



Curriculum Units by Fellows of the Yale-New Haven Teachers Institute  
2018 Volume II: Engineering Solutions to 21st Century Environmental Problems

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## Preface

In February 2018, teachers from New Haven Public Schools became Fellows of the Yale-New Haven Teachers Institute® to deepen their knowledge of the subjects they teach and to develop new curricular material to engage and educate the students in their school courses. Founded in 1978, the Institute is a partnership of Yale University and the New Haven Public Schools, designed to strengthen teaching and improve learning of the humanities and STEM fields in our community's schools. Through the Institute, Yale faculty members and Public Schools teachers join in a collegial relationship. The Institute is also an interschool and interdisciplinary forum for teachers to work together.

Teachers had primary responsibility for identifying the subjects on which the Institute would offer seminars in 2018. Between October and December 2017, teachers who served as Institute Representatives and Contacts canvassed their colleagues in New Haven public schools to determine the subjects they wanted the Institute to address. The Institute then circulated descriptions of seminars that encompassed teachers' interests. In applying to the Institute, teachers described unit topics on which they proposed to work and the relationship of those topics both to Institute seminars and to courses they teach. Their principals verified that their unit topics were consistent with district academic standards and significant for school curricula and plans, and that they would be assigned courses or grade levels in which to teach their units during the following school year.

Through this process two seminars were organized. The seminar entitled "Engineering Solutions to 21st-Century Environmental Problems" was led by Jordan Peccia, Thomas E. Golden, Jr. Professor of Environmental Engineering. Between February and July, Fellows participated in seminar meetings, studied the seminar subject and their unit topics, and attended a series of talks by Yale faculty members.

The curriculum units Fellows wrote are their own; they are presented in a volume for each seminar. The units, which were written in stages over time, contain five elements: content objectives, teaching strategies, examples of classroom activities, lists of resources for teachers and students, and an appendix on the academic standards the unit implements. They are intended primarily for use by Institute Fellows and their colleagues who teach in New Haven and are disseminated online at [teachersinstitute.yale.edu](http://teachersinstitute.yale.edu).

The Yale-New Haven Teachers Institute is a permanently endowed academic unit of Yale University. The New Haven Public Schools, Yale's partner in the Institute, has supported the program annually since its inception.

James R. Vivian

New Haven

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