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June 2012

**CITYWIDE SCIENCE EXPO IN MILSTEIN HALL OF OCEAN LIFE
AT AMERICAN MUSEUM OF NATURAL HISTORY
MARKS END OF SUCCESSFUL EIGHTH YEAR FOR
URBAN ADVANTAGE MIDDLE SCHOOL SCIENCE INITIATIVE**

**STUDENTS, TEACHERS, SCHOOLS, INSTITUTIONS CELEBRATE PIONEERING PROGRAM
TO IMPROVE SCIENCE EDUCATION FOR MIDDLE SCHOOL STUDENTS**

On Saturday, June 9, a major science expo at the American Museum of Natural History will **showcase the research projects of more than 500 New York City middle school students** who participated in the successful eighth year of the citywide **Urban Advantage Middle School Science Program**, an extraordinary collaborative effort that connects students and teachers in one of the nation's largest public school systems with some of the finest science-based institutions in the country. Museum educators will join families, teachers, and members of the City Council as they gather to see **more than 300 science projects** presented by participating students.

Through a public-private partnership between the New York City Department of Education and a Museum-led consortium of eight institutions that also includes the **New York Hall of Science, the Bronx Zoo, the New York Aquarium, the New York Botanical Garden, the Brooklyn Botanic Garden, the Queens Botanical Garden, and the Staten Island Zoo**, the Urban Advantage Program provides a comprehensive framework for teaching and learning that is grounded in encounters with authentic science and that emphasizes evidence-based inquiry.

"This event celebrates the accomplishments of these talented students and showcases the effectiveness of the Urban Advantage program," said Ellen V. Futter, President of the American Museum of Natural History. "By marshaling the extensive scientific resources of eight cultural institutions and building upon a vision shared with the City of New York and the Department of Education, Urban Advantage is now a structural part of the city's middle school curriculum empowering teachers and improving science learning."

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The program has expanded dramatically since it was introduced in 2004. This year, it includes **344 teachers and 35,670 students at 136 schools in all five boroughs** of New York City – fully one-fourth of the city’s public middle schools. Research analyzing student performance on New York State standardized science assessments shows that students at Urban Advantage middle schools perform better than students in non-Urban Advantage schools. Research also shows that students at UA schools were 25.5% more likely to take the Living Environment Regents exam than those at non-UA schools, and had higher pass rates for both Living Environment and Earth Science Regents. This pioneering formal-informal science education program has expanded beyond New York City with a recently launched Urban Advantage program underway in Metro Denver, involving three school districts working the museum, zoo, and botanic garden.

The need for improving science literacy among students preparing for high school is an urgent one. According to the 2009 Carnegie Corporation of New York–Institute for Advanced Study Commission on Mathematics and Science Education, too many American students fail to receive rigorous, motivating science and mathematics education or to achieve high levels of learning. One of the report’s major recommendations, building community assets into schools through intensive partnerships with math and science institutions, specifically credits the Urban Advantage Middle School Science Initiative with producing “significant learning gains in middle grades science.”

The **eighth annual Urban Advantage Science Expo** will be held on **Saturday, June 9, from 1 to 4 pm**, under the big blue whale in the Museum’s Milstein Hall of Ocean Life, as well as the Halls of North American Forests, New York State Environment, and the Grand Gallery. The expo, which is open to the general public, will include more than **300 science exit projects** presented by over **500 middle school students**. Project topics reflect a wide range of subject areas in the life, Earth, and physical sciences that were investigated by students in connection to their class visits to the Urban Advantage partner institutions.

- **Bronx Schools exit project topics include:**
 - the effect of gender and race on the prevalence of asthma and kidney disease
 - the role of compost tea on the growth of radish plants
 - the effect of insulation on the rate of solar heating
- **Brooklyn Schools exit project topics include:**
 - the role of gender on levels of fatigue caused by exercise
 - the effect of light on the speed at which Venus flytraps close
 - correlations between age and hearing loss
- **Staten Island Schools exit project topics include:**
 - The effect of different types of stimuli on short-term memory

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- the effect of music on plant growth
- the role of microwave radiation on seed germination
- **Manhattan Schools exit project topics include:**
 - the effect of zebra mussels on the Hudson River ecosystem
 - the frequency of certain behaviors in the ring-tailed mongoose
 - the effect of different levels of acidity on sedimentary rock
- **Queens Schools exit projects topics include:**
 - Correlations between age and reaction times
 - the effect of different toys on a cat's activity levels
 - the effect of colored light on phototropism

“Getting our city’s school children involved in math and science programs is imperative and the Urban Advantage’s Middle School Science Initiative has successfully done that,” said City Council Speaker Christine C. Quinn. “Working collaboratively thorough Public/Private partnerships with the end goal of getting our students engaged in the sciences is a win-win for everyone. I want to thank the American Museum of Natural History for hosting this event, the New York City Department of Education, and all the institutions involved in this program.”

“As we work to raise the bar and prepare all out students for college and careers, it is so important to keep middle school students engaged in learning science and math. I am grateful to our cultural partners for making the excitement of scientific experimentation accessible to thousands of public school students,” said Schools Chancellor Dennis Walcott. “The wonderful science projects on display today really show how the extraordinary partnership between the Urban Advantage Program and schools enhances science curriculum in a fun and enriching way.”

“Each year Urban Advantage cultural partners and classroom teachers make the excitement of scientific inquiry accessible to thousands of public school students from across the five boroughs. The thought-provoking projects on display today highlight the success of this dynamic public-private partnership, and the ingenuity of our talented middle schoolers,” said Cultural Affairs Commissioner Kate D. Levin.

“Brooklyn Botanic Garden salutes this year’s Urban Advantage students on the successful completion of their science-research projects,” said Scot Medbury, president of Brooklyn Botanic Garden (BBG). “BBG is a living museum noted for its educational programs, scientific research, and unparalleled beauty. Working together with our colleagues, we offer some of the very best educational opportunities to our community. Teachers and students who come to the Garden engage with BBG’s plant collections and make authentic observations and ask questions, essential elements

in the teaching and learning of science. We are delighted to continue working with AMNH and the Department of Education on such an important, collaborative program – one that offers middle-school students more rigorous and diverse opportunities to meet their academic requirements.”

“The Wildlife Conservation Society (WCS), through its five New York City Living Institutions, uses the power of wildlife to connect people to wild nature and to motivate them to become environmentally active citizens,” said Steven E. Sanderson, president and chief executive officer of the Wildlife Conservation Society. “Through the partnership with the Urban Advantage Program, WCS has taught a new generation of public school teachers to use field trips and other out-of-school learning opportunities to improve science education in our middle schools. As a result, thousands of 8th grade students benefit from the opportunity to complete real-world field science projects at WCS’s Bronx Zoo and New York Aquarium that integrate the core science curriculum. We look forward to continued participation in this effective partnership between New York’s schools and cultural institutions.”

“The Urban Advantage Program connects hands-on teaching and research programs with young peoples’ curiosity,” said Gregory Long, president and chief executive officer of The New York Botanical Garden. “The students do real science. At the Garden, that means young people explore plant growth experiments, forest diversity, river water quality, plant evolution, airborne pollination, and dozens of other concepts in the Botanical Garden’s research laboratories and gardens, native areas, and in the classrooms of their schools. The City’s support for Urban Advantage marries many of the world’s finest research and cultural institutions with their neighborhood schools in an exciting, innovative program that makes a difference for young people in the Bronx and throughout the city.”

“Urban Advantage helps kids, parents, and teachers discover the abundance of world-class science resources in our city’s cultural institutions,” said Margaret Honey, president and chief executive officer of the New York Hall of Science. “This has tremendous impact on our education community and it encourages the participants to find new exciting ways to engage with science.”

“Queens Botanical Garden thanks and applauds the students, teachers, parent coordinators and others on their science projects,” said Susan Lacerte, executive director of the Queens Botanical Garden. “QBG also thanks and applauds the American Museum of Natural History for their leadership in conceptualizing and leading this innovative program and to the New York City Council, under the leadership of Speaker Christine Quinn, and the Board of Education for providing funding for a program that is proven to make a difference.”

“The Staten Island Zoo is proud to continue its partnership in the Urban Advantage Program,” said Kenneth C. Mitchell, executive director of the Staten Island Zoological Society. “We are totally committed to this special program, which is in sync with our zoo’s educational mission, enabling us to connect with students and teachers alike in a venue beyond the Staten Island community.”

During its eighth year, Urban Advantage continued its multi-component implementation structure, which infuses science into the lives of students and families, their schools and teachers, school leaders, and communities. Major initiatives this year include:

- Expanding the number of schools that include students and teachers from 6th, 7th, and 8th grades in a school. 69 UA schools have all three grades covered (6, 7, 8).
- Expanding the depth of UA participation in schools by growing the average number of UA teachers per school to approximately three; 50 UA schools have more than three UA teachers.
- Workshops for school administrators attended by over 300 principals or assistant principals
- Over **6,500 hours of teacher professional development** for new and continuing science teachers in the program
- Over **500 class field trips** to participating institutions involving over **13,000 students**
- Over **9,000 students and family members** visiting participating institutions on trips related to work on long-term science investigations
- Over **340 new and continuing teachers receiving support** to purchase basic lab supplies focused on long-term science investigations
- **Nineteen lead science teachers** in schools throughout the five boroughs to support professional development efforts and build capacity within the school system

Major public support for the Urban Advantage program is provided by the Speaker and the City Council of New York, and the New York City Department of Education.