PATRICK ADMINISTRATION AND CONGRESSMAN KENNEDY ANNOUNCE $292,000 IN FUNDING TO PROMOTE STEM EDUCATION

Secretary Bialecki and Congressman Kennedy announce five new @Scale award recipients to complete the Massachusetts STEM Initiative’s @Scale portfolio

WELLESLEY – Monday, September 23, 2013 – Housing and Economic Development Secretary Greg Bialecki alongside Congressman Joseph P. Kennedy III today announced $292,000 in funding to promote and advance student interest, engagement and educator effectiveness in Science, Technology, Engineering and Math (STEM) education through the funding of five new @Scale projects. The @Scale Initiative endorses statewide STEM projects that demonstrate previous success in areas that directly support the state’s STEM Plan goals and brings them to new areas across Massachusetts to reach more students and teachers. The @Scale Initiative builds upon the Patrick Administration’s strategic plan tying economic and workforce development to educational enhancement in STEM fields.

“One reason our innovation economy is strong and growing is because of our state’s well-trained and skilled workforce,” said Secretary Bialecki. “By bringing successful STEM education and training opportunities to students in every region of the Commonwealth, these grants will help ensure our next generation is equipped with the skills and knowledge necessary for these 21st century careers.”

"Through its innovative partnerships between academia, industry and government, Massachusetts has long led the way in preparing students for the jobs of tomorrow," said Congressman Kennedy. "The @Scale Initiative combines private sector funding with government grants to ensure our students and educators have the resources necessary to stay engaged and interested in STEM education. These five projects have each created an effective approach to early STEM education that will build a pathway to higher education and to jobs in our expanding workforce."

Now in its final phase led by the new honorary chair Congressman Kennedy, @Scale Phase III and IV grant recipients focus on three goals within the STEM Plan: increasing STEM student interest, increasing STEM achievement and increasing STEM educator effectiveness at the Pre-K through middle school levels. The funding announced today will leverage almost $900,000 in non-state funding.

Phases I and II of @Scale projects were approved by the Governor’s STEM Advisory Council in 2011 and 2012, respectively. These first two phases of @Scale projects have been granted approximately $900,000 of state funding leveraging $2.5 million of private sector funding and has reached at least 170 teachers and 8500 students across the
state. The success of the commonwealth’s Governor’s STEM Advisory Council’s @Scale Initiative is revered nationally and strengthens the state’s position as a leader in STEM education within the country.

The Governor’s STEM Advisory Council’s most prominent accomplishment as a result of the STEM Plan’s implementation is the launch and implementation of the @Scale Initiative. With @Scale, the STEM Advisory Council has collaborated with government, academia and the private sector to “scale up” existing programs in Massachusetts, replicating models and best practices to reach more students and adults studying and pursuing STEM education and careers. @Scale has been hailed by STEM advocates as a breakthrough model at delivering a combination of public and private funding to replicate and bring to scale transformative, system-wide improvements in STEM education across the Commonwealth. The @Scale model is a strong example of private-public partnership by requiring each state funded projects to secure at least $3 in outside support for every $1 in funding it receives from the state. This model promotes local partnership building and a pathway toward sustainability that many publically funded projects never attain.

“We must invest in what we know will have the greatest impact on our students,” said Secretary of Education Matthew Malone. “These grants do just that because we know STEM related content will help prepare the Commonwealth’s youngest citizens for college and the jobs of the future. I’m especially glad these grants will have such a long reach, helping support the innovative work teachers are doing in classrooms across Massachusetts.”

As the new honorary chair of the Governor’s STEM Advisory Council replacing former Lieutenant Governor Timothy Murray, Congressman Kennedy is a member of the House Committee on Science and Technology. An engineer by training, he is a member of the Congressional Science, Technology, Engineering and Mathematics (STEM) Caucus. Earlier this summer, he joined Senator Kirsten Gillibrand and Congressman Paul Tonko in introducing the Educating Tomorrow’s Engineers Act (ETEA), which will help increase student achievement and interest in STEM fields.

The projects were announced during Congressman Kennedy’s first meeting as honorary chair at Mass Bay Community College’s Wellesley Hills campus. The five additional programs that will expand as a result of @Scale III and IV include:

**Boston Public Schools’ Strengthening Pre-K Mathematics Teaching and Learning - $58,695**

The Boston Public Schools (BPS) will scale up a successful pre-K mathematics program, *Building Blocks*. This project, “Strengthening Pre-K Mathematics Teaching and Learning: A Boston K1DS Collaboration between the Boston Public Schools and Boston Community-Based Organizations,” will expand from the 2,300 Pre-K students in BPS to eventually serve over 6,500 low-income at risk three- and four-year-olds in over 200 community-based organizations. The project will focus on Pre-K student engagement and educator effectiveness, and plans to contribute to the existence of
transformative, system-wide and sustainable improvements that are consistent with the goals described in the Massachusetts STEM plan.

**Future City Competition Working Cities Expansion Project - $75,000**

Run by the Boston Society for Civil Engineers and The Metro North Regional Employment Board, Future City is a team based transformative educational program designed for 6th, 7th and 8th grade students in which students imagine and design cities of the future and explain the underlying technologies and design principles that would make their city possible. Students create both physical scale models and virtual models (utilizing SimCity software), prepare presentations/Q&A responses and write research documents as part of their engineering design process. This program will scale up to the cities of Chelsea, Everett, Lowell, Lynn, Malden, Revere, Salem and Somerville.

**Increasing Accessibility to Algebra & Geometry for All Students - $33,549**

Increasing Accessibility to Algebra & Geometry for All Students (IAAG) is a teacher professional development project run by the University of Massachusetts’ Medical School in Worcester, which offers foundational math content and pedagogical strategies for general education, inclusion and special education mathematics teachers of grades 5 through 10. This program has proven to be especially helpful for teachers in high needs districts. IAAG strengthens teachers’ understanding of concepts and relationships among concepts within various domains including Operations and Algebraic Thinking; Equations and Expressions; Functions; and Geometry. Teachers learn universal design strategies and techniques to increase accessibility of rigorous mathematics to a broad range of learners. This program serves the greater Worcester area and other high needs school districts, including Springfield, Lowell and Medford.

**Massachusetts Afterschool Partnership’s Zero Robotics Program - $75,000**

Massachusetts Afterschool Partnership (MAP) will scale up its Zero Robotics program beyond the Boston area where they currently operate. The program is described as a fun, flexible yet rigorous summer STEM program for middle school students with a key element of targeting under-served and under-represented youth. Over five weeks during the summer, students work in teams to learn about computer programming, robotics and space engineering while gaining hands-on experience working with and coding SPHERES (Synchronized Position, Hold, Engage, Reorient Experimental Satellites). The program culminates in a tournament where each team competes for a spot to operate and race a SPHERE satellite against other teams aboard the International Space Station (ISS). MAP will also use @Scale funds to develop a comprehensive teacher training program to train perspective Zero Robotics educators and their regional partners across each of the seven Regional STEM networks.

**Science from Scientists During School In-Class STEM Enrichment Program - $50,000**

Science from Scientists (SfS) will expand its successful “During School In-Class STEM Enrichment Program” to two first-time partner schools in new locations, Winthrop and Plainville. The funding will enable SfS to provide in-class enrichment to 475 new students and allow as many as 16 classroom teachers to enroll in their Professional
Development Program. Student goals include improving students’ attitudes in STEM by working with every student in the classroom, using real, charismatic scientists and building mentoring relationships.

“The funding and programs announced today continue the state’s important focus on STEM and commitment to ensuring a pipeline of workers skilled in STEM competencies,” said JD Chesloff, Executive Director of the Massachusetts Business Roundtable and Chair of the Governor’s STEM Advisory Council’s Executive Committee. “In order to remain competitive in a global economy, we must continue to invest in Massachusetts’ greatest advantage: talent. The state STEM Plan, and the @Scale Initiative, provide a blueprint for that investment so that our workforce is prepared for the jobs of today and tomorrow.”

These new @Scale projects complete the diverse set of 17 @Scale projects which supports all six goals of the STEM plan. By looking at the @Scale projects as a portfolio, the Patrick Administration through the Governor’s STEM Advisory Council will now undertake the next step of this initiative and accelerate and scale up these promising practices that are evident through all of the @Scale projects to make positive impacts on students, teachers and the number of students graduating with STEM degrees.

About the Governor’s STEM Advisory Council and the @Scale Initiative

As part of his Administration’s efforts to align education with workforce development, Governor Patrick established the STEM (Science, Technology, Engineering and Math) Advisory in October 2009, to increase coordination and collaboration among existing STEM programs and resources. Building on the Patrick Administration’s comprehensive education agenda, in 2010, former Lieutenant Governor Murray tasked the Governor’s STEM Advisory Council to develop and implement the state’s first STEM Plan, which outlined the state’s first ever strategic plan for tying economic and workforce development to educational enhancement in the fields of science, technology, engineering and math. In addition to being rated number one by the U.S. Department of Education on the nationwide Race to the Top Competition, Massachusetts has also been recognized by the National Governor’s Association’s Center for Best Practices, Change the Equation and Innovate+Education as a top STEM state. This week, the Patrick Administration announced that 10th grade students once again achieved record high performance in mathematics and science and technology/engineering (STE), according to the 2013 statewide results of the MCAS exams.

Since the 2011 and 2012 rounds of @Scale, the STEM Advisory Council and business community have been working with the following projects as part of the @Scale Initiative: Quinsigamond Community College's (QCC) Advanced Robotics Program; Mass Insight Education’s Math + Science Initiative; the DIGITS Project; WPI's Project Lead the Way; MassBioEd Foundation's BioTeach; Massasoit Community College's Science Transfer Initiative; the Museum of Science’s Gateway Project; the Broadening Advanced Technological Education Connections (BATEC) initiative based out of UMass-Boston; UMass’ ABLE 4 STEM; the Central Massachusetts Workforce Investment Board’s STEM Power Network; the Western Regional Partnership made up
of four regional vocational technical high schools and three community colleges; and
the Massachusetts College of Liberal Arts’ STEM Pathways Project.

To read the STEM Plan or learn more about the Patrick Administration’s STEM
Initiatives and the Governor’s STEM Advisory Council, visit
www.mass.gov/governor/stem.

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