



News Release

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ECBC Hosts Inaugural Team CBRNE STEM Educational Outreach Day

Local middle and high school students apply real-world science and engineering concepts during 35 separate hands-on STEM activities

Aberdeen Proving Ground, Md. – In an effort to expose local students to the jobs of tomorrow, the U.S. Army Edgewood Chemical Biological Center (ECBC) was supported by the National Defense Education Program to participate in the inaugural ‘Team CBRNE STEM Educational Outreach Day’ at Downer Hall Sept. 23 with seven partner organizations that call Edgewood home.

U.S. Army organizations, whose main mission it is to defend our nation and warfighters against chemical, biological, radiological, nuclear and explosives (CBRNE) threats, teamed up to entice nearly 400 middle and high school students from Cecil and Harford counties to pursue career pathways in science, technology, engineering and math (STEM).

Army engineers and scientists exhibited their expertise and cutting-edge technologies during an Edgewood-wide training and education event billed as the Team CBRNE Capabilities Showcase Sept. 22. On Sept. 23, their focus shifted to help create a highly-skilled future STEM workforce.

James Baker, Ph.D., civilian deputy technical director of ECBC scanned the cavernous bay of Downer Hall at the Edgewood Campus of Aberdeen Proving Ground and saw smiles.

“I was really taken with the fact that the volunteers who were giving demonstrations were smiling from ear to ear as they interacted with the students,” he said. “They really seemed to be enjoying what they were doing.”

Students, separated in groups of 10 to 12 led by volunteer chaperones, rotated through eight of the 35 stations set up with hands-on STEM activities presented by ECBC, the U.S. Army Element Assembled Chemical Weapons Alternatives, Chemical Materials Agency, Defense Threat Reduction Agency, Joint Program Executive Office for Chemical Biological Defense, Medical Research Institute of Chemical Defense, Public Health Command, and 20th Support Command.

During 20-minute STEM sessions, each student explored an array of innovative research, design and engineering techniques that are being implemented across the CBRNE community. Activities included developing packaging designs in preparation for an egg drop test, extracting

DNA from strawberries, practicing how to safely unpack and analyze unknown samples in a glovebox, learning about the application of radar to measure speed, engaging in protection factor testing for military respiratory protection, experiencing explosions in slow motion and manipulating a mannequin for medical simulation purposes.

Not only students, but also local educators and school administrators said that they appreciated the opportunity to gain insight into fast-paced technology developments that protect warfighters and our nation against some of the most dangerous threats in the world.

“Events like these definitely get students excited about STEM education and give them the ability to see what scientists and engineers here do on a day-to-day basis,” stated Sarah Voskuhl, coordinator of the Science and Mathematics Academy (SMA) at Aberdeen High School. “I think this will help students have a better understanding of what’s available in their community, where education can take them and what jobs are available.”

“We started off at one of the mobile labs, where students got to use the Gas Chromatography-Mass Spectrometry method and do some soil sampling,” she added. “It was also interesting for them to hear that people [that work] here get to go to Hawaii, Australia and all over the world, while they help other people and protect the warfighter.”

SMA teacher Yvonne Gabriel encouraged her students to ask questions and to seek out topics for potential science fair projects during the event. According to Gabriel, doing a science fair project is the first step for students to become comfortable with applying the scientific method and improving their problem solving skills.

“It is important for students to be here because they don’t know what’s out there for them due to their age and lack of access,” she said. “So, here they get exposed to it, turned on to it, and then teachers take that lead to help them learn more.”

“This is also an opportunity for me to see what’s going on [in the research and development field] and to take the initiative of finding out more based on what the students are interested in,” she continued.

Kathy Kunda, Coordinator of the Business and Education Partnership Advisory Council for Cecil County Public Schools, attended the event and observed the enthusiasm that students and teachers generated throughout the STEM activities.

“It has been absolutely phenomenal for students to exactly see what goes on in real-world lab situations,” Kunda said. “This hands-on experience has simply been eye-opening, not only for students but also for the teachers. They’re excited about bringing some of these experiments back to the classroom.”

For more information about ECBC, visit <http://www.ecbc.army.mil/>.

ECBC is the Army’s principal research and development center for chemical and biological defense technology, engineering and field operations. ECBC has achieved major technological advances for the warfighter and for our national defense, with a long and distinguished history of providing the Armed Forces with quality systems and outstanding customer service. ECBC is a U.S. Army Research, Development and Engineering Command laboratory located at the Edgewood Area of Aberdeen Proving Ground, Maryland. For more information about the Edgewood Chemical Biological Center, please visit our website at <http://www.ecbc.army.mil/> or call (410) 436-7118.