



SCOTT MASON/The Winchester Star

Robert E. Aylor Middle School students Marcus Leon (left) and Renato Scudere won the grand prize in the junior division of the Frederick County Public Schools Science Fair held Thursday at Lord Fairfax Community College in Middletown. The two were awarded \$200 by Valley Health.

# Array of projects on display at science fair

## From biogas to fuel cells, Frederick County students' work earns them accolades, cash

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The Winchester Star

**MIDDLETOWN**

Renato Scudere sank against the wall and exhaled slowly. "Oh, my God," he whispered.

His partner and friend, Marcus Leon, 12, smiled widely.

In their hands was a check for \$200 from Valley Health.

The seventh-grade duo from Robert E. Aylor Middle School

in Stephens City were the winners of the junior district grand prize at the Frederick County Public Schools' District Science Fair on Thursday.

About 250 students presented 229 projects at this year's fair, held at the Corron Community Development Center at Lord Fairfax Community College.

Marcus and Renato's project tested how to obtain biogas as an alternative energy source from food wastes and cow manure.

"Nowadays, energy is expen-

sive," Renato said.

"So we wanted to know which was cheaper," Marcus finished.

"We found out that poop was actually better at producing biogas," Marcus said eagerly.

Mayra Leon, Marcus' mother, said she got excited when her son won the prize.

"I probably burned their ears off from yelling," she said, adding that she liked the boys' experiment because "maybe

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Sherando High School sophomore Catherine Pollack describes her science fair project to Sherando Principal John Nelson Thursday afternoon at the Frederick County science fair. Catherine won the grand prize in the senior division.

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that's the future."

All three division high schools and four middle schools entered the event.

Catherine Pollack, who won the high school grand prize of \$400, drove to the Atlantic Ocean to collect salt water for her project.

"It was only a day trip," she said. "It was fun."

Catherine, a sophomore at Sherando, used a homemade microbial fuel cell to create energy from chitin (the main component of insect and lobster exoskeletons) and anaerobic bacteria.

Sherando Principal John Nelson, after receiving a tutorial on the project from Catherine, remarked on her admirable fuel cell.

"If anything, you could be a plumber," he joked.

The State Arboretum of Virginia at Blandy Experimental Farm also presented two awards: most notable and most creative.

At the high school level, James Wood High School students George Graves and Cameron Morisak won the creative award for their project on the effect of different insulators on a building's ability to retain heat.

Jason Lee, of Sherando, won most notable for his project on the effect of solar trackers on output voltage.

At the middle school level, most creative went to Stuart Giffin, of Admiral Richard E. Byrd, whose project was about the effect of material on the time a log home collapses during a simulated earthquake.

Alexis Weir, also of Admiral Byrd, won most notable with her project detailing the effects of the spot a trout is released and its possible survival.

Dupont, Thermo Fisher Scientific and the Army Corps of Engineers provided 45 judges for the event.

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