

Science Literacy Through Science Journalism NSF DRK-12 Grant Proposal Project Summary

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The “Science Literacy through Science Journalism Project”, submitted as a DRK-12 grant under Contextual Challenges, Strand B, is designed to answer the following question: Does the teaching of science journalism using an apprenticeship model, reliable data sources and science-specific writing standards, improve high school students' understanding of science-related public literacy? Sub-questions include (1) Is the teaching of science journalism an efficacious, replicable and sustainable model for improving science literacy? (2) How useful are science-related standards and rubrics for scaffolding and evaluating students' science writing? (3) What is the nature of the engagement in science this apprenticeship model invites? In order to investigate these questions, a local science news service will be created in selected schools in the St. Louis metro area, supported by a working newsroom at the Saint Louis Science Center.

Anticipated products include a book on the teaching of science journalism, in-print and online science articles produced by students, a well-researched set of science writing standards and rubrics that can be used for instruction and evaluation nationwide, research articles on the affordances and challenges involved in using an apprenticeship model within schools, and research on student achievement relative to science literacy. This project should be viewed as part of a national effort to better understand how the teaching of science literacy can be scaffolded and how engagement in the production and interpretation of science text can be fostered. As students learn to assess information critically and write journalistically, their understanding of public science will be transformed and their ability to function as science-literate citizens—in the workplace and at home—will increase.

Intellectual Merit: Top-ranked science journalists and well-published senior faculty will use various methodological strategies to examine questions that are recognized by the American Association for the Advancement of Science, the National Research Council and the National Science Standards group as central to the development of a scientifically literate public. Their claim is that the very survival of the nation depends on the development of individuals who are able to seek out reliable science information, critically assess the information they encounter, learn from publicly available sources, and collect the data needed to make informed decisions. Science journalists routinely engage in all the behaviors listed above, but, to date, there are no model programs that teach science journalism in high schools as a way of learning these skills and no research to evaluate science journalism as a model for instruction.

Broader Impact: This project is sustainable within the St. Louis region and can be used as a model for other groups seeking to build science literacy within their communities. The project begins in, and will continue to support, poorly performing, low SES schools. It also includes the participation of urban, suburban and rural teachers. As result of this project, a new science journalism network involving the St. Louis Science Center and the local schools will be developed, and science writing from students will be shared with the public through local newspapers and online sources. This project will result in publications for the research community, the teaching public, and for local citizens.