

Paper Speakers Bring Music to the Ears of Future Engineers

Nearly 300 seventh-grade students at 24 Columbus schools were able to play their favorite music through speakers made of paper, wire and magnets, thanks to an innovative program designed by Ohio State ECE students and faculty, in collaboration with Big Brothers Big Sisters of Central Ohio.

Representatives of Project Mentor—an educational outreach initiative between Columbus City Schools and Big Brothers Big Sisters—invited Betty Lise Anderson, professor of electrical and computer engineering, to talk to middle school students and Big Brothers Big Sisters volunteers. She knew just the activity to spark kids’ interest in science and engineering, the speaker project which is one of six hands-on activities developed by ECE students during a senior capstone design class. Anderson, who leads the ECE department’s outreach program, has used the projects to reach more than 4,000 kids at some 20 Ohio schools since 2008. The only problem was that all 24 school visits had to take place in just five days. Anderson turned to members of RISE^ECE (Recruitment and Retention Initiative for Successful Engineers: Electrical and Computer Engineering) to coordinate the visits.



A future engineer tests his speaker.

RISE^ECE is a new student organization seeking to engage future engineers, promote engineering as a potential career, and spark interest in science and mathematics.

Led by Edwin Lee, RISE^ECE president, and Paul Berger, faculty adviser, nearly 60 student volunteers were recruited from the Ohio State Minority Engineering Program, the Department of Electrical and Computer Engineering, and across campus. Volunteers had to learn how to make the speakers, prepare 300 audio cables, and cut 300 pieces of magnet wire and 300 speaker templates.

“The RISE^ECE team, especially Edwin, recruited students from the

National Society of Black Engineers, Society of Hispanic Professional Engineers and the Lambda Psi Engineering Honorary, as well as students from outside engineering, to pull off this Herculean effort,” said Berger. “Activities like this show kids that science can be fun and introduces them to career possibilities, like engineering, that many may have never considered.”

Project Mentor aims to help students work toward graduation and a lifetime of success through strong mentoring relationships. The program focuses on the assets required to improve academic performance and high school graduation, with the goal of improving the entire education community—one child at a time.

“This is actually a foreshadowing of our future event, a shadowing day, where STEM-oriented middle school students can visit the OSU campus, hosted by a Big Brother or Big Sister volunteer,” said Berger. “We want to influence these students before they enter high school and perhaps help them choose the correct math and science track to keep them engineering eligible.”

RISE^ECE is accepting donations to enable one-on-one mentorship for future programming. Learn more about RISE^ECE at rise.ece.ohio-state.edu. Instructions for the speaker project are available at ece.osu.edu/about/outreach.



PHOTOS: PAUL BERGER

Ohio State engineering students Jasmyne Walker and Kenny Green assist Columbus City Schools students with building their speakers.