

## TESTIMONY

David A. Ucko, Ph.D.  
Head, Informal Science Education  
Division of Elementary, Secondary, and Informal Education  
Education and Human Resources Directorate  
National Science Foundation

Before the  
Committee on Homeland Security and  
Governmental Affairs  
Subcommittee on Federal Financial Management,  
Government Information, and International Security  
United States Senate  
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Chairman Coburn, Co-Chairman Carper, and distinguished members of the Subcommittee, thank you for the opportunity to describe the merit review process by which the National Science Foundation (NSF) makes available grant funds for museums. These institutions may compete for funds from programs throughout the agency. The Informal Science Education (ISE) program within NSF's Directorate for Education and Human Resources (EHR), which I represent, is most closely aligned with the educational mission of science museums<sup>1</sup> and will be the focus for this testimony.

### **Program Background**

Initiated in 1983, ISE invests in projects that promote public interest, understanding, and engagement in science, technology, engineering, and mathematics (STEM) through voluntary, self-directed, and lifelong learning opportunities. Funded at \$63 million in FY 2006, ISE achieves national impact through exhibition, media, technology, and community-based projects that reach some 150 million citizens of all ages and backgrounds in science museums, community centers, giant-screen theaters, outdoor settings, and homes.

ISE has altered the national landscape through impact both on the public and on the field of informal science education. The Foundation's ISE program is the major source of federal funding for public understanding of science. It has increased access to STEM experiences and resources for audiences ranging in age from pre-school to older adults.

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<sup>1</sup> The term "science museum" is used broadly here to describe awards to science-technology centers, natural history museums, children's museums, aquariums, zoos, planetariums, arboreta, nature centers, and similar types of institutions.

Examples of public impact include:

- Exhibitions. ISE has been a major force in supporting the development of innovative permanent and traveling exhibitions that engage millions of people each year at science museums in hands-on science experiences. Of the ~200 exhibitions that have been toured by the Traveling Exhibition Service of the Association of Science-Technology Centers (ASTC), more than half were made possible by ISE support. These exhibitions have traveled to institutions in every state, bringing science to the public and professional development to staff.
- Television and Radio Programs. ISE established the field of children's science programming on TV through support of *3-2-1 Contact*, *Bill Nye: The Science Guy*, and *The Magic School Bus*. Current investments enable such programs as *Cyberchase*, *ZOOM*, *PEEP and the Big Wide World*, and *Dragonfly TV* to reach millions of children each week. Similarly, ISE established adult-science programming through support of *NOVA* on television and the National Public Radio (NPR) science unit on radio. Most ISE-funded media programs now have an extensive after-life in schools, colleges, and libraries; they also attract tens of millions monthly to their associated Web sites.
- Large-format Films. ISE established this format as an immersive educational medium. There are now 107 institutional giant-screen theaters in 44 states (typically IMAX<sup>®</sup> theaters at science museums) that emphasize educational science films, most of which have been made possible through ISE investment.
- Community and Youth Programs. During the short time since this program focus was initiated, ISE has contributed greatly to both the quantity and quality of science-based activities used nationally in after-school and out-of-school programs, such as those offered by Girls Inc. Many of these programs target underserved youth in particular. ISE also made possible the development of "citizen science" programs that involve the public in activities that contribute to actual research, such as the *eBird* project at the Cornell Lab of Ornithology, which has generated some 15 million observations from across the nation that are used for research on population biology and ecosystems management.

In addition, ISE investments have had a significant impact on the field of informal STEM education.

- Expansion of Science Museums. The ISE program has been instrumental in early capacity building for the science museum field and its professional association (ASTC). Since 1973, the number of member institutions in the U.S. has jumped from 20 to 338. These science museums are now the principal means by which some 83 million citizens each year experience science first-hand, primarily as families and school groups. They are estimated to contribute more than \$1 billion annually to our nation's economy.

- Advancing the Informal Science Education Field. The ISE program encourages best practices and stimulates innovation. It has raised standards and changed the culture of the field through emphasis on accuracy of STEM content (partnerships with university scientists); linkages to formal education (support of national standards, classroom activities, and teacher professional development); reaching underserved audiences (broader participation and partnerships with community-based groups); collaboration (linkages between synergistic efforts and organizations); and evaluation (systematic study of exhibits and programs).
- Investments in Infrastructure. ISE investment continues to strengthen the infrastructure of informal science education, professionalize the field, and further knowledge transfer among science museums and related organizations through conferences; professional development activities for building capacity; Web sites and professional publications; applied research projects that advance knowledge in the field; and other means.

### Funding and Grants to Museums

The National Science Foundation is funded at \$5.58 billion for FY 2006. The NSF appropriation does not receive earmarks for museums or other institutions. At \$63 million, the ISE program represents approximately 1 percent of the total NSF budget. Grants to museums make up approximately 40 percent of the total ISE dollars awarded each year. They typically fund development and implementation of innovative permanent and traveling exhibitions, after-school programs and other educational activities, Web sites, planetarium shows, and ancillary materials for classroom use. Museums and other types of organizations submit proposals in response to the ISE program solicitation (*NSF 06-520*), which emphasizes strategic impact, innovation, and collaboration. The ISE program invests in specific projects that develop and implement exhibitions and other educational deliverables. Awards are typically made for a three-to-five year duration, with a maximum total investment of \$3 million in any project. About 40 percent of a given year's ISE funding goes towards 25 to 30 major new project grant awards based on the merit review process. The remaining program funds provide continuing grant increments for earlier multi-year awards, as well as a small number of competitive grants for planning, conferences, and educational outreach by NSF researchers.

The total dollar amounts awarded by the Foundation to museums each year since FY 2000 are summarized below.

*NSF Awards to Museums (in millions), Fiscal Years 2000-2005*

	2000	2001	2002	2003	2004	2005	Total
<b>ISE Program</b>	\$21.5	\$20.2	\$21.8	\$21.0	\$28.9	\$25.9	\$139.3
<b>Other NSF</b>	\$7.5	\$19.1	\$14.0	\$15.6	\$13.4	\$20.1	\$89.8
<b>Total</b>	\$29.0	\$39.3	\$35.8	\$36.6	\$42.3	\$46.0	\$229.1

Over the FY 2000-2005 period, NSF funding for museums has increased 67%. *Attachment A* shows the sources of funds within NSF for museums. The Informal

Science Education program provides 61% of the NSF funds awarded to museums; organizational units throughout the agency fund the remainder. Awards made by other programs within NSF's Directorate for Education and Human Resource represent 13% of funds going to museums in support of formal K-12 education. For example, the Center for Learning and Teaching program funded a *Center for Informal Learning and Schools* based at San Francisco's Exploratorium that advances research and develops leaders at the interface between formal and informal learning. The Foundation's research directorates represent about 26% of awards to museums. The Directorate for Biological Sciences, for instance, funds scientific research carried out by curators and scientists at natural history museums and botanical gardens.

*Attachment B* shows which museums have received grants in each of these years. In some cases, the grantee is a foundation associated with the museum or a university that serves as the parent organization. It should be noted that this table shows only the primary grantee institution. Since most projects involve multiple partner organizations, additional museums also receive funds through many of these awards, as well as through grants to other types of institutions as participating collaborators. As an example, the Queens Borough Public Library in New York received an award in partnership with three museums to embed science exhibits within a children's library. Principal museum awardees also typically disseminate or travel the results of the award to other museums across the nation. The Nanoscale Informal Science Education (NISE) Network out of the Museum of Science in Boston, for example, will create exhibits and other educational products on nanotechnology for some 100 museum sites.

In the ISE program, museums may apply for small amounts of additional funding as supplements to original awards in amounts up to 20 percent or \$200,000, whichever is less. These supplements are intended either to protect the initial investment by ensuring completion of the original project scope if changes in conditions have occurred after the original award was made, or to take advantage of opportunities to extend further the project impact. Cost overruns are not grounds for awarding a supplement. In FY 2005, ISE awarded three such supplements to museums, with average funding of \$164,163.

The ISE program does not fund operating support or capital expenses. Museums, like other NSF grantees, are eligible to recover approved indirect costs necessary to the general operation of the organization in support of the proposed project, such as certain administrative expenses. Organizations are required to support proposed indirect cost rates shown on their grant proposal budget by submission of a current indirect cost rate agreement negotiated with a Federal agency.

### **Merit Review Criteria**

The ISE program holds competitions and corresponding review panels two times each year. All ISE awards are made competitively through the NSF merit review process and are based on the National Science Board criteria of *intellectual merit* and *broader impacts*. The following criteria are considered by reviewers in assessing ISE proposals:

***Within intellectual merit, reviewers assess:***

*Deliverables.* Does this project creatively "push the envelope" in enhancing informal science learning? Have the deliverables been selected and integrated to achieve the greatest project impacts? Are front-end and formative evaluation efforts adequate for their development? Are the scope and depth of STEM content appropriate to the target audience?

*Project Design.* Are the deliverables, project design, and timeline well developed and integrated to produce the specified impacts? Does the project design build on informal learning research and on lessons learned from prior efforts? Is the proposed budget reasonable and adequate? Does the proposal present meaningful strategies for managing potential risks?

*Project Team.* Is the team qualified to carry out the project? Do external advisors provide the expertise necessary to conduct the project, including relevant expertise based in informal science learning, STEM content, any media used, and evaluation?

*Partnerships.* Does the project fully take advantage of partnerships to enhance project impacts? Is there a credible strategy and plan for fostering or strengthening collaboration among the partners?

***Within broader impacts, reviewers assess:***

*Audience.* Is the primary target audience, as well as any secondary audience, clearly identified and segmented into subgroups as appropriate? Does the project demonstrate knowledge about the target audiences, their needs, and their interests?

*Public Audiences.* Will the project likely achieve a significant impact on the target audience of informal learners? Does the project maximize reach to audiences nationally, regionally, or community-wide? Does the proposal offer effective ways to reach nontraditional audiences and underrepresented groups?

*Professional Audiences.* Will the project likely achieve a significant impact on professionals in the field of informal science learning?

*Impact Evaluation.* Are there clear, appropriate measures and criteria for defining project success? Is there an appropriate summative evaluation plan for assessing impact? Is there an effective plan for broadly sharing project outcomes and findings?

*Strategic Impact.* Is the project likely to advance the field of informal science education in a significant way?

Results achieved through any prior NSF funding are considered in light of these review criteria. In each proposal, the principal investigator (PI), who serves as project director, is required to describe outcomes from previous NSF awards. New projects from prior grantees or resubmissions of previously declined proposals are subject to the same competitive review process as all other proposals.

## **Merit Review Process**

Program officers facilitate merit review by forming diverse panels of experts with relevant knowledge and experience in informal science education, STEM content, evaluation, and areas specific to the type of proposal, such as exhibition design and production. All reviewers and panelists serve as volunteers. Selected panelists for each proposal submit written reviews with ratings (excellent, very good, good, fair, or poor) in advance of the panel meeting. After discussion at the panel meeting, reviewers then rank each proposal as high, medium, or low as a priority for funding, and a panel summary is written by an assigned panelist. After funding decisions are finalized, anonymous copies

of the reviews and panel summaries are made available to principal investigators to indicate the panel's assessment of their projects and offer suggestions for improvement.

After the panel meetings, program officers meet as a group to determine which of the most highly rated proposals will be recommended for funding. Their goal is to create a diverse program portfolio, based on such factors as type of deliverable (e.g., exhibit, TV series, after-school program, Web) and target audience, in order to achieve the greatest national impact for the dollars invested.

The program officer recommendations and their rationale must then be approved by the Division Director. The official awards are then made by the NSF Division of Grants and Agreements, following review of the budget and financial capability of the awardee. The ISE program is highly competitive; the funding rate in FY 2005 was 17 percent.

Costs for running merit review panels, covered by program funds, are modest. The ISE program provides reimbursement for non-local panelists at a flat rate of \$480 for each meeting day (typically three days for ISE panels) and \$280 for each of two travel days. Reviewers residing in the local metropolitan area receive compensation of \$280 for each full day of the meeting. These amounts are intended to cover all expenses, including lodging (as appropriate), taxis, parking, meals, and incidental expenses, except travel, which is paid directly. The following table shows the costs associated with holding ISE panels. These figures cover two sets of museum panels per year and currently represent about 1% of the funds awarded by ISE to museums annually. (The 2005 figure reflects greater use of external reviewers for preliminary proposal panels in response to an increased number of submitted proposals.)

*ISE Museum Panel Expenses, Fiscal Years 2000-2005*

2000	2001	2002	2003	2004	2005
\$47,692	\$57,753	\$58,651	\$80,687	\$54,958	\$112,674

### **Post-Award Accountability Measures**

As throughout NSF, each ISE program officer is responsible for ongoing post-award management for an assigned portfolio of awards. Significant changes in the original scope, project management, and budget must be submitted for review and approval by the cognizant program officer, and when required, the Division of Grants and Agreements.

Every grantee is required to submit an annual report describing progress of the project each year; award of the next annual continuing grant increment requires approval of the report by the cognizant program officer. Site visits also may be conducted by program officers to monitor progress and by the Division of Grants and Agreements to monitor financial aspects of awards.

Upon completion of the project, a final report is required that describes the outcomes of the award, including a summative evaluation of project impact carried out and written by an independent, third-party evaluator. The principal investigator for each ISE award is

required to post these summative evaluations on the [www.informalscience.org](http://www.informalscience.org) Web site so that others can learn from their experiences.

### **Program Review**

Every three to four years, each NSF program is reviewed by a Committee of Visitors (COV) consisting of outside independent experts. The ISE program recently underwent such a review. The complete report, entitled “Informal Science Education Program COV,” and the “Response to ISE COV Report” by staff are posted for public access at <http://www.nsf.gov/od/oia/activities/cov/covs.jsp#ehr> under the heading “EHR 2005.”

Regarding merit review, the COV reported that ISE’s mechanisms were extremely well suited to the tasks; that the process was efficient; and as orchestrated by program officers, the process seemed strictly and appropriately (if not impressively) implemented to meet all ISE goals. It noted that panelists were appropriately balanced between scientists with content expertise and experienced practitioners within the informal science education field, and that program officers were very careful in meeting desired characteristics of geographic, institutional, gender, and ethnic diversity. In addition, the COV stated that individual reviews were, at most times, comprehensive and written in such a way as to provide helpful comments to assist proposers. In general, the COV stated that the overall quality of the reviews was strong and, in almost every case, addressed both merit review criteria.

### **Opportunities**

The ISE program continually seeks ways to improve its efficiency and effectiveness. It has started to use Web conferencing as a cost-effective means to orient reviewers and panelists in advance, as well as to help prospective proposers become more familiar with the program and develop competitive proposals, especially from those states with fewest awardees. The ISE program is developing an online database to enable program officers to monitor awards and analyze the impact of the portfolio. The current solicitation calls for proposals to establish an ISE Resource Center, which will support continued professionalization and build capacity across the field; provide assistance to current and prospective project directors; and help assess the program.

The ISE program supports the development of a well-informed citizenry and a diverse, well-prepared workforce of scientists, engineers, mathematicians, and technicians, an effort that complements the President's recently announced American Competitiveness Initiative. This outcome is especially important to our nation today when science and technology play ever-increasing roles in our everyday lives, in local and national policy, and in a competitive global marketplace.

Attachment A

NSF Museum Funding  
Fiscal Years 2000-2005

	2000	2001	2002	2003	2004	2005	Total \$	%
<b>Informal Science Education</b>	\$21,450,377	\$20,243,729	\$21,794,384	\$21,027,656	\$28,846,217	\$25,890,479	\$139,252,842	60.8%
<b>Biological Sciences</b>	\$2,379,623	\$6,367,090	\$5,931,763	\$7,128,310	\$5,267,513	\$6,224,308	\$33,298,607	14.5%
<b>Other Educ. &amp; Human Res.</b>	\$3,517,297	\$9,443,750	\$1,523,817	\$5,136,990	\$4,572,202	\$6,135,513	\$30,329,569	13.2%
<b>Geosciences</b>	\$464,441	\$951,787	\$2,044,946	\$1,406,879	\$1,302,650	\$1,607,560	\$7,778,263	3.4%
<b>Math. &amp; Physical Sciences</b>	\$466,500	\$1,391,165	\$1,362,369	\$475,426	\$940,208	\$2,712,765	\$7,348,433	3.2%
<b>Social, Behav. &amp; Eco. Sci.</b>	\$310,524	\$232,280	\$714,151	\$1,370,381	\$745,628	\$1,082,317	\$4,455,281	1.9%
<b>Computer &amp; Info. Sci. &amp; Eng.</b>	\$300,000	\$165,000	\$2,144,691	-	\$242,094	\$374,525	\$3,226,310	1.4%
<b>Office of Polar Programs</b>	\$70,534	\$579,122	\$328,944	\$40,000	\$393,530	\$343,589	\$1,755,719	0.8%
<b>Engineering</b>	-	-	-	-	-	\$1,640,280	\$1,640,280	0.7%
<b>Total \$</b>	\$28,959,296	\$39,373,923	\$35,845,065	\$36,585,642	\$42,310,042	\$46,011,336	\$229,085,304	



2000

2001

2002

Adler Planetarium (IL)	Amer. Museum of the Moving Image (NY)	Bay Area Discovery Museum (CA)
Anchorage Museum Assn. (AK)	Anchorage Museum Assn. (AK)	Brooklyn Childrens Museum (NY)
California Science Center Fdn.	Brooklyn Childrens Museum (NY)	Buffalo Bill Historical Center (WY)
Chabot Space and Science Center (CA)	Buffalo Bill Historical Center (WY)	California Science Center Fdn.
Children's Discovery Mus. of San Jose (CA)	California Science Center Fdn.	Children's Museum of Houston (TX)
Children's Museum of Indianapolis (IN)	Chabot Space and Science Center (CA)	Exploratorium (CA)
Exploratorium (CA)	Children's Discovery Mus. of San Jose (CA)	Fort Worth Mus. of Sci. & History (TX)
Field Museum of Natural History (IL)	Children's Museum of Houston (TX)	Franklin County Historical Society (OH)
Franklin Institute Science Museum (PA)	Children's Museum of Indianapolis (IN)	Great Lakes Mus. of Sci., Env. & Tech. (OH)
Great Lakes Mus. of Sci., Env. & Tech. (OH)	Discovery Place, Inc. (NC)	Huntington Lib. & Botanical Gardens (CA)
Hudson River Museum (NY)	Exploratorium (CA)	Illinois State Museum Society
Illinois State Museum Society	Field Museum of Natural History (IL)	Independence Seaport Museum (PA)
LA County Museum Nat. History Fdn. (CA)	Franklin County Historical Society (OH)	Liberty Science Center, Inc. (NJ)
Louisville Science Center (KY)	Franklin Institute Science Museum (PA)	Maine Discovery Museum
Maryland Science Center	Great Lakes Mus. of Sci., Env. & Tech. (OH)	Miami Museum of Science (FL)
Miami Museum of Science (FL)	Independence Seaport Museum (PA)	Minnesota Children's Museum
Minnesota Children's Museum	Indianapolis Zoological Society Inc (IN)	Montshire Museum of Science (VT)
Montshire Museum of Science (VT)	Louisville Science Center (KY)	Museum of Science (MA)
Mount Washington Observatory (NH)	Maryland Science Center	New England Aquarium Corp. (MA)
Museum of Science (MA)	Miami Museum of Science (FL)	New Mexico Museum of Nat. History Fdn.
Museum of Science and Industry (IL)	Milwaukee Public Museum (WI)	New York Hall of Science
National Aquarium in Baltimore (MD)	Minnesota Children's Museum	North Carolina Museum of Life & Science
New England Aquarium Corp. (MA)	Montshire Museum of Science (VT)	Oregon Museum of Science & Industry
New Mexico Museum of Nat. History Fdn.	Museum of Science (MA)	Pacific Science Center Fdn. (WA)
New York Hall of Science	New England Aquarium Corp. (MA)	San Diego Museum of Man (CA)
North Carolina Museum of Life & Science	New Mexico Museum of Nat. History Fdn.	San Diego Society of Natural History (CA)
Oregon Museum of Science & Industry	New York Hall of Science	Science Museum of Minnesota
Reuben Fleet Space Theatre Sci. Ctr. (CA)	North Carolina Museum of Life & Science	Smithsonian Institution (DC)
San Diego Society of Natural History (CA)	Oregon Museum of Science & Industry	St Louis Science Center (MO)
Sci. & Tech. Interactive Ctr. (SCITECH) (IL)	San Diego Museum of Man (CA)	Tech Museum of Innovation (CA)
Science Museum of Minnesota	San Diego Society of Natural History (CA)	University of California-Berkeley
St Louis Science Center (MO)	Sci. & Tech. Interactive Ctr. (SCITECH)	University of Florida
University of California-Berkeley	Science Museum of Minnesota	University of Nebraska-Lincoln
University of Nebraska-Lincoln	University of California-Berkeley	Wildlife Conservation Society (NY)
Whitaker Center for Science & Arts (PA)	University of Nebraska-Lincoln	
Wildlife Conservation Society (NY)	Wildlife Conservation Society (NY)	

**Additional Museums Funded by Other NSF Programs:**

American Museum of Natural History (NY)	Academy of Natural Sciences (PA)	American Museum of Natural History (NY)
Buffalo Society of Natural Science (NY)	Adler Planetarium (IL)	Bernice P. Bishop Museum (HI)
Delaware Museum of Natural History	American Museum of Natural History (NY)	Chicago Botanic Garden (IL)
Denver Museum of Nature & Science (CO)	Bernice P. Bishop Museum (HI)	Cleveland Museum of Nat. History (OH)
Milwaukee Public Museum (WI)	Denver Museum of Nature & Science (CO)	Denver Museum of Nature & Science (CO)
Missouri Botanical Garden	LA County Museum Nat. History Fdn. (CA)	Field Museum of Natural History (IL)
New York Botanical Garden	Missouri Botanical Garden	LA County Museum Nat. History Fdn. (CA)
Santa Barbara Museum of Nat. History (CA)	National Tropical Botanical Garden (HI)	Missouri Botanical Garden
Smithsonian Institution (DC)	New York Botanical Garden	New York Botanical Garden
Virginia Museum of Natural History	Santa Barbara Mus. of Nat. History (CA)	Santa Barbara Mus. of Nat. History (CA)
	Smithsonian Institution (DC)	Virginia Museum of Natural History
	Virginia Museum of Natural History	

46  
\$28,959,296

48  
\$39,373,923

45  
\$35,845,065

2003

2004

2005

Anchorage Museum Assn. (AK)	Bay Area Discovery Museum (CA)	Anchorage Museum Assn. (AK)
Bay Area Discovery Museum (CA)	Brooklyn Childrens Museum (NY)	Bay Area Discovery Museum (CA)
Brooklyn Childrens Museum (NY)	California Academy of Sciences	Brooklyn Childrens Museum (NY)
California Academy of Sciences	California Science Center Fdn.	California Academy of Sciences
Chabot Space and Science Center (CA)	Chabot Space and Science Center (CA)	California Science Center Fdn.
Chicago Botanic Garden (IL)	Children's Discovery Mus. of San Jose (CA)	Chabot Space and Science Center (CA)
Children's Discovery Mus. of San Jose (CA)	Childrens Museum Boston (MA)	Chicago Children's Museum (IL)
Children's Museum of Houston (TX)	Children's Museum of Houston (TX)	Children's Museum of Houston (TX)
Exploratorium (CA)	Denver Museum of Nature & Science (CO)	Denver Museum of Nature & Science (CO)
Fort Worth Mus. of Sci. & History (TX)	Exploratorium (CA)	Exploratorium (CA)
Franklin Institute Science Museum (PA)	Fort Worth Mus. of Sci. & History (TX)	Franklin Institute Science Museum (PA)
Garfield Park Conservatory Alliance (IL)	Franklin Institute Science Museum (PA)	Garfield Park Conservatory Alliance (IL)
Great Lakes Mus. of Sci., Env. & Tech. (OH)	Garfield Park Conservatory Alliance (IL)	Hugh Moore Hist. Park & Museum (PA)
Hugh Moore Hist. Park & Museum (PA)	Hugh Moore Hist. Park & Museum (PA)	Miami Museum of Science (FL)
Liberty Science Center, Inc. (NJ)	Huntington Lib. & Botanical Gardens (CA)	Montshire Museum of Science (VT)
Mashantucket Pequot Museum (CT)	Indiana State Museum Fdn.	Museum of Science (MA)
Miami Museum of Science (FL)	Liberty Science Center, Inc. (NJ)	Museum of Science and Industry (FL)
Montshire Museum of Science (VT)	Louisville Science Center (KY)	New York Hall of Science
Museum of Science (MA)	Maryland Science Center	North Carolina Museum of Life & Science
Museum of Science and Industry (FL)	Mashantucket Pequot Museum (CT)	Pittsburgh Children's Museum (PA)
New York Hall of Science	Miami Museum of Science (FL)	Science Museum of Minnesota
North Carolina Museum of Life & Science	Montshire Museum of Science (VT)	St Louis Science Center (MO)
Ocean Institute (CA)	Museum of Science (MA)	University of California-Berkeley
Oregon Museum of Science & Industry	Museum of Science and Industry (FL)	University of Florida
Pacific Science Center Fdn. (WA)	New England Aquarium Corp. (MA)	University of Nebraska-Lincoln
San Diego Society of Natural History (CA)	New York Hall of Science	Wildlife Conservation Society (NY)
Science Museum of Minnesota	North Carolina Museum of Life & Science	
Smithsonian Institution (DC)	Ocean Institute (CA)	
Tech Museum of Innovation (CA)	Oregon Museum of Science & Industry	
University of California-Berkeley	Pacific Science Center Fdn. (WA)	
University of Florida	Pittsburgh Children's Museum (PA)	
University of Nebraska-Lincoln	Science Museum of Minnesota	
	Smithsonian Institution (DC)	
	Tech Museum of Innovation (CA)	
	University of California-Berkeley	
	University of Florida	
	University of Nebraska-Lincoln	
	Wildlife Conservation Society (NY)	

American Museum of Natural History (NY)	American Museum of Natural History (NY)	Adler Planetarium (IL)
Bernice P. Bishop Museum (HI)	Bernice P. Bishop Museum (HI)	American Museum of Natural History (NY)
Cleveland Museum of Nat. History (OH)	Chicago Botanic Garden (IL)	Bernice P. Bishop Museum (HI)
Cincinnati Museum Center (OH)	Dallas Museum of Natural History (TX)	Chicago Botanic Garden (IL)
Field Museum of Natural History (IL)	Delaware Museum of Natural History	Dallas Museum of Natural History (TX)
LA County Museum Nat. History Fdn. (CA)	Field Museum of Natural History (IL)	Field Museum of Natural History (IL)
Milwaukee Public Museum (WI)	LA County Museum Nat. History Fdn. (CA)	LA County Museum Nat. History Fdn. (CA)
Missouri Botanical Garden	Missouri Botanical Garden	Milwaukee Public Museum (WI)
New England Aquarium Corp. (MA)	New York Botanical Garden	Missouri Botanical Garden
New Mexico Museum of Nat. History Fdn.	North Carolina State Museum	New York Botanical Garden
Santa Barbara Mus. of Nat. History (CA)	Santa Barbara Mus. of Nat. History (CA)	Santa Barbara Mus. of Nat. History (CA)
		Seattle Aquarium Society (WA)
		Smithsonian Institution (DC)

43  
\$36,585,642

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\$42,310,042

39  
\$46,011,336