962-F1-538   **John G. Harvey*** (`jgharvey@facstaff.wisc.edu`), Department of Mathematics, University of Wisconsin, 480 Lincoln Dr., Madison, WI 53706-1388. *Mathematics Modeling for Pre-Service Elementary School Teachers.*

This paper will discuss the third of three courses (Math 130, 132 and 132) for undergraduate elementary education majors at the University of Wisconsin–Madison. In all three of the courses students collaborate to solve non-routine problems in small groups, write essays detailing their problem solutions and strategies, keep journals in which they write about the mathematics they study, and engage in whole-class discussions of the problems and their solutions. Math 132 has three content strands: probability, statistics, and mathematics modeling. The probability activities are ones in which students calculate both empirical and mathematics probabilities. In the statistics strand the problems solved are ones involving elementary concepts (e.g., mean, median, and mode). The mathematics modeling strand involves with problems and data from the "real world" including personal income, the national debt, and the depletion of the ozone layer. (Received September 15, 2000)