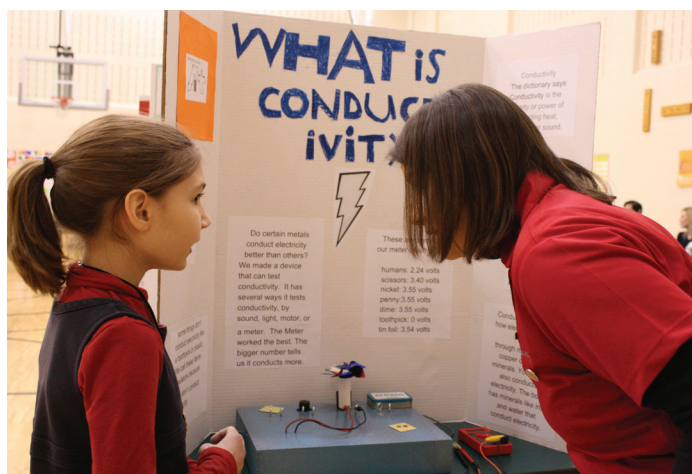


SCIENCE ON DISPLAY

Dow Ambassadors Connect With Students

By Matt Ottinger



Science ambassadors, including Koni Patterson (top photo) and Tina Kaiser, from Dow AgroSciences are partnering with schools to show students of varying ages how science applies to everyday life in a fun way.

Asking 10-year-olds their opinions about school subjects sometimes can yield unenthusiastic responses.

But when questioned if she enjoys science, Kelli Woods – a fourth grader at New Augusta South Public Academy in Indianapolis – passionately nods and answers, “Yes, very much – because I get to learn about new stuff and find out how it works.”

Kelli describes the project she entered in the school’s fourth grade science fair, in which she tested how soaking white roses in colored water would impact their appearance.

“My hypothesis was that the red (would make the rose change colors fastest) because it stains a lot,” she explains. “But it was actually the blue one.”

Dow AgroSciences’ Science Ambassadors gave guidance and judged the projects of Kelli and her classmates in late January in the New Augusta South gymnasium.

The scene was not a unique one as Dow’s brigade of over 300 staffers volunteer their time each year, often on nights and weekends. Last year, the ambassadors visited over 25 schools during about 75 events. Dow developed the program a decade ago, but added a major emphasis in 2012. Since then, officials estimate the company’s outreach efforts to promote science, technology, engineering and mathematics (STEM) education have impacted more than 4,200 teachers and almost 200,000 students.

In the field

The ambassadors normally do more than judge projects; they perform live experiments that promote engagement and discussion with students ranging from elementary school all the way to college.

“We’re very focused on collaboration, and this program is a way of putting that into practice,” relays Kenda Resler Friend, external communications and media relations leader. “We’re also focused on increasing the awareness of STEM in everyday life and career choices. These kids get coaching from real-live scientists, and they make it tangible for kids. We also want to assist in training STEM teachers and continue to give them ideas and resources to enrich what they’re doing.”

Koni Patterson – a trained molecular biologist turned human resources business partner for Dow – coordinates the Science Ambassadors program. She recalls how a visit from a scientist at an early age helped motivate her and her sisters to ultimately choose science as a career path. She relishes the opportunity to inspire future generations.

“At (Pike school district), a lot of the kids have never seen a scientist,” says Patterson, who also serves as the national president for Minorities in Agriculture, Natural Resources and Related Sciences. “The demographics are probably 70% to 80% African-American, 10% Hispanic and the rest are everything else. So these kids look like my kids, and I’ve gone to the schools and realized a lot of the kids had no idea about scientific experimentation or how to plan their projects.”

Patterson’s children have attended New Augusta South, furthering her direct impact on the school – and its administration is grateful for the partnership with Dow.

“We are now a STEM district and received one of the federal grants for that,” conveys New Augusta South Principal Nikki J. Henson. “It’s nice to have a partnership with fellow scientists in the city. (Patterson) has always kept in touch with us and sends us information on different science activities and clubs. Coming and serving as judges in our science fair is definitely helpful in getting our kids to work through the scientific process.”

Teaching is in their DNA

The ambassadors often perform experiments that illustrate the ubiquitous nature of science. Examples include extracting DNA from strawberries or using pipe cleaners and colored beads to display the complexity of a DNA strand, pointing out how people with differently-tinted hair and eyes would have dissimilar make-ups.

"We also teach them about healthy oils," Patterson adds. "We've tried to eliminate trans fats in our diets, and (Dow has a product) that's responsible for that. We'll have popcorn popped in our healthy oils, and we'll do a taste test (to demonstrate) that the ones in healthy oils may taste better. Making it something they can identify with makes them more apt to get involved."

Ricardo Ekmay, a Los Angeles native and research scientist who joined Dow after graduating from Cornell University and the University of Arkansas, asserts the lessons always elicit positive reactions from students.

"My favorite experience was an instance in which two kids were sitting next to each other, and one leaned over to the other and said, 'I can't believe how many women scientists there are,' " he relays. "That was awesome. That little thing alone of seeing a female scientist was inspiring to them. And that's our motivation – to continue to inspire and show them all of this is possible."

Tina Kaiser, a senior scientist and quality leader, is a seven-year veteran with the company. She estimates that she put in 40 to 50 hours of community service last year (between the Science Ambassadors and the School on Wheels program), and admits she was nervous the first time she experimented in front of students.

"I wasn't sure how it would go, but I loved it," she recalls. "They

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Expanding Knowledge

Dow AgroSciences has partnered with the following institutions (and others) to enhance STEM education in Indiana:

- Arsenal Technical High School
- Beech Grove Senior High
- Butler University
- Cathedral
- Clarence Farrington Elementary
- Francis W. Parker Elementary
- Franklin College
- H.L. Harshman Middle School
- Indiana University-Purdue University Indianapolis

- Lynhurst 7th & 8th Grade Center
- McKenzie Center for Innovation & Technology
- Pike Township Schools
- Plainfield High School
- Providence Cristo Rey
- Purdue University
- Sycamore School
- Union Elementary
- University of Indianapolis
- Wayne Township Schools
- William A. Bell Elementary
- Zionsville Community Schools



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Dow Ambassadors

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were so engaged, and their faces lit up when they examined the DNA. We may take it for granted because we've been doing it for so long, but the kids just loved it and started asking a lot of questions. I wasn't expecting all the questions, but that experience brought me in."

She also tells children that working in science doesn't just have to involve years and years of schooling to obtain a Ph.D. Kaiser explains that there are two- and four-year degrees available, and there are public relations and marketing jobs in the industry as well.

"Sometimes kids are hesitant; we don't want them to put up a barrier because they think it will be too difficult," she qualifies. "We like to show kids that science is everywhere; it's not hard and it's not scary."

She remembers having an affinity for science at an early age, immersing herself in the wonder of her microscope and chemistry kit. She's realized, however, that not all children have access to those kinds of tools and experiences. The opportunity to change the course of a young person's life is something she greatly values.

"I had a mom come up at an event months after I worked at the Cool Green Seeds Festival (in which Dow gives fourth graders hands-on experience in plant research) saying what an impact I made on her daughter, and how much she wants to go into science now," she concludes. "That's why I continue to do this extra work."

RESOURCE: Dow AgroSciences' Science Ambassadors program at www.dowagro.com/innovation/ambassadors