



# News Release

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## Pre-engineering students design, build and test at the Army's Edgewood Chemical Biological Center

**ABERDEEN PROVING GROUND, Md.** – Sponsored by the National Defense Education Program, employees from the U.S. Army Edgewood Chemical Biological Center (ECBC) recently afforded 24 high school students in Joppatowne High School's pre-engineering program the opportunity to experience real-world research and development processes conducted at ECBC.

While giving students an overview of the Center and its Advanced Design and Manufacturing (ADM) capabilities, the Center's ADM Division Chief Mark Schlein emphasized the value of an interdisciplinary team approach in delivering cutting-edge solutions that protect the warfighter and our nation.

As the group of juniors and seniors traversed a wide range of engineering career fields, they were able to interact with subject matter experts that specialize in areas such as rapid prototyping, 3D laser scanning, and robotics detection.

The Center is focused on creating a local workforce pipeline that is skilled to solve current and future challenges through science, technology, engineering and mathematics (STEM) solutions.

In addition to visiting ECBC's manufacturing shop, they received a 'sneak peak' of the Army's STEM Asset Vehicle -- a hands-on mobile showcase that the Center's ADM Division helped design and develop to attract and engage aspiring young scientists and engineers.

"Our students are usually not exposed to real-world engineering techniques such as 3D laser scanning and rapid prototyping," said Joppatowne High School Technology Education Teacher John Bachman. "This is an excellent opportunity for my students to learn about an array of STEM career pathways right in their backyard."

Students explored ECBC's Environmental and Field Testing facilities as Electronics Technician Mark Hull explained and demonstrated the techniques his team applies to simulate the transportation and storage of mechanical components under various environmental conditions.

Looking to reinforce the engineering process through a real-world challenge, ECBC Packaging Specialists David Vincitore, Deborah Brooks-Harris and Karyn Rafferty coached the group of students through the design, build and test phases of a package. Students' overall goal was to develop a package that prevented a raw egg from damaging during a five-foot drop test and an incline shock test.

All students received a 'whole egg' or 'cracked egg' certificate of appreciation based on the resistance of their individual packages. Students whose eggs remained undamaged after the test phase were evaluated for the weight, volume and creativity of their packaging design. Those who built the lightest, smallest and most creative package received special recognition.

While stimulating students to think 'outside of the box,' this activity required them to apply technical skills, such as measuring, weighing and basic mathematics.

Eleventh-grade student James Byrd said that the entire experience would help him shape his future career pathway.

"I will definitely try to come back to work here," he said. "This was a great learning experience."

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.*