

## Application

In 2021 the Institute will accept as Fellows teachers of English, history, languages, arts, science, and mathematics from New Haven's public elementary and secondary schools. Teachers interested in applying participate in an Open House when seminar leaders describe and answer questions about the seminar topics. Interested teachers discuss their potential eligibility with a School Representative or a Steering Committee member who recommends and works closely with those teachers who submit an online application. To learn more about participating in the Institute, speak with your School Representative or a member of the Steering Committee.

**Open house:** January 5, 2021

**Application deadline:** January 26, 2021

**Notification concerning selection:** February 17, 2021

### Steering Committee

Carol P. Boynton, Edgewood Creative Thinking through  
STEAM Magnet School  
Jason J. Ward, Barack H. Obama Magnet University  
School

### School Representatives

Somi Devi Akella, Wilbur Cross High School  
Cheryl A. Canino, Bishop Woods Architecture and Design  
Magnet School  
Daniel Croteau, Barnard Environmental Studies School  
Melissa A. Dailey, Sound School  
Felicia S. Fountain, Ross Woodward Classical Studies  
School  
Taniesha Granger, King-Robinson Inter-District  
Magnet School  
Sean T. Griffin, Roberto Clemente Leadership Academy  
for Global Awareness  
Aron S. Meyer, Engineering and Science University  
Magnet Middle and High School  
Robert M. Schwartz, Cooperative Arts and Humanities  
High School

### School Contacts

Laura A. Carroll-Koch, John S. Martinez School  
Melody S. Gallagher, Mauro-Sheridan Science,  
Technology and Communications School  
Susan B. Hansen, Columbus Family Academy  
Mary Healy, Wexler-Grant School  
Michael Petrescu, Engineering and Science University  
Magnet Middle and High School  
Kathleen Z. Rooney, Hill Regional Career High School  
Barbara A. Sasso, Wilbur Cross High School  
Eden C. Stein, Worthington Hooker School  
Stephanie White, Celentano Biotech, Health, and Medical  
Magnet School



**Yale-New Haven  
Teachers Institute®**

## Seminar Descriptions

**2021**

## **“The Earth’s Greenhouse and Global Warming,”** led by Peter Raymond, Professor of Ecosystem Ecology and of Geology and Geophysics

The earth is warming at an unprecedented rate. The global community is pushing towards stabilizing warming at 2o C (~3.5o F). There are two major global processes that are critical to understanding the science of this warming. The first is the energy, or heat budget of the atmosphere, while the second is the controls on greenhouse gas concentrations in the atmosphere. This seminar for the New Haven Institute will focus on the dynamics of these two global phenomena in order to provide teachers with an understanding of the science behind climate change. Topics to be addressed will include:

*Energy in the Atmosphere.* Concepts covered in this unit will include short wave and long wave radiation, the major processes controlling how much of this radiation has been delivered to the earth through geological time, latent and sensible heat, the role of clouds, and albedo.

*The Greenhouse Effect.* Here we will review the 3 main radiatively active gases (CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O). We will discuss how they form the greenhouse effect.

*Natural exchange of Carbon between the Atmosphere, Biosphere, and Oceans.* This unit will track atmospheric CO<sub>2</sub> and how it moves through the earth’s 3 major reservoirs through natural processes

*Breaks in the cycles.* This section will focus on how human disturbance has altered the energy and greenhouse gas budgets of the atmosphere.

*Climate Change Feedbacks.* This unit will cover the processes that are potential positive and negative feedbacks to warming, such as the warming of the permafrost.

*Ocean Acidification.* Here we will discuss how the uptake of human derived CO<sub>2</sub> leads to ocean acidification and the potential impacts on ocean environments.

*Global Warming Myths.* This unit will discuss misinformation around the science of climate change by introducing and discussing common myths around the physical science of climate change.

What you can do. In this final unit we will discuss potential ways that individuals and society can manage a warming earth.

The seminar will include readings from text books, climate primers, and summaries from IPCC publications. It will also include 4-5 hands on demonstration components. Each of the above units provides an opportunity for curriculum development by the Fellows.

## **“How to Do Things with Maps,”** led by Ayesha Ramachandran, Associate Professor of Comparative Literature

This seminar begins with the premise that maps both create narratives and influence the shape and interpretation of texts. As historical objects, maps offer narratives about how we imagine and organize ourselves in psychological, spiritual, social and political terms; but the map has also become a charged concept in contemporary literary and social theory, codifying ideas and expectations about space, place, orientation and itinerary. Thus, we will trace the shifting intersections between cartographic technologies, social-political conflict and literary form, moving from the “cartographic revolution” of the sixteenth century to the grand digital-spatial dream of Google Earth. Topics covered will include: spatial literacy in verbal and visual texts, cartographic technologies and instruments; maps in books and as books (atlases); and textual uses of various mapping practices (spiritual, geographic, conceptual, data-driven); these topics will be anchored in readings of Camões’s *Lusiads*, and Pynchon’s *Mason & Dixon*, and Calvino’s *Invisible Cities*, with a variety of complementary materials (travel accounts, navigational tracts, broadsides, poems, maps, globes, atlases). Depending on interest and the participants, the course can engage more with political/historical/social/empirical questions or slant more towards intersections between cartography and literature—though it will contain some combination of all these things. Our materials and methodologies also mean that the course can function as an alternative introduction to themes in book history and the digital humanities (if there is sufficient interest). This seminar will make ample use of online digital materials from the Beinecke Library, the Newberry Library and John Carter Brown Library.

## **“The Social Struggles of Contemporary Black Art,”** led by Roderick Ferguson, Professor of Women’s, Gender and Sexuality Studies and of American Studies

This seminar puts contemporary black art from visual artists in North America, Europe, Latin America, the Caribbean and Africa in conversation with black writers from those regions. It does so to illustrate the conversations that were explicitly and implicitly taking place between visual artists, philosophers, writers, and cultural critics. The course covers such issues as homophobia, transphobia, patriarchy, colonialism, neocolonialism, police violence, racism, war, migration, poverty, and ecological devastation.

## **“Developing Anti-Racist Curriculum and Pedagogy,”** led by Daniel Martinez HoSang, Associate Professor of Ethnicity, Race, and Migration, and of American Studies

The seminar provides Fellows with the concepts, skills and resources to develop anti-racist curricular materials and pedagogical practices, drawing especially from traditions of Black Studies, Latinx Studies, Indigenous Studies, and Ethnic Studies. Moving beyond the more limited paradigms of racial colorblindness and diversity, the seminar introduced curricular strategies for centering race and racism in ways that are accessible to students from a broad range of backgrounds, and that work to advance the overall goals of the curriculum. Fellows will be invited (but not required) to bring in existing curriculum unit or set of lesson plans they already use and to redesign it with new strategies, texts, concepts and commitments introduced through the seminar. The seminar is appropriate for teachers across all subject areas in the humanities, creative arts and social sciences. It will be especially relevant to high school teachers who may be teaching the new course in Black and Latinx Studies mandated by the State Board of Education beginning in 2022. Fellows who have previously taken my seminar “Teaching About Race and Racism Across the Disciplines” in 2019 are welcome to apply to this seminar.