

# Picatinny engineers help foster STEM interest in women

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Picatinny Public Affairs

Picatinny hosted an "Introduce a Girl to Engineering" night Feb. 27, for approximately 50 local high school females and their parents to encourage them to pursue careers in science, technology, engineering, and mathematics (STEM).

The event showcased the science behind different engineering jobs at Picatinny, and offered the students a chance to talk with female engineers about their career fields.

"This event is a great example of an activity that's helping to shift the perception of engineering for young females," said Gihan Oraby, event planner. "These young women's ability to see engineering from another female's perspective is essential."

"It allows them to observe women who are currently achieving new levels of accomplishments and technological breakthroughs. Seeing other women engaged in engineering is essential in establishing the "can do" attitude of women engineers in the workplace.

Events like these help send the message to women that engineering is an opportunity to help the community and create solutions for real life situations."

Oraby is the Chief, Medium Caliber Munitions and Rockets at the Armament Research, Development and Engineering Center (ARDEC) at Picatinny. More than 50 ARDEC engineers and scientist, both male and female, volunteered to support the event, which occurred after normal



Photo by Todd Mozes

Alessandra Vella from Boonton High School tests out the video display on a pair of googles

office hours.

"We don't see a sufficient number of STEM people coming into the workforce to fill the needs of the future," said Ed Petersen, STEM Program Manager for ARDEC.

One issue is that women are not entering the STEM fields at the same rate as men, he said.

According to a 2011 report from the U.S. Department of Commerce's Economics and Statistics Administration, "although women fill close to half of all jobs in the U.S. economy, they hold less than 25 percent of STEM jobs."

Out of Picatinny's roughly 6,000 employees, 1,025 are female.

However, of Picatinny's approximately 3,000 scientists and engineers, less than 300 are female.

"That's quite the disparity," Brig. Gen. John McGuinness, Picatinny Senior Commander and Program Executive Officer Ammunition, said to the event attendees.

"We're not here selling the military or saying that you need to be a military engineer, as far as I'm concerned," he continued.

"We're saying you need to become an engineer. Our

problem is a national problem, not a military problem. America needs infrastructure. We need environmental, we need chemical. We need to have better products for our consumers. There's jobs out there. Here's just a taste of what you can do at Picatinny to contribute to the defense of our nation."

Event attendee Samantha Rizzuto, 17, from The Academy for Math, Science and Engineering in Morris Hills, N.J., plans to be an aerospace or mechanical engineer.

A proponent of fostering scientific interest in females, Rizzuto began her own STEM non-profit, STEM-CAM (developing science, technology, engineering and mathematics through changing attitudes, building confidence and mentoring programs), and served as a motivational coach at Picatinny's STEM academy over the summer.

"I'm here because I had such a great time at the STEM academy and I wanted to meet more engineers," she said, "and being that they're female, that's also really inspirational to me. And it's nice to see all the projects and what they're working on -- there's a wide variety of things here tonight, which is awesome.

"There's a couple really interesting (displays) and I think it's nice that they have all the different types of engineering represented

"There's an ammunition exhibit that was really cool, and a couple of simulators where you can practice your targeting and aiming.

"And there's a whole station

on the science behind what the military has to wear and the construction of their uniforms and the engineering that goes into that."

Emily Roth, 17, of Morris Hills High School in Rockaway, N.J., would like to become an electrical or mechanical engineer. Her favorite part of the evening was learning about robots military members use to disarm bombs.

"I got invited (to the event) from my guidance counselor in school. I'm really interested in math and science and I thought it was going to be a lot of fun -- which it was."

Jinan Andrews, 18, is a senior at Vernon Township High School. She plans to attend the Air Force Academy after graduation.

"I'm so happy that Picatinny Arsenal created a program like this because there aren't that many women engineers, and having this opportunity to talk with female engineers is inspiring."

As far as the STEM gender gap, Andrews said she is optimistic that more women will enter into STEM fields in the future.

"I think that we just got a late start," she said. "Especially these days, women are becoming more interested in engineering."

For instance, her robotics team had more girls this past year than in previous years, she said.

"Maybe (females) might be a little intimidated because it's primarily a male-dominated career, but I think that programs like these show them that they can take part in something that men may have typically done in previous years."



Photo by Todd Mozes

Jinan Andrews from Vernon Township High School