An understanding of the nature of science as a method of inquiry is a fundamental component of scientific literacy. Broadly, the “nature of science” refers to the assumptions, characteristics, and methods of scientific inquiry. Delvin (1998) refers to this understanding as “scientific awareness” and Varmus (1996) notes that this knowledge is essential, as it allows individuals to make decisions based on evidence rather than beliefs, desires, and biases. The fostering of an accurate understanding of the nature of science as a method of inquiry has long been a goal of science education and is currently emphasized by scientific and educational organizations concerned with the quality of science education (American Association for the Advancement of Science, 1993; National Research Council, 1996; National Science Foundation, 1996). Much of the resulting curricular reform has focused on the laboratory, and has resulted in laboratory investigations and exercises that are more investigative and inquiry oriented. Less attention has been focused on the lecture environment, however, where curricula, activities, and assignments can also be utilized to foster an accurate understanding of science as a method of inquiry.

Increasingly, the use of real-world, student-relevant activities, assignments, and curricula that invoke students’ critical thinking is recognized as a powerful

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