



# YALE NATIONAL INITIATIVE

*to strengthen teaching in public schools®*

Curriculum Units by Fellows of the National Initiative  
2024 Volume IV: Energy: Past, Present, and Future

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## Preface

In April 2024 the Yale National Initiative to strengthen teaching in public schools® accepted teachers from fifteen public school districts in nine states to participate in five national seminars led by Yale University faculty members. The Initiative, which builds upon the success of a four-year National Demonstration Project (1998-2002), promotes the establishment of new Teachers Institutes that adopt the approach to professional development the Yale-New Haven Teachers Institute developed and has followed since 1978.

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-three of the teachers, named Yale National Fellows, were from school districts that are planning or exploring the establishment of a new Teachers Institute for Chicago, IL; the Navajo Nation, AZ; Pittsburgh, PA; Richmond, VA; San José, CA; and locations in Texas. Other National Fellows came from existing Teachers Institutes located in New Castle County, DE; New Haven, CT; Philadelphia, PA; and Tulsa, Oklahoma. Overall, about half of the National Fellows participated in national seminars for the first time.

The National Fellows attended an Organizational Session of the seminars held at Yale on May 3-4. The seminars reconvened on campus during a ten-day Intensive Session from July 8-19 and concluded in mid-August when the Fellows submitted their completed curriculum units. The five seminars were:

- "Landscape, Art, and Ecology," led by Timothy Barringer, Paul Mellon Professor in the History of Art;
- "A History of Black People as Readers: A Genealogy of Critical Literacy," led by Roderick A. Ferguson, William Robertson Coe Professor of Women's, Gender and Sexuality Studies and of American Studies;
- "Poetry as Sound and Object," led by Feisal G. Mohamed, Professor of English;
- "Energy: Past, Present, and Future," led by Gary Brudvig, Benjamin Silliman Professor of Chemistry; and
- "Evolutionary Medicine," led by Paul E. Turner, Rachel Carson Professor of Ecology and Evolutionary Biology.

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 to high-quality professional development. 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 their students about the seminar subject and to share with other teachers in their school district and, through our website at [teachers.yale.edu](http://teachers.yale.edu), 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. 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.

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