



YALE NATIONAL INITIATIVE

to strengthen teaching in public schools®

Curriculum Units by Fellows of the National Initiative
2018 Volume V: Manipulating Biology: Costs, Benefits and Controversies

Preface

In March 2018 the Yale National Initiative to strengthen teaching in public schools® accepted teachers from seventeen public school districts in nine states and the District of Columbia to participate in five national seminars held at Yale University. The Initiative is a long-term endeavor to influence public policy on teacher professional development, in part by establishing exemplary Teachers Institutes for high-need schools in states around the country.

Teachers Institutes are educational partnerships between universities and school districts designed to strengthen teaching and learning in a community's high-poverty, high-minority public schools. Evaluations have shown that the Institute approach exemplifies the characteristics of high-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.

Thirty-eight of the teachers, named Yale National Fellows, were from school districts that are planning or exploring the establishment of a new Teachers Institute for the Bay Area, CA; Chicago, IL; the Diné Nation, AZ and NM; the District of Columbia; Pittsburgh, PA; Richmond, VA; and San José, CA. Other National Fellows came from existing Teachers Institutes located in New Castle County, DE; New Haven, CT; Philadelphia, PA; and Tulsa, OK. Overall, half of the National Fellows were participating in national seminars for the first time.

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 five seminars were:

- “Race, Class, and Punishment,” led by James Forman, Jr., Professor of Law;
- “Poems about Works of Art, Featuring Women and Other Marginalized Writers,” led by Paul Fry, William Lampson Professor Emeritus of English;
- “Adaptation: Literature, Film and Society,” led by Brigitte Peucker, Elias W. Leavenworth Professor of Germanic Languages and Literatures and Professor of Film Studies;
- “Big Numbers, Small Numbers,” led by Roger E. Howe, William R. Kenan, Jr. Professor Emeritus of Mathematics; and
- “Manipulating Biology: Costs, Benefits and Controversies,” led by Paul Turner, Elihu Professor of Ecology and Evolutionary Biology, and Acting Dean of Science.

The purposes of the program are to provide public school teachers deeper knowledge of the subjects they teach and first-hand experience with the Teachers Institute approach. This reinforces their leadership in an existing Teachers Institute or prepares them to lead the development of a new Teachers Institute. Each

teacher writes a curriculum unit to teach his or her students about the seminar subject and to share with other teachers in their school district and, over the Internet, with teachers anywhere. The curriculum units contain five elements: content objectives, teaching strategies, examples of classroom activities, lists of resources for teachers and students, and an appendix on the district academic standards the unit implements. In these ways the curriculum units assist teachers in engaging and educating the students in their school courses.

The curriculum units National Fellows wrote are their own; they are presented in five volumes, one for each seminar, and are disseminated at teachers.yale.edu. We encourage teachers who use the units to submit comments online.

The Yale-New Haven Teachers Institute® is a permanently endowed academic unit of Yale University, which undertook the National Initiative in 2004.

James R. Vivian

New Haven

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