



News Release

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ECBC Helps Boost Innovation in the Classroom

ECBC launches first session of teacher professional training in Cecil County challenging teachers and Army scientists in STEM

Aberdeen Proving Ground, Md. — The U.S. Army Edgewood Chemical Biological Center (ECBC) recently offered biology, chemistry and physics teachers from high schools across Cecil County a Smart Sensors training opportunity, sponsored by the National Defense Education Program.

During the three-day CASE-led science, technology, engineering and math (STEM) Learning Modules training, ten local teachers partnered with ECBC engineers Nichole Au, Mark Colgan and Daniel Wise to collaboratively explore techniques to implement Smart Sensor learning scenarios in the classroom.

They collectively applied their knowledge, expertise and creativity to solve relevant problems such as “Evading Motion Detection”, “Making a Microphone”, “Designing a Coin Counter” and “Measuring Piezoelectric Response.”

This student-focused, hands-on teaching approach uses scientific inquiry and technological design methods to convey science and engineering concepts in the classroom. It aims to turn traditional STEM lessons into cutting-edge research projects and to ultimately motivate students to develop innovative solutions in response to real-world problems.

Wise commented on the caliber of teachers that participated in the training and their dedication in tackling the challenges of ever-progressing technology.

“I was very impressed and encouraged by the quality and enthusiasm of the high school teachers I met,” he said. “It was great fun training with them, and I am confident that we will be in an effective partnership as we use this program to promote STEM-focused career fields to students in our public school system.”

Furthermore, Wise commended the educational value of the Smart Sensors modules for the creation of well-rounded lesson plans that address today’s STEM demands and help inspire students to choose career fields such as engineering.

“This inquiry-based learning approach accurately reflects the way we address real-world engineering challenges, allowing students to experience the joy of discovery that is inherent in engineering,” he said.

After briefly describing how teachers had a significant impact on his career decision, ECBC’s

Technical Director Joseph Wienand expressed his appreciation of their efforts in effectively preparing students for the country's future challenges in science and engineering.

"I truly thank you for your public service and commitment in the classroom every day," he addressed the group of teachers. "You all play such a critical role in shaping and molding the next generation of STEM talent."

"Your participation in today's professional training clearly demonstrates your passion for teaching and makes you an inspirational resource for students," he added.

Motivated to enhance their lessons with a hands-on learning and research environment, Cecil County Public School teachers embraced the STEM learning tools and methods they applied during the three-day training session.

"Material World Modules offers well-organized and inquiry-based science content that provides students meaningful and experimental design challenges," said Rising Sun science teacher Gregg Stickler. "The modules are an effective framework for teachers to use as they begin to change from teacher-centered instruction to student-centered research and design."

"I will begin implementing the Smart Sensors module in my Principle of Physics class next week," he added.

Cecil County Public School Science Instructional Coordinator Frank Cardo shared teachers' feedback of their STEM Learning Module experience and reiterated the importance of these types of professional development opportunities for teachers in his school district.

"I have spoken to my teachers, and they really enjoyed the training and want more," he said. "I can speak for my colleagues when saying that ECBC has provided them an exceptional training experience with tools and methods to enhance their STEM lesson plans in 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 web site at <http://www.ecbc.army.mil/> or call (410) 436-7718.