Current Issue

Shmoos in Space

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Skinner West science teacher Kori Milroy (M.A.S. SED '11) and students Hannon Wilson, Marc Anthony Huang, and Stone Chen practice skills for their microgravity experiment at the University of Illinois at Chicago laboratory of David Stone.
Photo: Michael Goss

A popular character from the Li'l Abner syndicated comic strip was the "Shmoo," a blob-like, bowling-pin-shaped creature.

Improbable as it may seem, the Shmoo is extending a gesture of celestial goodwill on behalf of a group of Chicago Public Schools sixth-grade students.

They are aiming for the stars in a biology experiment designed to detect the presence or absence of real-life shmoos—polarized growth by yeast cells—in a microgravity environment aboard the International Space Station (ISS). The two-month-long experiment was flown to the station in September on the first operational flight of the SpaceX Dragon commercial spacecraft.

The students, from Skinner West Classical, Fine Arts and Technology School on Chicago's West Side, were selected for the opportunity through the Student Spaceflight Experiments Program (SSEP). Their laboratory science teacher, Kori Milroy (M.A.S. SED '11), learned about the program while she was a graduate student at IIT and successfully led a group of fifth-grade Skinner students in their efforts to send an experiment about goldfish development to space last year.

The sixth-graders' 2012 proposal—"Shmooing Around in Space"—was one of more than 1,100 finalist entries from a nine-state region. A team of scientists, engineers, and science educators from across the United States selected the

proposal as among 11 experiments to go to space.

David Stone, a yeast biologist at the University of Illinois at Chicago, met with the six students who crafted the proposal over the spring and summer. He demonstrated how normal yeast shmoos form in response to pheromonal secretion, and practiced group skills for setting up the space experiment and loading the yeast into the NASA apparatus —a Teflon outer tube with two inner glass tubes. In the experiment, an astronaut breaks one of the glass tubes mixing dormant yeast cells with a medium containing the pheromone, while leaving the cells in the other tube unmixed with the pheromone as a control.

"When students come to a real lab to work with a real scientist doing a real experiment, there is no substitute for the experience; it comes to life for them," says Stone. "Kids are extremely curious about the natural world. We have to nourish that curiosity and show them how real science works."

IIT Professor Christopher White, chair of the Department of Physics, served as a local judge and, according to Milroy, is one of two influential teachers who stoked her passion for making science come alive for young students.

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