CASE Brings Teachers, Scientists and Engineers Together

MCHENRY, Maryland –

Garrett College is the scene of a lot of excitement this summer as the Center for the Advancement of STEM Education (CASE) brings science, technology, engineering, and mathematics (STEM) teachers and U.S. Department of Defense scientists and engineers from around the country together to provide teachers with more tools to inspire their students.

The Center for the Advancement of STEM Education is providing four, one-week Summer Teacher Training Institutes to middle and high school teachers and scientists and engineers from 14 states, including Alaska and Hawaii. The first week of training began Sunday, July 5.

The U.S. has a severe short-fall of STEM professionals in its workforce. In 2006, President Bush announced the American Competitiveness Initiative (ACI) to encourage American innovation and strengthen our nation’s ability to compete in the global economy. An important component of this ambitious strategy is that it will provide American children with a strong foundation in math and science.

During the Summer Institutes, participants learn new and innovative strategies for teaching STEM subjects. They use the latest technology and cutting-edge best practices for the 21st-century classroom. A variety of instructional tools are introduced, including Materials World Modules (MWM), created by Northwestern University.

The summer program gives teachers and S&Es the opportunity to share ideas and build friendships with peers from around the country. They learn about successful programs that have worked outside of their scope of experience.

CASE was established in June 2006 with funding from the U.S. Department of Defense. A National Defense Education Program (NDEP), the primary purpose for the Center is to add more professional engineers and scientists to the workforce by motivating middle and high school students to enter STEM careers.
CASE Executive Director, Dr. Stephen Priselac, explains that the training continues far beyond this summer. “The intensive week-long summer trainings provide teachers with a solid foundation. Ongoing classroom training continues throughout the school year to ensure that everyone can use the new tools effectively. The S&Es will partner with the teachers to provide the real-life perspective to complement the expertise of the educators.”

Dr. Stephen Herman, retired Garrett College president, was the keynote presenter at the opening ceremonies. He set the stage for the purpose of CASE and the Summer Institutes by providing valuable data supporting the STEM gap.

Herman suggested there are four interconnected gaps worth considering: production of scientists and engineers, STEM academic achievement gap, student major and career choice gap, and millennial gap. His research supported the need for aggressive and effective educational strategies to address these critical gaps. He commended the teachers for taking the initiative to attend the CASE Institutes. “I don’t mean to overdramatize, but a lot of the nation’s future is in your hands and the hands of your colleagues across the nation. So, I commend you for being part of the solution.”

CASE Director of Training, Dr. Nancy Priselac, shared, “We are excited to have outstanding STEM professionals from designated Department of Defense laboratories. Upon return to their home states, teachers will be teamed up with local scientists and engineers (S&Es) to plan their classroom strategies for fall. The DoD has committed its S&Es to serve as mentors to the teachers and students.”

Toby Ratcliffe, NDEP VIP speaker, provided tremendous enthusiasm for teacher and S&E collaboration. As a research naval architect in Maryland, Toby coordinates outreach efforts in her local communities and schools. She sees firsthand the value of such partnerships. “Having exposure to S&Es in the classroom brings the educational process full circle for students. They see actual industry professionals solving authentic problems. This enables them to understand the relevance of science, technology, engineering, and mathematics to real life.”

CASE is creating training programs to immerse teachers and students in activities associated with inquiry and design-based learning that supplements the normal science curriculum. The Center’s main goal is to stimulate an interest in and a heightened awareness of science, technology, engineering, and mathematics so that our children—our future—will be prepared for the new millennium.

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