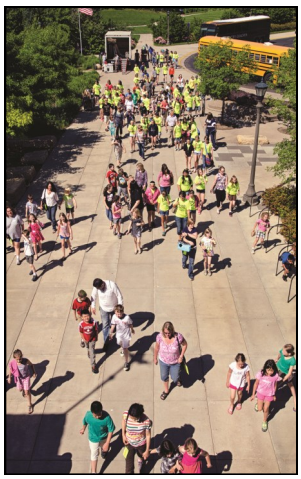
FY2014 Report
Arts and Cultural Heritage Fund
Legacy Amendment
Science Museum of Minnesota

The Science Museum of Minnesota is grateful for the generous appropriation from the State of Minnesota's Arts and Cultural Heritage Fund of the Legacy Amendment, and is pleased for the opportunity to submit a report on the generous allocation of $1.2 million for each of fiscal years 2014 and 2015.

School Services

3.75 FTE, July 1, 2013 – June 30, 2015

The Science Museum of Minnesota's work with schools is a continuation of efforts undertaken in the FY12-13 biennium, generously funded by an appropriation from the Arts and Cultural Heritage Fund. With previous Legacy funds, we undertook a museum-wide evaluation of our offerings to schools and how we could better serve our student and educator audiences. The outcome of this was ***The Big Weather Experience***, a new field trip program package about weather that directly addresses Minnesota State Science Standards. As a result of the renewed focus on creating increased value for educators and students, our field trip attendance for 2012-2013 grew by 31%. Additionally, 79% of teachers saw their students learn about air and weather in a way that supported Minnesota standards.



Building on our successes of FY12-13, our work for the FY14-15 biennium has three goals:

1. **Reach every county in Minnesota through our work with schools;**
2. **Improve support for 21st century teacher needs through more explicit connections to standards;**
3. **Increase our web capacity to support access to museum resources.**

We are achieving these outcomes through a variety of efforts. As the Science Museum of Minnesota, we strive to serve the entire state of Minnesota; our commitment to reach every county in the state is reflective of that statewide focus. The increased value in field trip offerings is one strategy, drawing students and educators from all corners of Minnesota. A second strategy is to send instructors to schools across the state to deliver assemblies and residency programs, bringing students vibrant, hands-on and standards-based programming. As of January 1, 2014, we have served or have booked programming to serve schools in 83 of 87 counties across Minnesota.

School Liaison

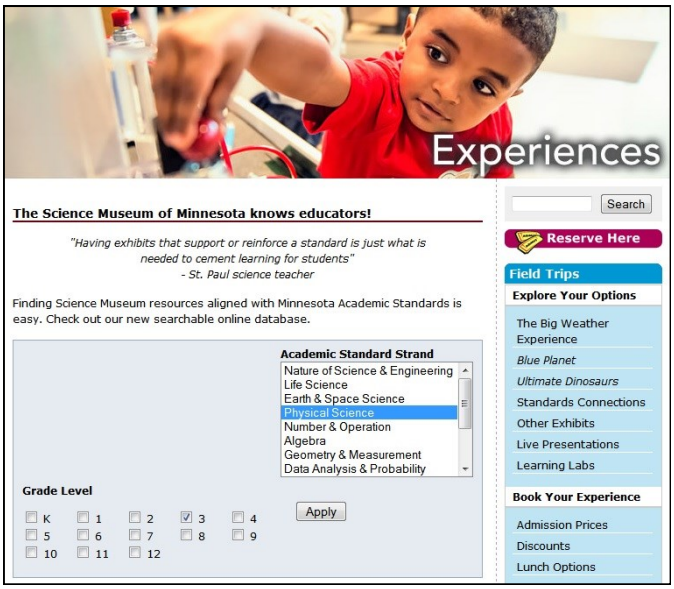
To provide additional support for educators, the Science Museum has hired a full time School Liaison, Kelly Meyer. She is charged with building new, and strengthening existing, partnerships with schools across Minnesota that meet the educational goals and needs of schools, teachers and students. With ten years of experience in STEM teaching, Kelly brings a unique understanding of teachers and knows how museum programming can fulfill student and educator needs. For example, her work has contributed to strengthening relationships with schools in Bemidji, piloting a new standards-based school assembly at Peter Hobart Elementary in St. Louis Park,

working with a school in Rockford to provide an engineering-focused assembly to 3rd-5th grade students, and more. Kelly will be engaging with educators at a multi-district conference in Esko in January. Kelly's work provides educators and schools with a personal connection, understanding what support they need and connecting teachers with standards-based, interactive programming.

New Program Development

In evaluating our outreach programming, we identified assembly programs to redevelop by strengthening their academic standards connections and/or filling gaps in our programming with new standards-based programs. Program developers are thus redeveloping a Sound assembly for K-2 students, focusing on vibration and Nature of Science and Engineering standards. Another new assembly in development include a K-2 Water assembly, available in winter 2014. To complement our existing Engineering assembly for 3rd-5th grade students, we are developing a K-2 Engineering assembly program, available in spring 2014.

Learning Labs is another new program with a fresh approach. While on a field trip, students receive a 50-minute, standards-based classroom instruction, supplementing the experiences they have in Science Museum exhibits. This program served 4,900 students in 2012-2013. All new and redeveloped programs are



grounded in Minnesota Academic Standards and continue to provide a quality learning experience for students across Minnesota.

Online Standards Database

A key accomplishments of FY14 has been the launch of the Science Museum's Minnesota Academic Standards database in December 2013. With this new tool, educators can search the museum's menu of programs to find resources for a specific grade that meet specific academic standards. For example, a 3rd grade teacher can search and find all of the exhibits, films and programs that meet Physical Science standards for 3rd grade. We will continue to refine and update this online resource, ensuring this tool is useful and relevant for educators. The searchable database can be found online at www.smm.org/experiences.

As of December 31, 2013, the direct expenses for this project are $60,068.44. The administrative costs are $0. Additional funding for School Network includes private gifts totaling $150,000. The support provided by the Arts and Cultural Heritage Fund has given us the ability to invest in new program development and create new resources that directly address academic standards, ensuring teachers and students have high-quality educational experiences with Science Museum of Minnesota programs.

American Indian Programs

4.25FTE, July 1, 2013 – June 30, 2015

The Science Museum of Minnesota's work with American Indian programming, funded by the Arts and Cultural Heritage Fund, has spanned three biennium, beginning with the purchase of the Bishop Whipple collection in FY10-12. The Bishop Whipple collection consists of local and regional American Indian artifacts from the 1850s. In FY13, we developed a prototype exhibition, *We Move and We Stay*, which features artifacts from the museum's collection including many from the Bishop Whipple collection. The exhibition tells the story of generations of Dakota and Ojibwe people who have made their home in Minnesota, as well as traditions, change, and persistence within these communities. The exhibition opened in February 2013 and continues to be available for visitors in our galleries.

Our FY14-15 goals for the American Indian programming project include:

1. **Expanding the pilot exhibition to include more objects, hands-on activities and visitor feedback opportunities;**
2. **Initiating community programming around the state to include a wider and more diverse group of Minnesotans;**
3. **Inventorying and digitizing the museum's American Indian ethnology collections to make them accessible to a larger audience.**

Expanding *We Move and We Stay*

Much of our work for FY14 has been planning for exhibition expansion. Ongoing evaluation on how visitors engage with the exhibition and work with community partners continue to inform the project's direction. Preparation is underway to add additional artifacts within the existing exhibit structure but increasing the footprint and scope. In addition, the project team is developing interactive exhibit components for instillation in FY15.

Currently, *We Move and We Stay* is located in the museum's Collections Gallery and as we plan to expand the exhibition, space limitations become a reality. Due to the age and fragility of some of the artifacts, *We Move and We Stay* must remain in the climate-controlled Collections Gallery. Therefore, we plan to relocate other non-related exhibits into other galleries in the museum as we add to the exhibition.

Community Programming

During the spring of 2014 we will launch new community programming with the goal of supporting Native teens. Youth will learn STEM content, science process skills and critical thinking as they study, curate and create programs and displays of objects from their communities and the Science Museum's collections. This program is modeled after the museum's successful Kitty Andersen Youth Science Center and other youth development frameworks. Ten youth, recruited with assistance from our American Indian Advisory Council and other partnerships, will form a team that explore exhibit content and issues relevant to their own lives. Youth participants will learn about Dakota and Ojibwe communities, interview elders, and create a tangible output from their experiences, including the possibility of a mini-exhibit within *We Move and We Stay*. This opportunity will be a paid job for the youth, allowing them to develop job and life skills while examining their own experiences and backgrounds. We hope to continue to work with some of these youth through the summer, with the possibility of hiring them as ethnobotony interns to assist with our Native garden, grown with indigenous seeds. Joanne Jones-Rizzi, Director of Community Engagement, and Scott Shoemaker, Research Assistant with focuses in ethnobotony and American Indian studies, will lead the program with help from local Native educators.

As of December 31, 2013, the direct expenses for this project are $20,527.18. The administrative costs are $0. We have received additional private gifts from individuals and corporations totaling $125,533 for *We Move and We Stay* and our American Indian programming. We are grateful for the continued support from the Arts and Cultural Heritage Fund to, over the course of several biennia, move this project from purchasing the Bishop Whipple collection to a full-fledged exhibition with supporting community programming.

Omnitheater Digital Upgrade

July 1, 2013 – June 30, 2015

The William L. McKnight-3M Omnitheater's unique brand of immersive education has been one of the leading attractions at the Science Museum since the original Omnitheater opened in 1978. Today, the Science Museum's current Omnitheater puts viewers in the heart of the dramatic action. It is the only IMAX Convertible Dome Theater in the United States.

The William L. McKnight-3M Omnitheater currently uses the largest film format ever manufactured for both recording and projecting images. However, the future of the system is short-term as film is being replaced with digital technology. In fact, 2014 will be the last year that commercial movie theaters use film projection technology; all of the major movie distributors will only be supplying movies in a digital format beginning in 2015. With the loss of consumer and theatrical market for film, film itself will no longer be made. Our goal for this project is to implement the technical upgrades in the Omnitheater necessary to show digital productions.

Preparing to Upgrade

The Omnitheater Digital Upgrade is in a preparation phase for FY14.The Science Museum has taken a leadership position with our peers nationwide, forming a consortium of seven U.S. museums, all housing

Omnitheater, and working directly with IMAX Corporation to design and develop a new sophisticated digital projection system. This new system will solve technological issues and improve upon the superlative experience that has been a hallmark of the Omnitheater for over 30 years. We have reached an agreement with IMAX on the principal terms for the ground-up design and installation of the IMAX laser digital dome projection system. As a stakeholder in developing this groundbreaking technology, Mike Day, Executive Vice President of Museum Enterprises, was one of three people in the world IMAX invited to a technology demonstration in Copenhagen in June 2013. Additionally, the Science Museum of Minnesota has been designated the "beta site" for the first installation worldwide of the 2nd generation digital projection system in a giant dome screen Omnitheater.

Digital Upgrade Timeline

Each year, the week after Labor Day, the Omnitheater closes for a week for cleaning and maintenance. In September 2013, we completed a revamping of our Rotating Dome Control System, a small but vital first step in modernizing the Omnitheater. The current plan calls for expanding the September 2014 shutdown to four weeks to reconfigure and build out the theater's rear projection booth and install the infrastructure necessary to accommodate the new projection system. Then during the shutdown period in September 2015, we would install and test the new system prior to beginning beta testing the new system.

As of December 31, 2013, the direct expenses for this project are $0. The administrative costs are $0. Arts and Cultural Heritage Funds are designated for purchasing equipment for the Technology Upgrade. We anticipate completing the negotiations, executing the contract with IMAX, and making a first payment by the end of FY14. We have received $355,000 in additional private funding to support the Omnitheater Technology Upgrade, and we continue to seek private funds to complete this project. We look forward to showing films with improved image quality and using a digital project system that uses less energy to operate. Minnesotans of all ages have prized memories of seeing a giant screen film in the William L. McKnight-3M Omnitheater. Thanks to support from the Arts and Cultural Heritage Fund, this cherished theater will continue to create memories and educate visitors for many years to come.

The Science Museum of Minnesota is pleased to submit this report on support from the Arts and Cultural Heritage Fund of the Legacy Amendment. We're proud of our work on these projects, and look forward to continuing the important work that these funds make possible. The museum would be thrilled to provide a tour of the museum, our school services, American Indian programming, or the Omnitheater, and we would be happy to answer any additional questions. Please contact Lindsay Bacher directly for additional information.

Contact:
Lindsay Bacher
Corporate Relations Coordinator
651-265-9813 or lbacher@smm.org
www.smm.org/legacy

Science Museum of Minnesota®