



EPA-NIEHS Climate Change Workshop Inspires High School Students

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There is no better time than during the blazing heat of a North Carolina summer to learn about climate change. In June 2011, the US Environmental Protection Agency (EPA) and the National Institutes of Environmental Health Sciences (NIEHS) co-sponsored a weeklong climate change workshop in Research Triangle Park, NC, the first of its kind.

Twenty-six academically-talented high school juniors and seniors, representing nearly every high school in Durham, NC, were chosen based on their interest in pursuing a career in science. Speakers from both the EPA and NIEHS brought their knowledge and enthusiasm for science and climate change to the workshop, with the goals of increasing knowledge and sparking interest in the subject.

Many of the EPA speakers have experience in environmental education outreach, having spoken and presented at elementary, middle, and high school events. As climate change becomes an increasingly important issue, these workshops are more relevant and critical in informing students of environmental challenges and potential solutions.



In the spirit of summer break, many speakers tried to involve the students without relying solely on classroom lectures.

EPA researcher Shar Samy took the students outside to use a solar cook stove. Through this hands-on demonstration, he showed the students how solar cooking can be used as an alternative to fossil fuel-based or wood-based cook stoves and help to reduce greenhouse gas emissions. Samy believes that solar cook stoves are just “one tool in the solutions box” for solving climate change.



Like Samy, EPA researcher Prakash Bhavne knows how to actively engage the students. Bhavne led the students in creating an inventory of the sources of greenhouse gases and the countries that emit the most, rewarding correct answers with candy. He believes that scientific inquiry not only gets the students to actively participate but also helps them learn and retain new material.

Other speakers literally wore their enthusiasm for climate change research. Not even the summer heat stopped environmental engineer Gayle Hagler from arriving at the workshop fully clothed in ski gear. She showed video clips of field research in the Arctic as an example of how scientists are involved in research. One particular video of leaking methane catching on fire elicited many laughs and gasps from the students.

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EPA researcher Drew Pilant spoke to the students in a way that they could connect to—through a rap song. In addition to his presentation on paleoclimatology, he performed a rap song which he wrote motivating the students to stay in school and educate their friends and families about climate change.



On top of the different lectures, hands-on activities, and games, EPA and NIEHS researchers engaged the students in team-building activities, communication exercises, and a tour of the EPA facilities.



“We need smart people to help us solve current and future environmental problems,” said Samy. Workshops such as this one are opportunities for the scientists of today to share their knowledge and inspire a new generation of problem-solvers.

The first step of the problem-solving starts now. As part of the workshop, the students are required to do an extension project in their communities or schools that involves what they learned.

Two students at Northern High School completed their extension project even before the school year began. During the summer, Amber and Cody used a

watts meter to measure energy consumption of various electronic devices around their school. They created flyers to share their findings—including the ability to save 121 pounds of coal a year just from turning off a computer when it’s not in use!

Inspired by the workshop, Jordan High School senior Kelsey reached out to the Alliance for Climate Education (ACE) and invited them to come give an assembly at her school. North Carolina ACE representative Johanna gave presentations on climate change to over 250 students in science classes.

Kelsey’s experience at the workshop has sparked her interest in environmental issues, and she has since joined her school’s Environmental Club. Kelsey’s involvement in the club and her contact with ACE led her and her classmates to apply and earn an ACE grant for Jordan High School. They will use the grant to renovate an old greenhouse and install rain barrels and a compost system at the school. They plan to plant a garden in the greenhouse for a salad bar, giving students in the lunch line a healthy and local food option.

Kelsey’s enthusiasm for climate change has propelled many of her friends to be interested in the Climate Change Workshop. Part of the appeal of the workshop, according to Kelsey, is learning facts from the scientists who actually study them. She enjoyed listening to scientists during the sessions and chatting with them during lunch. She’s glad to share what she’s learned in any way possible, saying that “in the US, we’re cushioned and can’t always see the effects of environmental problems.”

Outreach projects are an important part of the workshop, as they allow students to reflect on what they have learned and spread the knowledge to others. Climate change is an environmental issue that impacts future generations more than others. The EPA-NIEHS Climate Change Workshop allows the scientists of today to inspire the next generation of scientists, policymakers, and leaders.

For more information, contact:
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Read more about the workshop from NIEHS:
<http://www.niehs.nih.gov/news/newsletter/2011/july/spotlight-local/index.cfm>