

Volunteers from NIEHS wrap up outreach module at middle school

By Eddy Ball

Now entering its third year, the NIEHS Citizen Schools outreach program completed its latest module Dec. 11 at Lowes Grove Middle School in Durham, North Carolina, with an open house known as the WOW! event.

The open house is an opportunity for students to show off what they've learned during their apprenticeships to friends, family, and members of the community, as they celebrate the culmination of a ten-week interactive science education curriculum on Healthy Lungs, Happy Living.

With an emphasis on interactive learning, the program concluded its latest cycle with presentations by the middle school apprentices on lung capacity and the impact of pollution, by Team Breathers; the mechanism of breathing and lung physiology, by Team Exhalation; and a dramatic demonstration of the effect of cigarette smoking on lung health, by Team Living Lungs.

The exercises employed a hands-on, student-centered active learning approach to cultivate the participants' ability to make inquiries, and analyze and synthesize information.

Volunteers as citizen teachers

The outreach effort is coordinated by the NIEHS Office of Science Education and Diversity (OSED), directed by Ericka Reid, Ph.D., and staffed by NIEHS volunteer postdoctoral fellows and science and support staff (see text box). Working with Huei-Chen Lao, OSED K-12 science education and outreach coordinator, the NIEHS volunteers conceived, designed, revised, and presented the learning module.

"It's been a great program," Reid said. "We plan to stay involved with Citizen Schools with another module for next fall." The experience is valuable for students, but, as Reid noted, it also benefits volunteers, who thoroughly enjoy working with the students and value the opportunity to serve the community.

"I love the kids, and I wanted to give teachers some help," said volunteer Wanda Holliday, of the NIEHS Office of Acquisitions, about her first experience in the program. "The whole premise of Citizen Schools, getting citizens back involved in the community, is really important. They [the apprentices] benefit from getting involved with someone other than their teachers."

"It was important for me, as a first-time volunteer, that I had the support and encouragement of my supervisors at work and Citizen School team lead Huei-Chen Lao," Holliday added. "I wouldn't have been able to participate if they had not afforded me the time and the opportunity."

Participating in the outreach effort can also help postdoctoral fellows expand their career goals. "A lot of the postdocs, when they come to us, they are looking for this kind of experience to add to their resumes," Reid said, pointing to past volunteers who are now in scientific careers in outreach and education.

Celebrating its 20th year of service, [Citizen Schools](http://www.citizenschools.org/)

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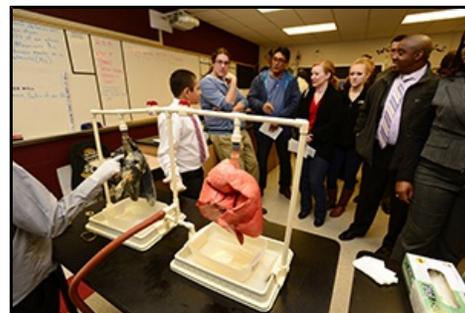
partners with public middle schools in low-income communities to provide an expanded learning day, by organizing volunteer professionals in a range of fields to enrich the educational experience for young learners. While NIEHS outreach modules have focused on basic science and public health, other modules in the Citizen Schools program at Lowes Grove included apprenticeships in electrical engineering, finance, tech startup, and Web design.



Team Breathers members demonstrated their lung capacity measurement apparatus to Holliday, left, and other visitors. (Photo courtesy of Steve McCaw)



One young apprentice acted out the physiology of breathing at the Team Exhalation demonstration. (Photo courtesy of Steve McCaw)



This colorful display contrasts graphically the difference between a healthy lung, right, and the lung of a longtime smoker, left, helping Team Living Lungs communicate its take-home message. (Photo courtesy of Steve McCaw)



Holliday, center, joined some of her students as the WOW! event came to a successful close. (Photo courtesy of Steve McCaw)



Leaders of the NIEHS and Citizen Schools effort said goodbye to the apprentices and looked forward to seeing each other again at Lowes Grove. Shown from left, are Citizen Schools teaching fellow Molly Wright, Lao, Citizen Schools teaching fellow Lauren Wolfe, Holliday, and Reid. (Photo courtesy of Steve McCaw)

A who's who of fall 2014 NIEHS Citizen Schools outreach

- Visiting fellow [Sara Andres, Ph.D.](#), of the Genome Stability Structural Biology Group
- Biologist [Kathleen Azzam, Ph.D.](#), of the Clinical Investigation of Host Defense Group
- Intramural Research Training Award (IRTA) fellow [Miranda Bernhardt, Ph.D.](#), of the Reproductive Medicine Group
- Head of the Comparative Medicine Branch Terry Blankenship-Paris, D.V.M.
- Visiting Fellow [Chun-Hsien Chu, Ph.D.](#), of the Neuropharmacology Group
- Wanda Holliday, of the Office of Acquisitions
- IRTA baccalaureate fellow [Palmyra Romeo](#), of the Synaptic and Developmental Plasticity Group
- Mary Waligora, of the Facilities Management Branch

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