

Students excel at difficult science projects

Annual science fair showcases complicated projects from determined students

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HAMDEN -- Judges huddled around Hania Zaman, a Shelton High School junior, at Thursday's 61st annual Connecticut Science Fair weren't learning how to cure a disease, improve the environment or find new energy sources.

Instead, they watched a computer play a flawless game of tic-tac-toe. Over and over and over.

"I've always wanted to work with computer intelligence," said Zaman, 16, who next hopes to teach the computer how to be unbeatable at checkers.

Two rows over in the Quinnipiac University gymnasium, Anita Gade, 17, a Fairfield Warde High School senior and future neuroscientist, explained how she contacted 30 professors at Yale University before one, Vinzenz Unger in the biophysics department, opened his research lab to help her with a project that investigated the role of stargazin glutamic acid, a brain-specific transmembrane protein in mice that have epilepsy or Parkinson's disease.

"I'm very encouraged," said Gade, Warde's only state science fair finalist.

The fair had 144 finalists representing 56 schools and one homeschooler from Hebron. That list was culled from nearly 500 entrants whose poster boards describing their projects filled the Quinnipiac gymnasium.

The top high school winners vie for \$5 million in cash and scholarships at the Intel International Science & Engineering Fair in Reno, Nev., in May. Three out of four top winners were from Greenwich High School -- Michael Tom, William Newberry and Eliza McNitt. Second in life sciences was Amoolya Narayanan, of Glastonbury High.

This year there were many firsts. The two-year-old Oxford High School was represented by four finalists, all students in an applied research lab run by teacher Frank LaBanca.

"There are eight kids in the class. Half of us made it," said John Knepple, 16, a sophomore who investigated the use of organic clay to absorb oil.



Phil Noel/Staff photographer Micol L. Bedarida, an eighth-grader at Hillel Academy in Fairfield, explains her science fair project to judge Alexandra Mcle of Mount Holyoke College during the annual Connecticut Science Fair at Quinnipiac University in Hamden.

Fairfield College Preparatory School put in a rare appearance with two finalists: Nicholas Hilton, 15, a sophomore who tried to find a way to speed up ethanol production, and Adam Kee, 14, a freshman, who worked on algae as a biofuel. For the last two years, Kee represented St. Catherine of Siena School in Trumbull.

This year, Olivia Kelly, a St. Catherine seventh-grader, took up where Kee left off, with a project that sought to grow a better tasting, more nutritious tomato through hydroponics -- growing plants in a nutrient solution, not soil. Kelly's effort merited first place in the seventh-grade Life Science division.

Rigel Janette and Avarham Moskowitz, eighth-graders from Fairfield's Hillel Academy, tested the resiliency and firmness of their school playground. The effort was rewarded with first place in the middle school physical science team division.

Others were happy just to be representing their school. Michael Quintero, an eighth-grader at Multi-Cultural Magnet School in Bridgeport, analyzed soil from the front entry ways of eight schools, including his own, to find higher lead rates in urban settings than in the samples culled from Monroe.

Elizabeth Gregorio, 13, of West Shore Middle School in Milford, combined a love of science and architecture to determine that butterfly-shaped roofs, which are concave in the middle, collect more recyclable water than gable roofs.

Brendan Wardlow, 14, an eighth-grader at Flood Middle School in Stratford, worked out a mathematical equation that suggests weather has a minimal impact on football players.

Science fair finalists Area finalists in the 2009 Connecticut Science Fair held Thursday at Quinnipiac University in Hamden: Escarlin Ramirez, Bassick High School, Bridgeport. Michael A. Quintero, Multicultural Magnet School, Bridgeport. Nicholas Hilton, Fairfield College Preparatory School. Adam C. Kee, Fairfield College Preparatory School. Anita Gade, Fairfield Warde High School. Micol L. Bedarida, Hillel Academy, Fairfield. Yaakov Breiner, Hillel Academy, Fairfield. Rigel Janette and Avraham Moskowitz, Hillel Academy, Fairfield. Jason L. Wiener, Hillel Academy, Fairfield. Elizabeth A. Gregorio, West Shore Middle School, Milford. John Knepple, Oxford High School. David Samuelman, Oxford High School. Daniel Spicer, Oxford High School. Charles Widmer, Oxford High School. Ryan J. Roussel, Shelton High School. Hania Zaman, Shelton High School. Brendan H. Wardlow, Flood Middle School, Stratford. Ethan C. Kee, St. Catherine of Siena School, Trumbull. Olivia N. Kelly, St. Catherine of Siena School, Trumbull. Kyle T. Ryan, St. Catherine of Siena School, Trumbull. -- Linda Conner Lambeck