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Michael C. Burke* (burke@smccd.edu), Mathematics Department, College of San Mateo, 1700 W. Hillsdale Blvd., San Mateo, CA 94402. *Integrative Learning in a Mathematics Classroom*.

Lynn Arthur Steen has written, in *Mathematics and Democracy*, that "Quantitative literacy is more a habit of mind, an approach to problems that employs and enhances both statistics and mathematics ... Unlike mathematics, ... numeracy is often anchored in data derived from and attached to the empirical world." In this spirit, I assigned a collection of integrative assignments in Precalculus and Calculus courses at the College of San Mateo. Each assignment provided real data about an issue that we confront today: global warming, the population of Ireland, carbon dating, nuclear waste, and world population. Although the assignments were designed to use the mathematics being studied in class, the students began to think about other important, non-mathematical questions. Can we make decisions about such issues ourselves, or do we have to rely on experts? What role should data play in making decisions? What can we conclude from a mathematical model? What are the limitations of a model – when and how might it break down? In this session, we will look at some of the assignments and at examples of the student work they generated; we will use the student work to begin thinking about how our students think, and about how we can begin to cultivate, in them, new habits of mind. (Received August 27, 2007)