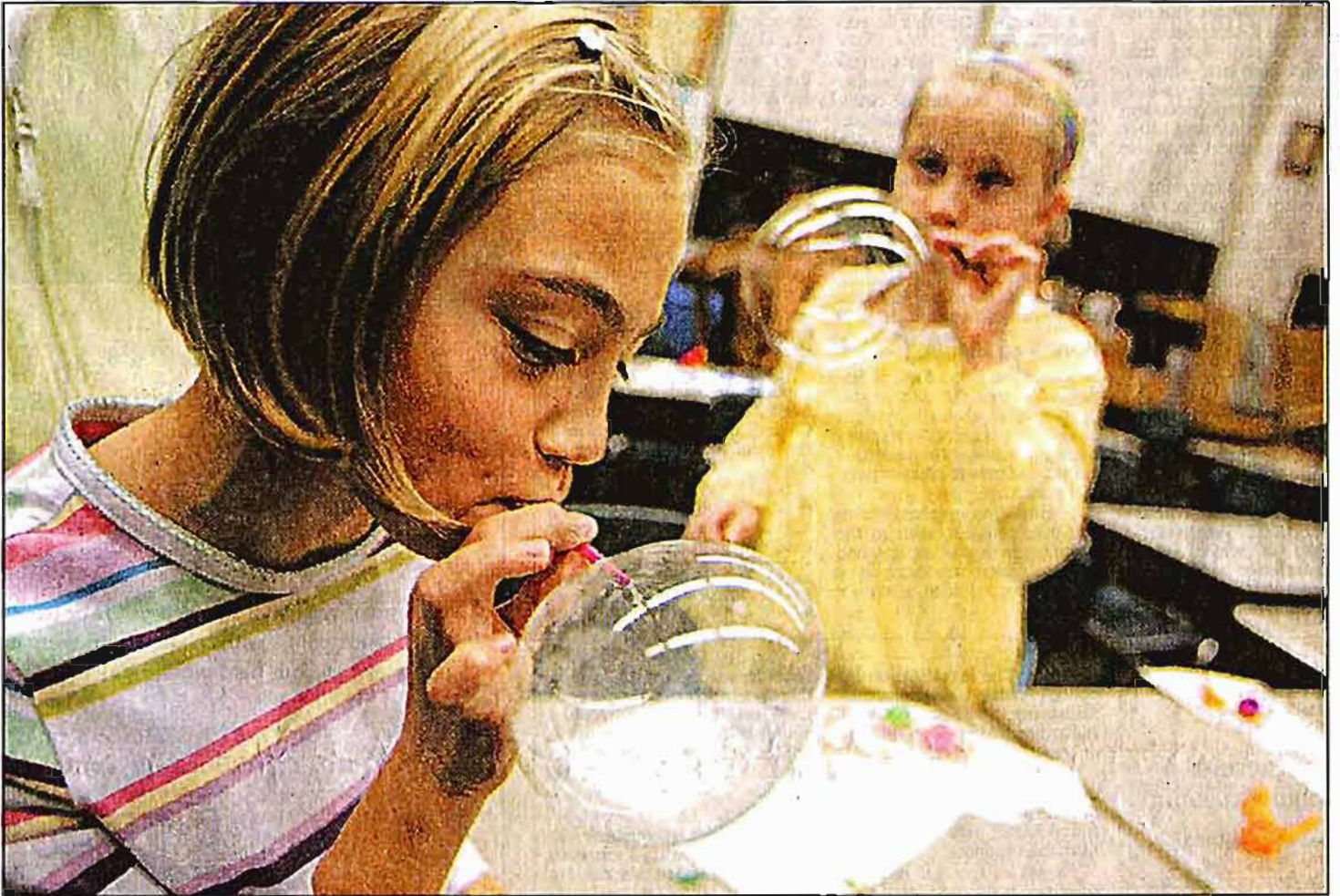


Science night is equal parts learning, fun



KAREN SCIBBY/Akron Beacon Journal

Green residents Abby Lertz (left) and Morgan Suponic, both 9, blow clear polymer balloons from a straw at St. Francis de Sales School in Coventry Township.

Playing with polymers a blast

UA program trains K-12 teachers, who pass on knowledge to students

By John Higgins
Beacon Journal staff writer

Six children sat in a classroom with their parents on a recent Tuesday night and listened to 12-year-old Nick Jordan explain the basics of polymers.

"Today we'll be investigating the

three ways that polymers are going to be made, and one of the ways is extrusion," Jordan said. "An example of extrusion is putting Play-Doh through the Play-Doh factory."

Jordan continued with the other methods - blow molding and injection

molding. He showed examples of each: blowing a clear polymer balloon from a straw and injecting polymer material into a mold to make a bouncing ball.

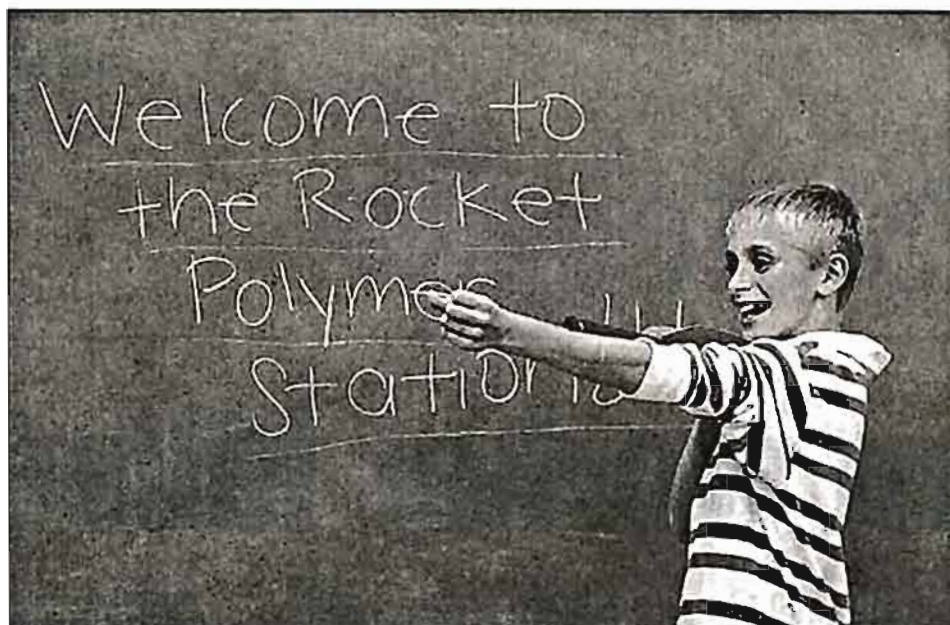
Jordan was among the 180-plus children and parents who came to the Partners in Polymers Science Night at St.

Francis de Sales School in Coventry Township. It was one of four family science nights organized by science teachers who received special training at the Akron Global Polymer Academy.

The academy, which is part of the

Please see Polymer, B2

Spencer Mellon, 12, a sixth-grader at St. Francis de Sales School in Coventry Township, launches a polymer rocket at the school's Partners in Polymers Science Night.



KAREN SCHEELY/Akron Beacon Journal

Polymer

Science night features four learning stations

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University of Akron's College of Polymer Science and Polymer Engineering, was started in 2001 to promote polymers among businesses and K-12 schools.

It has mostly done that through its Web site - <http://www.agpa.uakron.edu> - which includes lesson plans, video lessons, demonstrations and other resources for teachers and their students.

The academy also trains 25 teachers every summer in an intensive two-week institute, which is worth more than \$1,000 to each teacher because it includes three graduate credit hours donated by the university, a modest stipend, and money for classroom supplies such as the kits to make bouncing balls.

"In that, we open teachers' eyes to some of the really cool and interesting research that's going on in the field of polymer science and engineering," said Katharine Owens, professor of education in the College of Education, who has worked with the group since 2002. "We do that in a number of ways: formal classes, interaction with polymer grad students here in the university, and also with tours of local

industries that do polymer processing."

Diana Salamon, who teaches science and social studies at St. Francis de Sales, attended the institute two years ago.

"I love science, and I just came back to teaching," she said. "I really wanted to be updated and uplifted. A lot of new things were happening. The free graduate credit hours were always a bonus, and getting a stipend, too. Those were big incentives, but I just thought, 'Oh, this is perfect.'"

She returned to the seminar last year to become a "teacher leader" who can mentor others in her school and promote professional development.

She and three other teacher leaders developed the idea of the family fun night.

Another family science night was held last week at St. Paul School in North Canton; the remaining two will be at Emmanuel Christian Academy in Akron and Hudson schools.

Hands-on learning

The night at St. Francis featured four stations, where students learned about the various kinds of polymers, how polymers are made, how to shrink plastic, and how to create a polymer rocket.

Each station involved make-and-take projects, such as the bouncing balls and rockets, and the atmosphere was more like a school carnival than a science lab.

Carin A. Helfer has coordinated the K-12 outreach for the Global Polymer Academy for two years. Her background as a scientist includes a chemical engineering degree, industry employment, a doctorate in polymer science and research experience.

She was pleased to see the strong student interest at St. Francis de Sales, especially among the girls. She said girls' interest in science, math and other intellectual activities drops in middle school.

"I would really like them to think you can definitely do this and have a career," Helfer said.

She said the teachers also appreciate the academy's teaching resources, which are geared toward the state science standards. Competition for the summer institute is intense. About a quarter of the participants each year teach in Akron Public Schools. Others come from all over the Akron-Canton area.

"We typically have twice as many applicants as we're able to take," Owens said.

The academy is hosting a reception for teachers on Feb. 8 during the Science Education Council of Ohio conference at the John S. Knight Center in downtown Akron.

Salamon and the other teacher leaders will give a presentation on how to create a science family night at a school.

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