

# Physics: “The Greatest Show on Earth”

Fifth-grade girls visiting SMU are spellbound as physicist Fred Olness uses an electric current to make a pickle glow like a light bulb. They stand beside their desks to watch as he speeds across the front of the room on a four-wheeled cart powered by a fire extinguisher. And when the associate professor and chair of the physics department carefully sits on a bed of nails, the room fills with their applause.

For more than 10 years Olness and other physics faculty members and graduate students have demonstrated complex principles to school children through a program they developed called the Physics Circus. When presenting the circus, Olness uses the standard magic trick of snatching a tablecloth from under a place setting to demonstrate inertia. His audience giggles as he floats a styrofoam ball six inches above a blowing hair dryer to illustrate the properties of air flow.

“This is something we often do in science,” Olness explains. “If we don’t understand something

or can’t see it, we use a simple model to explain it.”

In November, more than 100 Hispanic students, parents, and teachers participated in the Physics Circus at SMU through the “Psyched About Science and Math” program coordinated by the Dallas Concilio of Hispanic Services. The program is designed to encourage students to attend college and pursue careers in math, science, and health, says Sybil Pietersz,

program support specialist for Dallas Concilio.

Olness’ lighthearted approach to physics is key to catching the girls’ interest, Pietersz says. “He made the concepts so easy for them to learn.”

Producing the Physics Circus is a natural byproduct of Olness’ family heritage. Two siblings are Broadway performers and his father and grandfather were physicists.

“My dad was a nuclear experimentalist at Brookhaven National Laboratory in New York. When I was a kid I thought of his lab as a magic show. I think the Physics Circus is an extension of that,” Olness says. “It’s fun to share it with others.”



*Physicist Fred Olness demonstrates the properties of force and pressure as he comfortably sits on a bed of nails.*



*Students see the property of inertia demonstrated when Fred Olness pulls a tablecloth from under a place setting.*



*Fifth grade girls were encouraged to pursue scientific careers at the Physics Circus.*

## CALENDAR

### MARCH 6 *Dedman College Book Club*

Dedman College Dean Jasper Neel shares his wit and wisdom as host of the new Dedman College Book Club. He will lead a discussion of *In The Beginning: The Story of the King James Bible and How It Changed a Nation, a Language, and a Culture*, by Alister McGrath. The review begins at 7:30 p.m. in McCord Auditorium in Dallas Hall and is followed by dessert. There is no charge to join. For more information call Tricia Barnett at 214-768-2691 or visit [www.smu.edu/dedman/bookclub/](http://www.smu.edu/dedman/bookclub/).

### MARCH 23 *Collegium daVinci Lecture Series*

The United States’ preparedness for bioterrorism is the subject of the March 23 Collegium da Vinci lecture. Robert Haley (’67) professor and director of the division of epidemiology at the University of Texas Southwestern Medical Center and Gulf War Syndrome researcher, will present the lecture. For more information, call 214-768-1177 or visit [www.smu.edu/collegium](http://www.smu.edu/collegium).

### SPRING *Godbey Lecture Series*

Poetry and performance are among the spring topics in the Godbey Lecture Series. English Professor Willard Spiegelman will lead “Four Poets and Four Poems: The English Romantic Ode.” The series “Who’s Playing and Who’s Listening” will be led by music historian Carol Reynolds. Spring and summer tours include “U.S. National Parks,” led by Geological Sciences Professor Lou Jacobs. For more information, call 214-768-2532 or visit [www.smu.edu/godbey/](http://www.smu.edu/godbey/).