



Tracy Shirer (tshirer@ctsciencecenter.org)  
860.520.2116

Connecticut Science Center | 250 Columbus Blvd | Hartford, CT 06103

**FOR IMMEDIATE RELEASE**

## **Connecticut Science Center Pilots STEM Education Units for Middle Schools**

Hartford (May 3, 2012) -- The Connecticut Science Center (CSC) announces the launch of new STEM (science, technology, engineering and math) curriculum units for middle school students and teachers. These engineering-focused learning programs, which include classroom activities and kits, are designed to meet a new demand spurred by upcoming changes in curriculum standards. The STEM units have been developed with Hartford Public Schools with additional support from United Technologies Corp. (UTC), and will be available to schools statewide.

"Innovation in science and engineering builds the future of our country and builds the future of our company," said Dr. J. Michael McQuade, UTC Senior Vice President for Science and Technology and a Science Center board member. "We are pleased to support educational initiatives that will make a real difference in the future competitiveness of Connecticut's workforce and will shape the future of technology-based industries like ours."

Many states including Connecticut are expected to adopt the national Next Generation Science Standards, which are scheduled for completion in 2012. The Next Generation Science Standards will detail the scientific and engineering practices, core ideas and cross-cutting principles defined in the Framework for K-12 Science Education published by the National Research Council.

The new STEM curriculum takes students through the sequential process of problem identification, design, building models, testing, data analysis, design revision, re-testing and finally, communicating results. To bring these concepts to life, the units feature feats of engineering that we encounter in everyday life such as elevators and bridges.

"The topic of bridge-building was selected as the focus of the pilot program," explained Hank Gruner, the Connecticut Science Center's Vice President of Programs and Exhibits. "In the design of structures, there is a need to consider factors such as function, materials, safety, cost and appearance. These are fundamentals of engineering. This pilot program model serves as the framework for the next STEM strands that include Fuel Cells, Elevators and Aerospace units, all of which provide a common reference point thanks to Connecticut's leading role in these technologies."

Six new program units are currently in the pilot test phase at McDonough Expeditionary Learning School in Hartford. The units have been written by Science Center staff scientists with the assistance of McDonough teachers, who helped incorporate the new Language Arts and Math standards. Professional development workshops conducted by the Science Center in support of these new STEM units have also been piloted at McDonough.

“I am excited about our ongoing partnership with the Connecticut Science Center, particularly around our new STEM units,” said Dr. Sandra Inga, Director of Science for Hartford Public Schools. “In alignment with the district’s strategic operating plan, we are aggressively engaging our students in STEM content and supporting our teachers with in-depth resources and instructional strategies. The continued partnership with CSC allows us to better engage students and support teachers, in real-world engineering practices,” she said.

Each STEM program package provides teachers with several weeks of classroom activities that culminate in addressing a real-world problem. The packages prepare students for a final research project with a series of activities and tasks that progressively explore the basic scientific concepts needed to solve the larger problem. For example, before producing a proposal for a new elevator design, students learn about pulleys, friction, and simple machines.

“Our materials guide students through the process of collecting the knowledge and skills that lead to understanding and make it possible for them solve the final problem,” said Holly Harrick, the Science Center’s Education Director. Resources for teachers include background information, links, and tie-ins with mathematics and language arts lessons as well as aligning with the current CT Science Framework adopted in 2004.

The STEM units initiative is part of an ongoing partnership between the Connecticut Science Center and Hartford Public Schools. Previous collaborations have focused on the elementary school level in preparation for the Connecticut Mastery Test (CMT) taken in the 5<sup>th</sup> grade. “The Science Center is already engaged in a path-breaking partnership with the Annie Fisher STEM Magnet School, with preliminary evaluation results showing a positive impact on test scores in the 5<sup>th</sup> grade,” said Gruner. “These projects have been an inspiring success, and we want to support students preparing for the 8<sup>th</sup> grade test, as well. And beyond the test, we have an important role to fill in preparing kids and their teachers to excel in these subject areas.”

In the fall, the STEM packages will be available to all middle schools throughout the state. In addition to providing the STEM units, the Connecticut Science Center will also offer teachers professional development experiences with the content and pedagogy supporting the engineering model proposed in the new national science standards.

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**About the Connecticut Science Center** The LEED-Gold certified Connecticut Science Center, located in downtown Hartford, sparks creative imagination and an appreciation for science by immersing visitors in fun and educational hands-on, minds-on interactive experiences while maintaining an environmentally conscious presence. Visitors experience over 150 exhibits in ten galleries and a range of topics, including space and earth sciences, physical sciences, biology, the Connecticut River watershed, alternative energy sources, Connecticut inventors and innovations, a children’s gallery, and much more. Other features include four educational labs, a 200-seat 3D digital theater, function room, gift store and café, and ongoing events and lectures for all ages. With the support of the Department of Economic and Community Development, The Science Center is a non-profit organization dedicated to enhancing science education throughout the state of Connecticut and New England, providing learning opportunities for students and adults of all ages, and engaging the community in scientific exploration. More information: [www.CTScienceCenter.org](http://www.CTScienceCenter.org) or 860.SCIENCE.