

Half a million, and still counting, learn through CSU physics project

Loveland elementary school marks milestone

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Valentina Cerrillo Ortega, a Truscott Elementary kindergartner, checks out a color changing display Thursday afternoon during CSU's Little Shop of Physics visit to the Loveland elementary school. *(Michael Brian / Loveland Reporter-Herald)*

As kindergartner Haider Afsar ran from one physics experiment to another, learning about light, sound and so much more, he exclaimed, "It's so cool."

His excitement mixed with that of his classmates at Truscott Elementary School as they tried out different experiments and began to question how and why.

That is what Colorado State University professor Brian Jones had in mind 25 years ago when he

created Little Shop of Physics to bring hands-on learning to elementary school students throughout Larimer County.

And he couldn't help but smile when Haider, the 500,000th student to learn from the workshop and his classmates smiled, giggled and loved learning.

One of Haider's favorite experiments was an old television rigged up to a microphone to records and displays sound waves. He tried many different tones, screeching, shouting and talking more deeply and slowly, to change the image on the screen.

Meanwhile, other students turned the hand crank on an old drill that was hooked up to LED and incandescent Christmas lights — one of Jones' favorite experiments. The motor in the drill works as a generator, and students can see, just by the amount of effort needed to turn the crank, how much more efficient the LED lights are than the other bulbs.

At another station, teacher Mary Kay Randall helped her students make shadows on a phosphorescent green surface, and the kindergartners were simultaneously trying it out and figuring out how it works.

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"They're trying to come up with their own ideas of why," said Randall, who teaches at Truscott. "We're expanding their creativity. We're expanding their thinking."

Creating that critical thinking, fostering questions and learning by experimenting is what Jones had in mind when he created Little Shop of Physics, which elementary science coordinator Jan Lanting said has inspired so many students over the years.

"The other thing Brian (Jones) pushes is curiosity about our natural world and asking questions," said Lanting. "That leads to life-long learning."

When Little Shop of Physics started, Jones and two undergraduate students brought 25 experiments to different elementary schools. One of the first was BF Kitchen.

"The whole idea was just to give kids a chance to work with science in a way that was hands on, open ended, exploratory," said Jones.

Now, he works with an assistant director, an outreach coordinator and seven undergraduate students with a total of 300 experiments created by his college students over the years. The team brought 120 projects to Truscott on Thursday, teaching 246 students in several different grades.

The last class of the day, the dual immersion kindergartners, brought the overall tally to 500,003. As organizers counted down the line of students, Haider was in just the right spot to be the 500,000th student.

Jones said it was a little "crazy" to think of how much his idea has grown, and he is excited to see it continue to inspire students to learn about science.

"They're really investigating," he said as the youngsters literally ran from one station to the next, eager to see what each project would do and to try for themselves.

"They're just trying stuff. They're learning."

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Brian Jones, left, Director of CSU's Little Shop of Physics, and Izabella Atwood, right, Truscott Elementary kindergartner, experiment with a beach ball Thursday afternoon during the program's visit to the Loveland elementary school. (Michael Brian / Loveland Reporter-Herald)