Seeking Support for the Following Agencies and Programs in FY 2015:

- **Department of Education** – STEM Innovation Initiative, Effective Teaching and Learning: STEM, and 21st Century Community Learning Centers
- **Institute of Museum and Library Services** – Office of Museum Services
- **National Institutes of Health** – Science Education Partnership Awards

**Introduction**
Chairman Kingston, Ranking Member DeLauro, and Members of the Subcommittee, thank you for the opportunity to submit written testimony for the record. My name is Anthony (Bud) Rock, and I serve as the President and Chief Executive Officer of the Association of Science-Technology Centers (ASTC). My testimony today addresses the importance of science, technology, engineering, mathematics (STEM), and health education, and will focus specifically on the fiscal year (FY) 2015 budgets for five specific programs and offices at three Federal agencies over which your Subcommittee has jurisdiction, including: (1) the STEM Innovation Initiative at the Department of Education (ED), which would be funded at $170 million under the President’s FY 2015 Budget Request; (2) the Effective Teaching and Learning: STEM program at ED, which would be funded at $149.7 million under the President’s FY 2015 Budget Request; (3) 21st Century Community Learning Centers (21st CCLC) program at ED, which would be funded at $1.1 billion under the President’s FY 2015 Budget Request; (4) the Office of Museum Services at the Institute of Museum and Library Services (IMLS), which would be funded at $29.6 million under the President’s FY 2015 Budget Request; and (5) the Science Education Partnership Award (SEPA) program at the National Institutes of Health (NIH), which would be funded at $18.5 million under the President’s FY 2015 Budget Request.

**Our Request**
On behalf of ASTC and the nearly 400 science centers and museums the Association represents here in the United States, I urge the Subcommittee to continue its strong support for critical education programs within ED, IMLS, and NIH as your work on the Labor, Health and Human Services, Education, and Related Agencies Appropriations Bill for FY 2015 moves forward. Specifically, I ask you to:

- Provide the President’s requested level of funding for the STEM Innovation Initiative ($170 million), Effective Teaching and Learning: STEM program ($149.7 million), and the 21st Century Community Learning Centers program ($1.1 billion) at the Department of Education.
- Provide the Congressionally-authorized level of funding ($38.6 million) for the Institute of Museum and Library Services’ Office of Museum Services.
- Provide $20 million—commensurate with the FY 2012 and FY 2013 levels—for the Science Education Partnership Award program at the National Institutes of Health, while investigating the Administration’s proposal for joint NIH-ED administration of the program.
Continue to closely examine any proposals that would seek to consolidate and/or reorganize Federal STEM education programs in an effort to ensure that stakeholder input has been sought and that proven, successful programs are maintained.

Before going into more detail about ASTC and the science center and museum field, I want to first offer a brief snapshot of these Federal programs and why they are so essential.

Department of Education
According to the Administration, the STEM Innovation initiative would create a fresh framework for delivering STEM education to more students and more teachers more effectively while reducing fragmentation. ASTC is especially intrigued by the proposed STEM Innovation Networks component of the program, as it would provide competitive awards to Local Education Agencies in partnership with institutions of higher education, nonprofit organizations, other public agencies, and businesses to transform STEM teaching and learning. I understand that museums would be among the eligible partners for this program, allowing the very institutions that ASTC represents to further expand their already substantial community impact. I encourage the Subcommittee to support our work by providing $170 million in FY 2015 funding for the STEM Innovation initiative.

The Department’s Effective Teaching and Learning: STEM program promises to build on the success of the current Mathematics and Science Partnerships (MSP) program and would provide State Education Agencies with formula grants that would allow them to provide their students with more high-quality STEM instruction and support. ASTC members—and the communities they serve—have benefitted from the MSP program, and would welcome the opportunity to become further engaged with high-need schools. I encourage the Subcommittee to include $149.7 million in FY 2015 funding for the Effective Teaching and Learning: STEM program.

For years, the 21st Century Community Learning Centers program has supported the creation of community learning centers that provide academic enrichment opportunities during non-school hours for children—particularly those students who attend high-poverty and low-performing schools. The 21st CCLC program helps students meet state and local student standards in core academic subjects, such as reading and math; offers students a broad array of enrichment activities that can complement their regular academic programs; and offers literacy and other educational services to the families of participating children. ASTC members across the country have utilized 21st CCLC funding to partner with local school districts in an effort to highlight STEM in afterschool, and I encourage the Subcommittee to continue to support the 21st CCLC program by providing it with $1.1 billion in FY 2015 funding.

Institute of Museum and Library Services
The mission of IMLS is to inspire libraries and museums to advance innovation, lifelong learning, and cultural and civic engagement, and the agency provides valuable leadership through research, policy development, and grant making. ASTC members—and the Association itself—have a long history of partnership with IMLS, and have been delighted by the agency’s recent focus on STEM learning. IMLS recognizes that libraries and museums are important components in the broad effort to improve STEM learning skills in young people, and ASTC
supports their efforts in this regard. In FY 2015, the agency proposes to continue its funding priority (within current grant programs) for projects that develop new programming models to teach STEM skills to at-risk youth. I ask the Subcommittee to support this effort—and each museum grant program IMLS offers—by providing the Congressionally-authorized funding level of $38.6 million for the **Office of Museum Services**.

**National Institutes of Health and STEM Education Consolidation**

NIH’s **Science Education Partnership Award** program funds innovative K-12 STEM and informal science education projects and is designed to create partnerships among biomedical and clinical researchers and K-12 teachers, as well as schools, museums and science centers, media experts, and other educational organizations. SEPA resources target state and national K-12 standards for STEM teaching and learning and are rigorously evaluated for effectiveness. To date, Federal funding for SEPA has resulted in approximately 150 projects across the country, each one designed to help to attract young people into biomedical and behavioral science careers and enhance science and health literacy in children and adults. Last year, the Administration proposed terminating the SEPA program as part of the broad effort to consolidate Federal STEM education programs—a proposal that ASTC strongly opposed. I am grateful for the Subcommittee’s efforts to restore SEPA funding last year, and encourage you to continue your support for the program by providing $20 million for FY 2015.

With regard to the consolidation plan, while I recognize the importance of creating efficiencies within the Federal government whenever possible, I nevertheless had serious concerns about the proposal to altogether eliminate programs that support informal STEM education. Integral Federal investments, SEPA among them, were slated for elimination, with their associated resources directed to ED, the National Science Foundation (NSF), and the Smithsonian Institution. Again, I sincerely appreciate the Subcommittee’s thoughtful consideration of the harmful effect the proposed terminations would have had. For FY 2015, the Administration is offering what they call a “fresh reorganization” of Federal STEM education programs, which I urge the Subcommittee to closely examine. While I am pleased that SEPA is no longer slated for termination, I am anxious to learn more about the idea of joint NIH-ED administration of the program and encourage the Subcommittee to seek details. (I should note that while STEM education programs at the National Aeronautics and Space Administration and the National Oceanic and Atmospheric Administration do not fall under this Subcommittee’s jurisdiction, I am troubled that they are once again zeroed-out in the FY 2015 Budget Request.)

**About ASTC and Science Centers**

The Association of Science-Technology Centers is a global organization providing collective voice, professional support, and programming opportunities for science centers, museums, and related institutions, whose innovative approaches to science learning inspire people of all ages about the wonders and the meaning of science in their lives. Science centers are sites for informal learning, and are places to discover, explore, and test ideas about science, technology, engineering, mathematics, health, and the environment. They feature interactive exhibits, hands-on science experiences for children, professional development opportunities for teachers, and educational programs for adults. In science centers, visitors become adventurous explorers who together discover answers to the myriad questions of how the world works—and why. As Members of this Subcommittee know, it is imperative that we spark an interest in STEM fields at
an early age—a key role for community-based science centers and museums, who often undertake this effort with the aforementioned modest—but important—support from ED, IMLS, and NIH, in addition to other Federal agencies.

ASTC works with science centers and museums to address critical societal issues, locally and globally, where understanding of and engagement with science are essential. As liaisons between the science community and the public, science centers are ideally positioned to heighten awareness of critical issues like agriculture, energy, the environment, infectious diseases, and space; increase understanding of—and exposure to—important and exciting new technologies; and promote meaningful exchange and debate between scientists and local communities.

ASTC now counts 651 members, including 490 operating or developing science centers and museums in 45 countries. Collectively, our institutions garner 93 million visits worldwide each year. Here in the United States alone, our guests—and your constituents—pass through science center doors more than 66 million times to participate in intriguing educational science activities and explorations of scientific phenomena. The recent release of the National Science Board’s *Science and Engineering Indicators 2014* generally supports this data, reporting that 58% of Americans said they had visited a zoo, aquarium, natural history museum, or science and technology museum in the 12 months prior to the 2012 survey. *Indicators* also found that:

> U.S. residents may also come in contact with science and technology (S&T) through America’s rich and diverse informal science and cultural institutions. Many of these institutions actively try to broaden and deepen Americans’ intellectual and emotional engagement with science (Bell, Lewenstein, Shouse, and Feder 2009). By offering visitors the flexibility to pursue individual curiosity, such institutions provide exposure to S&T that is well-suited to helping people develop their interests and improve their knowledge, and such institutions can sometimes even change patrons’ attitudes.

Science centers come in all shapes and sizes, from larger institutions in big metropolitan areas to smaller centers in somewhat less populated ones. ASTC represents institutions as diverse as the American Museum of Science and Energy in Oak Ridge, Tennessee; the Chabot Space and Science Center in Oakland; the Columbia Memorial Space Center in Downey, California; the Connecticut Science Center in Hartford; the Museum of Science and Industry in Chicago; and the Natural History Museum of Utah in Salt Lake City.

**Science Centers as an Integral Part of the Nation’s Educational Infrastructure**

Science centers are physical—and virtual—places where science and citizens meet. Many have scientists on staff, and some feature research facilities on-site. Through exhibits and programming—like lectures and science cafés—science centers bring current research findings to the public while encouraging discussion and debate of current science issues. More and more, science centers are also getting members of the public involved in research projects themselves.

Our centers reach a wide audience, a significant portion of which are school groups. Here in the U.S., 94% of our members offer school field trips, and we estimate that more than 13 million children attend science centers and museums as part of those groups each year. Field trips, however, are truly just the beginning of what science centers and museums contribute to our country’s educational infrastructure, as:
As the Subcommittee knows, there is a strong consensus that improving STEM education is critical to the nation’s economic strength and global competitiveness in the 21st century. In order to improve STEM education, of course, we must be willing to draw on a full range of learning opportunities and experiences, including those that occur outside of the classroom. In its report entitled Learning Science in Informal Environments: People, Places, and Pursuits (2009), the National Research Council (NRC) of the National Academies said “beyond the schoolhouse door, opportunities for science learning abound...” The NRC found, among other things, that there is ample evidence to suggest that science learning takes place throughout the lifespan and across venues in non-school settings. Furthermore, the report highlighted the role of after-school STEM education in promoting diversity and broadening participation, finding that non-school environments can have a significant impact on STEM learning outcomes in historically underrepresented groups, and that these environments may be uniquely positioned to make STEM education accessible to all.

Conclusion
With this in mind, and while ASTC is fully aware of the significant budget challenges that face this Subcommittee and the nation, I hope you will continue to recognize the important educational offerings science centers and museums make available to students, families, and teachers, along with the essential Federal support they receive from the Department of Education, the Institute of Museum and Library Services, and the National Institutes of Health.

Again, I respectfully request that you provide $170 million in funding for the STEM Innovation Initiative, $149.7 million for the Effective Teaching and Learning: STEM program, and $1.1 billion for the 21st Century Community Learning Centers program at the Department of Education; $38.6 million for the Institute of Museum and Library Services’ Office of Museum Services; and $20 million for the Science Education Partnership Award program at the National Institutes of Health, while investigating the Administration’s proposal for joint NIH-ED administration of the program. In addition, please continue to closely examine any proposals that would seek to consolidate and/or reorganize Federal STEM education programs in an effort to ensure that stakeholder input has been sought and that proven, successful programs are maintained.

Thank you once again for your strong support for America’s science centers and museums—and for the opportunity to present these views. My staff and I would be happy to respond to any questions or provide additional information as needed by the Subcommittee.