



YALE NATIONAL INITIATIVE

to strengthen teaching in public schools®

Curriculum Units by Fellows of the National Initiative

2012 Volume VI: Asking Questions in Biology: Discovery versus Knowledge

Preface

In April 2012 the Yale National Initiative to strengthen teaching in public schools® accepted seventy-five public school teachers from seventeen school districts in nine states to participate in seven national seminars held at Yale. The Initiative is a long-term endeavor to influence public policy toward teacher professional development, in part by establishing exemplary Teachers Institutes in high-need school districts in states throughout the country.

Following the approach developed in New Haven and implemented in other cities, Teachers Institutes are educational partnerships between universities and school districts designed to strengthen teaching and learning in a community's public schools. Evaluations have shown that the Institute approach exemplifies the characteristics of the highest-quality teacher professional development, enhances teacher quality in the ways known to improve student achievement, and encourages participants to remain in teaching in their schools.

Overall, two thirds of the teachers, named National Fellows, were participating for the first time. The Fellows came from a school district that is planning a new Teachers Institute for Richmond, VA; from school districts that are exploring the establishment of a new Teachers Institute for Chicago, IL; Diné Nation, AZ; Emeryville, CA; San Jose, CA; San Mateo County, CA; and Tulsa, OK; and from school districts that are partners in existing Teachers Institutes located in Charlotte, NC; New Castle County, DE; New Haven, CT; Philadelphia, PA; and Pittsburgh, PA.

The National Fellows attended an Organizational Session of the seminars held in New Haven on May 4-5. The seminars reconvened during a ten-day Intensive Session from July 9-20 and concluded in mid-August when the Fellows submitted their completed curriculum units. The seven seminars were on "Interdisciplinary Approaches to Consumer Culture," led by Jean-Christophe Agnew, Professor of American Studies and of History; "Storytelling: Fictional Narratives, Imaginary People, and the Reader's Real Life," led by Jill Campbell, Professor of English; "The American Presidency," led by Bryan Garsten, Professor of Political Science; "Narratives of Citizenship and Race since Emancipation," led by Jonathan Holloway, Professor of History, of African American Studies, and of American Studies; "How Drugs Work," led by W. Mark Saltzman, Professor of Chemical and Biomedical Engineering; "Asking Questions in Biology: Discovery versus Knowledge," led by Paul E. Turner, Professor of Ecology and Evolutionary Biology; and "Energy, Environment, and Health," led by John P. Wargo, Professor of Environmental Risk Analysis and Policy.

The twin purposes of the program were to provide public school teachers deeper knowledge of the subjects they teach and first-hand experience with the Teachers Institute approach. Each participating teacher wrote a curriculum unit to teach his or her students what they had learned, to share with teachers in their school district, and to disseminate to other teachers over the Internet. The units contain five elements: content

objectives, teaching strategies, sample lessons and classroom activities, lists of resources for teachers and students, and an appendix on the district academic standards the unit implements.

The curriculum units National Fellows wrote are their own; they are presented in seven volumes, one for each seminar.

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New Haven

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