

Stockton Faculty Share STEM Opportunities with Female High School Students from Across New Jersey at AAUW NJ teentech Event

About 200 Girls in Grades 9-11 Explore the Chemistry of Cuisine, Solder Switches to Help Children with Disabilities and More at June 4 Event

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Galloway Township, NJ – Girls in grades 9-11 from throughout New Jersey spent today soldering switches to help disabled children play with toys, learning about underwater robots, exploring the chemistry of cuisine, solving cybercrimes and much more, during the American Association of University Women (AAUW) NJ teentech 2015 at Stockton University.

The program's goal is to encourage girls to explore the many high-demand, well-paying careers in Science, Technology, Engineering and Mathematics (STEM) fields.

"The AAUW's mission is to empower girls to go as far as they can go," said Carol Cohen, president of AAUW-NJ. "The university picked very interesting topics and this was a phenomenal experience because the girls were engaged. Everyone I polled said they had learned something new."

"Every year the teentech event gives students the chance to learn more about the careers they might not think about every day, they may not have considered for themselves, that they might not think they have the aptitude for," said Dr. Susan Davenport, Stockton interim provost and executive vice president.

"Five hundred years ago, most of the world's economy was based on farming. One hundred years ago, many people worked in factories, but today many of the most exciting and well-paid jobs can be found in high tech science and computer labs. The skills needed for these jobs will

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be a combination of imagination and drive and that's why Stockton is happy you are here today. We want you to use your imagination, have fun and learn more about the variety of careers you can prepare for as you are planning for college," she said.

Victoria Battaglia, of Linwood, a freshman at Mainland Regional High School, said she "never thought about [being a scientist] before, but after this, maybe."

Battaglia attended "The Chemistry of Modern Cuisine" taught by Dr. Elizabeth Pollock, associate professor of Chemistry, held inside one of Stockton's state-of-the-art science labs in the Unified Science Center, which opened in 2013 and will soon be expanded.

"We were making chocolate. It's really fun because it's up and moving instead of just sitting in a classroom. [The science] is cool because you have all this stuff every day, then you realize what really goes into your food," Battaglia explained.

Dr. Pollock explained that her workshop was designed to dispel the notion that cooking is "women's work" and not challenging, because you can just follow a recipe.

"Modernist cuisine is using science and chemistry to create dishes with different flavor profiles - once you understand how the ingredients will interact through chemistry, you can make some seemingly weird combinations taste really good," she said.

Each student who attended "Let's Play," taught by Dr. Kimberly Furphy, associate professor of Occupational Therapy, had a collection of wires, CDs and parts to create their own switches using a soldering tool.

Furphy said, "When people have disabilities, sometimes some of the things they do need to be adapted. A big part of what I do as an occupational therapist is adapt what people do either through technology or devices to get them to be a little more independent. Our occupations are what we do every day. We work to help people. We are actually going to focus on really helping kids with disabilities play. If a kid can't turn on a toy, what can they do?"

The students learned how to craft a handmade switch that connects to a toy to enable a child with a disability to play and interact with the toy.

"I like hands-on activities. That's why I picked this [workshop], and also because my cousin has a disability and he can't use his legs sometimes," said Keila Santiago, a freshman at Camden Academy.

Other workshops focused on diagnosing diseases, determining probability, analyzing how soil provides nutrients to plants and using light waves to create repeating patterns called Lissajous figures.

Teachers and guidance counselors accompanied the students from 16 schools in Atlantic, Burlington, Camden, Cumberland, Ocean, Monmouth, Gloucester, Hunterdon and Mercer counties. They attended a session on "Safety on the Information Superhighway" and learned about education and career options available to their students in the STEM fields.

Donna Scalia of the U.S. Department of Labor outlined the [Registered Apprenticeship](#) program that helps students obtain jobs with room for advancement, while providing employers with well-trained workers.

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Susan E. Chittooran, a program analyst with the Women's Bureau at the U.S. Department of Labor, emphasized that STEM jobs are a way for women to close the pay gap that exists between male and female workers' lifetime earnings.

"Nineteen of the top 20 highest paid jobs are all STEM jobs," Chittooran said, adding that "women are leaving large sums of money behind" if they don't go into those fields. The unemployment rate for STEM jobs is a lot lower than unemployment in other fields, she said, with STEM jobs projected to grow at a much faster rate than other sectors.

Rachel Jones, a physics teacher at Hunterdon Central Regional High School who also advises the robotics club, was impressed with the day's events.

"For the students, it's great to have the hands-on experience with STEM - seeing that it's not just mechanical engineering," Jones said. "The activities are showing them that STEM is part of everything."

Her Hunterdon Central colleague, guidance counselor Deborah Hul, summed up:

"They're learning that women can do anything!"

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