Climate Change in the Classroom  
Summer 2013 Teacher Workshop  

Online Workshop Sessions: July 31 – August 1, 2013  
Workshop at NASA/Columbia University: August 5-6, 2013  
2880 Broadway, New York New York 10025

Who Should Attend?

Science, mathematics, English and social studies educators (grades 8-12) interested in interdisciplinary environmental and climate change education. A team of teachers from a school is preferred but not required.

What Will Teachers Learn?

Teachers will explore a wide variety of media, text and data to enhance their understanding of the complex global issues surrounding climate change. In addition to online and collaborative learning with facilitators and peers, participants will have opportunities to work with NASA and Columbia University scientists from the Goddard Institute of Space Sciences.

Problem-based learning, real-world simulation and analysis will be applied and reviewed for classroom use to help students meet Common Core State Standards and Next General Science Standards. A wide range of instructional strategies will be presented for engaging students in interdisciplinary investigations around the topic.

A special emphasis will be placed on exploring climate and energy data to develop literacy for evaluating energy solutions to mitigate global climate change, and for using science to inform media consumption.

How the Workshop is Organized

A newly developed experiential learning curriculum, HOT: ONE WORLD, ONE CLIMATE, will be one of the main course texts to support this blended learning workshop. During the online sessions:

- Attend specialized interactive online chats (via Google hangout) with NASA and Columbia University scientists and view and discuss talks from global thought leaders.
- Field-test the Hot curriculum by addressing relevant guiding questions, using climate data, mathematical reasoning and analysis tools.
- Study cutting edge climate science research and related media around practical classroom applications.

At face-to-face sessions in New York:

- Participate in an educational simulation to involve students as scientists and decision-makers in a global challenge –
Finding energy solutions to mitigate climate change.

- Play roles of global youth confronting and making sense of climate change causes and impacts.
- Form teams to do climate mitigation tasks, assess energy solutions and present recommendations – using science, math, critical-thinking, and computing and social media.
- Develop customized plans for the use of the Hot curriculum in the classroom.
- Collaborate with NASA and Columbia University Scientists around the Hot curriculum role play.

**Stipend**

Teachers accepted to participate receive a $700 stipend, $350 will be paid by Real World Matters upon completion of the workshop in August 2013, with the expectation that each teacher’s school will supply a minimal matching stipend of $350.

**Earn Credit**

Participants can take the workshop for their personal professional development or elect to take the course for 1 or 2 graduate credits (approximately 14 contact hours per credit hour) at the reduced rate from The University of Michigan - Flint. Students opting to receive graduate credit must complete the additional workshop commitments outlined in the syllabus. Upon acceptance to the course we will direct participants to the appropriate forms and registrationsites links at UM-Flint.

**Faculty**

RYAN GOBLE is an adjunct professor of education at multiple universities and professional development leader in Chicago Public Schools. He is the founder Mindblue.com and the social media network Making Curriculum Pop that reaches nearly 7000 teachers all over the globe. He is a nationally recognized speaker, writer an expert on media literacy and project-based interdisciplinary curriculum practices.

PUSHKER KHARECHA is a climate research scientist at NASA Goddard Institute for Space Studies (GISS) in the Center for Climate Systems Research and lead/co-author on numerous publications with acclaimed climate scientist, James Hansen. His research interests include: climate change, energy mitigation/energy solutions, using science to inform sound environmental policies.

CAROLYN HARRIS is the Climate Education Coordinator at NASA GISS in the Center for Climate Systems Research. Lead author of HOT, she formerly lead the nationally recognized Institute on Climate and Planets at GISS, involving students and teachers throughout the New York metro area in climate research experiences.

CONTRIBUTING FACULTY at NASA GISS and COLUMBIA UNIVERSITY’S EARTH INSTITUTE will participate as advisers, meeting with and engaging in online discussions with teachers.

**Commitment from Teachers**

Assignments for all workshop participants:

- Submit a reflection and evaluations for the lessons in one unit of the Hot curriculum during the online workshop and develop 1 assessment for the Unit.
- Reflect on workshop blog questions about pedagogy, content and classroom applications through workshop blog entries and discussion.
- Partial participation in the online workshop sessions.
Participate in the 2-day New York workshop at GISS/Columbia University and Hot Simulation. Create a Climate Change in the Classroom action plan based on your workshop experience.

**Additional Assignment** for credit-earning workshop participants:

- Full participation in the online sessions with additional blog and discussion requirements.
- Develop 2 student assessments for the Hot Unit reviewed.
- Choose and submit one of the “Differentiated Learning” assignments related to your workshop experience (roughly a five-page paper equivalent) on climate change and science learning across disciplines.

Please note: Teachers may opt to participate in the online sessions only, without receiving a stipend.

**How to Apply (Deadline: June 21, 2013)**

Complete the application that can be downloaded [here](#). Secure $350 in stipend matching funds from school. Download Letter to School Administrator [here](#).

**Accommodations and Travel**

Teachers are responsible for travel and accommodations for the workshop sessions in New York City at GISS/Columbia University. Teachers are welcome to explore hotel options anywhere in the city. We recommend the following hotels that are near Columbia University (on the Upper West Side) and where discount rates are available to Columbia University:

Hotel Newton
2528 Broadway
New York, NY 10025
Phone: 212-678-6500
Fax: 212-678-6758
www.TheHotelNewton.com

The Lucerne Hotel
201 West 79th Street
New York, NY 10024
Phone: 212-875-1000
Fax: 212-362-7251
Toll-free: 800-492-8122
www.thelucernehotel.com