

TEAACH promotes better youth STEM education

By Jennifer Bohlman

This year marks the 10th anniversary of Northrop Grumman's Teachers and Engineers for Academic Achievement (TEAACH) program, which helps middle school math, science and technology teachers incorporate engineering lessons in their classrooms.

In July, 20 educators from Maryland and Washington, D.C., participated in four days of programming at the National Electronics Museum near the BWI campus built around science, technology, engineering and math (STEM) topics.

Electronic Systems sector representatives, along with visitors from the Maryland State Department of Education, Hood College, and the University of Maryland, Baltimore County (UMBC), led demonstrations and activities aimed at helping teachers meet the state's "Next Generation Science Standards" designed to show real-world STEM applications and convey understanding of the academic content.

America's status as an innovator is at risk because of a shortage of young people pursuing STEM fields, advisory engineer Steve Smalley told teachers, noting that just 15 percent of U.S. undergraduates are pursuing engineering or natural science, compared to 38 percent in South Korea, 47 percent in France, 50 percent in China and 67 percent in Singapore.

Participants rolled up their sleeves for some hands-on experiments including a "Pop Fly" ping-pong ball challenge by Smalley, a "Kicking Machine" exercise by Program Manager Januca Berry as well as a tangram puzzle and computer simulated bridge construction project.

Teachers also attended panels with engineers who recently began their careers and spoke with executives and hiring managers.

A tour of the hangar and manufacturing facilities showed participants real-life applications of engineering. At the end of the week, each teacher received a stipend to use for STEM-related classroom activities, a goodie bag with resources and TEAACH items, and a program directory of the participants so that they can stay connected.

At the Rolling Meadows, Ill., campus, TEAACH held a two-day program similar to the one at BWI. Twenty-two teachers participated in the program, which included a skit depicting a day in the life of an engineer, demonstrations of a Rapid Prototype Machine (3D printer), panel discussions, and tours of lab and manufacturing areas. Teachers also took part in hands-on activities that can be easily replicated in the classroom.

"I can't thank you enough for allowing me to participate in a program of this caliber," said Pandora Brant from Laura S. Ward School in Chicago. "I am looking forward to bringing these demonstrations and experiments back to my classroom. My students are the ones who most benefit from this program."