

Contact:

Megan DaGraca – 703.519.6698 / 585.261.5375 / mdagraca@redpegmarketing.com

National Guard's Nationwide Tour to Improve Performance of America's Students in Science and Math

Interactive Mobile Learning Center Program to support the country's "Educate to Innovate" campaign

Arlington, VA (9.22.10) – In support of "Educate to Innovate" and to raise the math and science literacy of the nation, the Army National Guard is launching its new, interactive Mobile Learning Center (MLC) Program which will visit high-schools and armories in underserved communities throughout the country. The MLC Program will focus on technology while exploring energy efficiency and alternative energy sources through engaging and highly interactive math and science experiences. The kick-off event, which will include speeches from Legislative and Congressional Leaders, the Departments of Education, Energy and Labor, and the Military, will take place in the Ronald Reagan Building Courtyard on September 30, 2010 at 8AM.

"The National Guard's Mobile Learning Center Program brings an exciting new dimension to learning and teaching," said Colonel Diana Craun, Division Chief of the National Guard Bureau - Education, Incentives & Employment division. "The National Guard is devoted to our communities and to ensuring that our children are prepared to meet the challenges of an increasingly competitive global workforce. The program's unique tour vehicle will be on the road, bringing educational opportunities and engaging experiences directly to our students so they are best prepared for a bright future."

The mobile tour's vehicle, "The Energy Lab", is a fully mobile 65' Rapid Deployment Vehicle that transforms into an interactive, remote classroom filled with educational, engaging and inspiring learning tools that will encourage our Nation's youth to participate in and excel at science and math. On-board the trailer is a 24-seat theater with a powerful sound and lighting system that will provide an enhanced multimedia learning experience while introducing students to the platform of energy and environment. Off-board the 27'x27' tent contains four separate interactive exhibits focusing on the four elements: earth, water, wind and fire.

The mobile tour begins this fall and will continue through spring 2011.

In 2009, President Obama launched the "Educate to Innovate" campaign, an initiative designed to improve the participation and performance of America's students in science, technology, engineering, and math (STEM). The MLC Program will support the development of STEM education standards across the country and encourage students to stay in school, study, and graduate.

While the United States boasts great schools, excellent teachers, and successful students, there are also troubling signs that, overall, our students should be doing better in math and science. In the [2006 Programme for International Student Assessment \(PISA\) comparison](#), American students ranked 21st out of 30 in science literacy among students from developed countries, and 25th out of 30 in math literacy. On the [2009 National Assessment of Educational Progress \(NAEP\) math tests](#), 4th graders showed no signs of progress for the first time in years, and 8th graders tallied only modest evidence of progress.

After the kick-off event on September 30th, The Energy Lab will visit Ballou Senior High School in Washington, DC. In addition to aiding students in discovering new career opportunities in STEM-related fields, the MLC Program will also provide teachers with innovative and engaging tools that will further interest students in STEM education. After the visit to Ballou Senior High School, the mobile tour will then depart the National Capital Region and visit underserved communities and schools in GA, AL, TN, AR, LA, TX, NM, AZ, NV & CA. This route targets schools with below average 2009 8th Grade NAEP scores in both math and science.

For those communities and schools The Energy Lab does not visit, there will be STEM-related education resources available online (www.NATIONALGUARD.com/energylab) to students, parents and educators. Tools include pull-down teacher's guides, experiments and resources pertaining to The Energy Lab.

Additional Highlights from the Mobile Learning Center Program

EARTH

Interaction with the Earth station gives students the experience of controlling the planet's fossil fuel resources for the next forty years. Participants extract oil, gas, and coal from beneath the Earth's surface and use these resources to produce electricity. The level of difficulty increases as the Earth's population grows and resources are depleted. Through this experience, students will learn about the supply level of Earth's fossil fuels and the effects that mining and extracting these resources can have on the environment.

WATER

Students get to create waves and measure the electrical output created by their effort at the Water experience. As participants become more efficient at creating electricity, they will be challenged with generating the waves necessary to turn energy into electricity during stormy seas and rough waters. Students will learn about different types of waves, the characteristics that make them most efficient, and optimal locations on Earth for harnessing them to convert energy into electricity.

SOLAR (fire)

At the Fire station, students will use simulated solar panels to capture solar energy and convert it into electricity to power as many homes as possible. Participants must overcome the challenges of cloudy and stormy weather as they compete against others and work towards the goal of providing an entire city with solar power.

WIND

Students will choose between different types of wind turbines, then place and arrange them where they will be exposed to the most wind in order to maximize electricity output. Students will go head-to-head against an opponent to see who can construct the most efficient wind turbine farm and generate the most electricity.

Energy Town

Following the last experience, students will gather at Energy Town, a physical model of a city that will showcase the visual and physical representations of the percentage of resources, both renewable and nonrenewable, being used today and the projected use in the year 2050. This experience brings together the concepts learned at the four stations: earth, water, wind & fire and allows students to better understand the abstract concept of energy and wattage, and learn how each relates to their own lives.

MORE INFO ON THE KICK-OFF EVENT

- Expected speakers include:
 - Ismael Junior Ortiz – U.S. Department of Labor – Veterans’ Employment and Training Service Deputy Assistant Secretary
 - Scott D. Pearson – U.S. Department of Education – Office of Innovation and Improvement Associate Assistant Deputy Secretary
 - Steve Robinson – U.S. Department of Education (Senior Staff) Special Assistant (Elementary and Secondary Education)
 - Bill Valdez – Department of Energy Director of the Office of Workforce Development for Teachers and Scientist
- A full tour of The Energy Lab will be available from 9AM – 12PM
- Interviews available (National Guard Bureau Members, Legislative and Congressional Leaders, the Departments of Education, Energy and Labor speakers)

About the Army National Guard – The Army National Guard (ARNG) is one component of the Army (which consists of the Active Army, the Army National Guard and the Army Reserves). The Army National Guard is composed primarily of traditional Guardsmen—citizen-Soldiers who serve their country, state and community on a part-time basis (usually one weekend each month and two weeks during the summer.) Each State, Territory and the District of Columbia has its own National Guard, as provided for by the State, Territory and the Constitution of the United States.

About the Educate to Innovate campaign – President Obama’s Educate to Innovate campaign is a nationwide effort to help reach the Administration’s goal of moving America’s youth from the middle to the top of the pack in science and math achievement over the next decade. Launched in November, 2009, Educate to Innovate is designed to improve the participation and performance of America’s students in science, technology, engineering, and math (STEM). This campaign includes efforts not only from the Federal Government but also from leading companies, foundations, non-profits, and science and engineering societies to work with young people across America to excel in science and math. This nationwide effort includes over \$260 million in public-private investments.

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