CHIEFTAIN PHOTOS/CHRIS MCLEAN

Charles Rothbaum, 14, a student at Corwin International Magnet School, shows off the robots he used in his Southern Colorado Regional Science Fair entry Thursday at Pueblo Community College.

EDUCATION

Students unlock their secrets of science

### Competing in fair also brings them out of the shell of their labs

BY ZACH HILLSTROM
THE PUEBLO CHIEFTAIN

At the 15th annual Southern Colorado Regional Science Fair Thursday, science-savvy sixth through 12th graders from across Custer, Fremont and Pueblo counties showed judges that when it came to mastering and presenting chosen scientific research projects, the students had it down to a science.

The fair took place in the Academic Building at Pueblo Community College, where 84 student projects were submitted and evaluated by volunteer judges who scored each project on its adherence to the scientific method, its measurable results and its originality, among other factors.

George Guddendorf, a science teacher at Goodnight School who served as director of the science fair for the second consecutive year, said the event serves as a multi-faceted skill-building experience for students to not only learn scientific research methods, but also to build confidence.

"Some of my students are a little shy and so they're here, and they have to be able to articulate the things that they've done and to present themselves with confidence. Being able to take a step out of their comfort zones helps them be able to write in science and be able to draw those conclusions,"
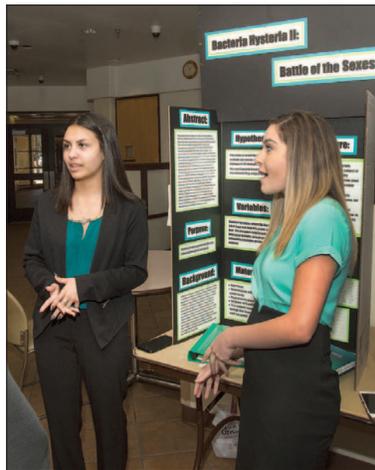
Central High School juniors Shaleese Romero (left) and Breanna Torrones tell judges about their project during the science fair.

he said.

"So it's really taking everything from academics and personality and kind of combining them all together to give them that opportunity to show everybody what they have."

The competitors were divided by age and subject category, with the junior division consisting of sixth- through eighth-graders and the senior division encompassing ninth through 12th grades.

Categories included animal sciences, behavioral and social sciences, chemistry, energy, engineering, environmental sciences, medicine and health, physics and plant sciences.

Top three finishers in each category earned a medal for their submission, however, only the top 23 projects across all ages and categories advanced to the next round.

The 62nd Colorado State Science and Engineering Fair will take place in Fort Collins from April 6–8, where participants from all across the state will square off to see which projects take home the competition's top spots.

Those who have advanced will have an op-

portunity to compete for over $250,000 in scholarships and prizes, with only high school seniors eligible to compete for scholarship offers.

One of the 23 advancing competitors was 14-year-old Charles Rothbaum, a robotics-enthusiast from Corwin International Magnet School who debuted his maze-navigating robotics project in the junior division and took home first place in the mathematics and computer sciences category.

"When I started out I wanted them to solve a maze, but I couldn't tell them where to go so they basically developed a pattern which just made it so that they wouldn't see any walls, so they basically just started spinning," Charles said.

From there, Charles spent the next five months working through a variety of hypotheses and adjusted the coding of graphical programming language in order to design the most effective program for the robots to avoid walls.

He said that of all the challenges he faced in completing his project, one of the biggest was learning to be comfortable while presenting his findings.

"You have to build up nerve so you can talk to lots of people and you have to really know your project and everything about it," he said.
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