for additional coursework for middle school teachers. (Received August 31, 2004)