Thesis: The ‘History and Nature of Science’ in the Era of Standards-Based Reform

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Abstract:
The goal of science education in the United States is promoting scientific literacy for all students. The goal necessitates understanding the nature of science—what science is as a body of knowledge, explanatory tool, and human enterprise. The history of science is one of the most long-standing pedagogical methods of getting at the nature of science. But scientific literacy also encompasses education in scientific inquiry, and in the relationships among science, technology, and society (STS), as well as fact and theory-based subject-matter content.

Since the beginning of the standards-based reform movement (circa 1983) many attempts have been made to codify the components of scientific literacy. National level voluntary standards have lead to state standards. Under No Child Left Behind, those state standards have become integral parts of the educational system. Standards are political in nature, yet play the role of intended curriculum. I examine one thread of scientific literacy, the history and nature of science, from its beginnings in science education through the political perturbations of the last thirty years. This examination of "the history and nature of science" through the history of standards-based reform sheds light on our changing conception of scientific literacy.

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