



ANNUAL REPORT ARTS AND CULTURAL HERITAGE FUND LEGACY AMENDMENT

SCIENCE MUSEUM OF MINNESOTA

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The Science Museum of Minnesota is pleased to submit an annual report for the work we are doing with the generous appropriation of \$1.3 million for fiscal years 2020-2021 from the Arts and Cultural Heritage Fund of the Minnesota Legacy Amendment. This report details accomplishments in **FY20 (July 1, 2019 – June 30, 20)** related to the following statutes: M.S. 3.303, Subd. 10, and M.S. 129D.17, Subd.2 (d). **We are grateful for your support of our programs.**

Statewide School and Community Initiative | July 1, 2019–June 30, 2020

FY20 Report, 4.09 FTE

Building upon previous Legacy support, the Science Museum of Minnesota (SMM) began the 2020 fiscal year excited and committed to delivering on our stated project goals and to further engage family and school audiences. Our work was well underway and on target to meet our project outcomes until the COVID-19 pandemic upended all aspects of society including schools, families and the museum. In March the museum shut down all public operations including school field trips and outreach to schools and communities. Nearly 90% of museum staff were furloughed in the spring and into the summer which impacted the work associated with our Legacy funding. During this time, remaining staff shifted to support the development and implementation of new online resources for both families and schools. In addition, planning efforts were undertaken to reshape our program plans for the 2020-2021 school year, shifting all of our program efforts away from in-person outreach and field trip programming to distance based learning and online resources. This has been an unprecedented year of upheaval for the museum, schools, and communities. We remain committed to expanding access to high quality, standards aligned, and culturally responsive programs and resources; engaging with audiences, stakeholders and partners in respectful and collaborative ways to support STEM learning that improves lives; and increasing access to objects that tell the story of Minnesota's cultural heritage. Science, Education and Equity are at the core of the museum's mission, values, and programs. This project supported by Legacy provides critical investments to continue our work and commitment to meet the changing needs of our schools, families and communities.

Progress made towards project goals includes:

1. Increase access to museum programming and resources for schools throughout Minnesota.

The Science Museum of Minnesota prides itself on annually reaching K-12 school children in all 87 Minnesota counties, a goal achieved seven years straight since FY2013. In FY20, SMM was on track to again meet this goal based on program reservations for the spring season. Due to the pandemic, the museum closed in March and cancelled all remaining school programs for the fiscal year. Even with the shutdown and the cancellation of spring and summer programs, we were able to serve over 100,000 students and schools in 81 of 87 counties.

Prior to the pandemic, the museum continued to offer discounted admission for all schools, along with free admission for chaperones, to ensure equitable access for all Minnesota students. Schools with greater than 50% of students receiving free and reduced lunch were eligible for an additional 60% discount. In addition, and with the generous support of private donors, the museum raised \$25,000 to provide busing reimbursements for schools with 50% free and reduced lunch or traveling over 200 miles round trip to visit the museum.

Proposed Outcome Achievement

- Achieved proposed outcomes (Achieved 100% of outcomes)
- **Achieved most of the proposed outcomes (Achieved greater than 50% of proposed outcomes)**
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- Outcomes data not yet available

2. Build capacity of school districts, leaders, and teachers to develop and implement plans to address systems of oppression and educational inequities.

Due to health and safety concerns, the teacher institute planned for June 2020 was postponed until July 27. This highly regarded professional development program is designed for teams of K-12 educators who are committed to being change agents in making their schools and classrooms more just and equitable places to learn. 47 individuals applied resulting in 33 educators from five school districts participating in this year's virtual program. The museum's IDEAL Center staff returned from furlough in June to restart program planning and shift to a distance learning format. Staff worked to revise curriculum, develop new technology skills and build the online capabilities required to deliver a high quality professional learning experience virtually.

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3. Develop shared understanding of opportunities, barriers, and potential roles of SMM family-focused programming to increase access to STEM learning experiences in multiple settings, in collaboration with community partners

Prior to the shutdown, museum staff from the STEM Education and Museum Access & Equity departments identified communities of focus. Based on a STEM Education departmental initiative rooted in the findings of our Legacy-funded RACE in Greater Minnesota project, we chose to focus our resources on developing relationships with tribal communities in Minnesota. We began tracking our engagements across our spectrum of authentic community engagement. In this reporting year we began to build relationships with community partners within the Red Lake Nation and Fond du Lac Reservation. We were beginning to plan listening sessions in communities as the museum was forced to shut down and staff were furloughed April 2–June 30.

- Developed new relationships within the Red Lake Tribal Nation and Fond du Lac Band of Lake Superior Chippewa, based on previous school-based programming.
 - Met with Fond du Lac Elementary School staff and attended a school-hosted pow-wow
 - Met with Robert Blake (CEO of Solar Bear and executive director of Native Sun Community Power Development) several times and hosted him as an exhibitor for our Climate Reality event November 2019
 - Met with Red Lake Tribal Chairman, Darrell G. Seki Jr. and Oshkiimaajitahdah Executive Director, Jerald Loud

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4. Provide SMM programs and resources that support high quality STEM learning experiences aligned to Minnesota Science Standards (existing and adopted) for both in-person and distance learning environments

We continued to refresh and revise our exhibits, films, field trips, and educational programming, as well as develop new learning experiences for school audiences, all aligned with Minnesota Academic Standards. Program development incorporates best practices for science education instruction, culturally relevant teaching strategies, and informal science education methods. In response to teacher feedback, a new field trip guide “Exploring the Science Museum of Minnesota” was developed to introduce students to a museum as a learning experience. Legacy funding supported supplemental Science Live Theater programming offered at no additional charge for schools. Prior to the shutdown, over 2,500 students participated in the *Big Weather Experience - Storms on Stage* program. The *Race Program Package - Race to the Finish* was only presented 12 times to nearly 700 students due to the museum closure. Educational staff also identified and began development of new on-line resources to extend the learning experience for the Dinosaurs and Water Assemblies.

SMM has developed and hosted online educational resources and programming including the still popular *Mysteries of Çatalhöyük* created in 2003. In response to the pandemic, our efforts shifted to developing and communicating with teachers about the availability of online resources for schools and families. Our online educational programming was accessed more than 38,000 times in FY20. Even before the pandemic, FY20 saw increases in monthly sessions from school-based platforms compared with the previous year. After sweeping school building closures in March, there were dramatic increases in the number of school-based sessions accessing our content as part of classroom activities.

Throughout the year we have continued to conduct pre/post field trip surveys and post-outreach experience surveys to both measure program quality and gain insight on the needs and motivations of our school audiences. This year we conducted additional surveys to hear from teachers about their experience teaching online and their anticipated needs for the 20-21 school year.

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“Amazing programs for all age levels and learning levels. All students were engaged on the topic at all times. Great program - worth every penny!!”

– Teacher feedback

“Our 5th graders experienced the technology program, and loved every bit of it. The experience they got from it was something many of them never have had before, and it generated a lot of new interest in the topic among the students.”

Jefferson Elementary - 5th Grade (teacher)

5. Communicate effectively with Minnesota teachers, schools, and districts about museum programs, resources, and professional development opportunities.

We focus on meaningful communication and engagement with Minnesota teachers through print, email, web, in-person contacts, conferences, museum events, and other meetings. Highlights of these efforts include:

- Developed the first online version of the Educator Resource Guide based on teacher feedback and website analytics. The guide provides an overview of all educational resources and programs for schools including professional development, programs at your school, and resources at the museum.
- Reaching out to over 35,00 teachers and monthly with emails that include classroom tips, inspiration, and Science Museum information. In the spring these emails shared resources for use by teachers to support their students and families.
- Our School Liaison represented the museum at fall education conferences related to STEM and education in Minnesota. The Liaison supported the administration of school access and scholarship programs.

The Statewide School Initiative Team measures outcomes through the following methods:

- Surveys sent to schools before and after field trips and post-outreach experiences.
- Tracked attendance of field trips and outreach experiences. A standardized field trip dashboard and outreach attendance report is reviewed quarterly. Field trip and outreach attendance numbers are reviewed at team meetings.
- Analysis of education web traffic and open rates of emails sent monthly to a distribution list of 12,000 educators in Minnesota.

In FY21 we will build upon our experience of this past year to continually innovate and improve the usability and effectiveness of our communication strategies to grow the impact of our programs with school and community audiences.

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6. Increase visits (in person and virtual) to SMM collections through accessible on-line portal leading to new partnerships

The Science Museum of Minnesota made a big pivot when the pandemic began and started to focus on creating a stronger and more vibrant website for the people of Minnesota who could no longer visit us in person. The content available on the SMM website changed significantly to execute SMM's mission online. Whereas much of the website (and much of the web traffic) prior to the museum's closure was focused on logistical or transactional concerns (including information about hours, parking, tickets, accessibility, accessing accounts, food and drink, and first-time visits), educational content pages were added once in-person visits were no longer possible. These new pages provided website visitors with opportunities to try [Learn from Home \(https://new.smm.org/learn\)](https://new.smm.org/learn) activities and see Omnitheater films at home. As part of this initiative, we highlighted some of the museum's Minnesota based anthropology collections to make them more accessible. Website use data shows that 185,928 sessions throughout FY20 were to the Educational pages added after the SMM closure.

This online initiative highlighted objects from our Hmong collection that are being digitized as part of this project. The museum holds a large and well-documented collection of Hmong material culture collected from refugee camps in Thailand and from St. Paul, dating from the 1970s to the 2000s. This particular [blog entry focuses on Hmong Batik Cloth \(https://new.smm.org/learn/blog/hmong-batik-cloth\)](https://new.smm.org/learn/blog/hmong-batik-cloth) and is written by staff in the museum's anthropology department. Another posting highlights the summer field work of Dr. Ed Fleming, staff and students at the University of Minnesota.

Dr. Fleming is working to identify Native settlement patterns in the Lower St. Croix Valley, which was a route that connected the woodlands of the north to the prairies of the south for thousands of years. To be a good steward of Minnesota's cultural resources, we need to find the sites on our own properties (in this case the St. Croix Watershed Research Station) in order to protect them. Learn more about [Minnesota Archaeology in this blog \(https://new.smm.org/learn/blog/museum-summer-archaeology-2020\)](https://new.smm.org/learn/blog/museum-summer-archaeology-2020).

Staff in the Anthropology Department created an activity to give participants a sense of what archaeologists do through the at-home activity, Make Your Own Archaeological Dig (<https://new.smm.org/learn/activities/make-your-own-archaeological-dig>). Here they learn about stratigraphy by making a model. Online visitors can also learn about the treasures in our trash through another activity developed by museum staff called [Treasure in the Trash \(https://new.smm.org/learn/activities/trash-treasure-archaeology-activity\)](https://new.smm.org/learn/activities/trash-treasure-archaeology-activity). There is so much more to discover on the site including other parts of the collection.

In the coming year much more work will be done to bring Minnsotans virtually into the collection so that they can explore more of our cultural heritage. The pandemic might have changed our timelines but the commitment to the work has not waived.

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7. Gain knowledge about objects in the anthropology collection with ties to Minnesota cultures

The work on digitizing museum cultural collections with ties to Minnesota occurred during most of the year with a pause that started in April due to the COVID-19 pandemic. Some of the work resumed in limited capacity onsite and other tasks are being worked on in staff's home offices. During the past year the following was accomplished:

- Renamed 865 photos, associating the photos with proper catalog records, and uploading the information to the museum's database
- Updated 65 accession records
- Updated 468 Catalog records
- Re-wrote inventory and digitization protocols.
- Revamped the workflow in order to increase efficiency.
- Added new terms to the Object Name lexicon
- Edited the Materials lexicon

Soon we will be starting the physical inventory again. This is work that needs to be done onsite in the museum collections area and we have been working hard to develop protocols that ensure the safety of staff and the collection. Much more to come in the second half of this project.

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8. Keep staff employed during uncertain economic times

The COVID-19 pandemic forced Minnesota, and the rest of the world, into a public-health crisis the likes of which we have not seen in over a century. The financial impacts of the crisis have been far-reaching and severe. Following the Governor's Executive Order in March 2020, the Museum shut down public-facing operations and worked collectively to redefine organizational priorities and find alternate ways to fulfill our mission. In order to ensure the long-term viability of the institution, the Museum placed 89% of SMM staff on temporary layoff in April 2020. As the effects of the pandemic wore on, these layoffs resulted in the permanent layoff of 39% of SMM staff, impacting 158 individuals, in June 2020.

Program leaders pivoted from our hallmark hands-on STEM learning experiences to developing and implementing distance based learning and online resources to meet the needs of remote learners, both in virtual classrooms and in households across Minnesota. The pandemic closure also highlighted the urgent need to add more of the museum's research and collections online and to amplify our work making it more accessible. To this end, this project allowed for:

- Complete planning necessary to return anthropology staff in FY21 to work on this project both on and off site.
- During the spring and summer, Legacy funds supported the work of the STEM Education Director and limited staff to maintain communication with schools and develop program plans and scenarios for the 20-21 school year
- IDEAL Center staff returned to work in June to develop new curriculum and technical capacity required to deliver a virtual teacher institute scheduled for July

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In this unprecedented year, we are grateful for what we have achieved and our efforts to shift to a new online education environment and digitize more of the museum's cultural collections. The impact of this work will continue with Legacy funding in FY21. As of June 30, 2020, the year one direct expenses for this project are \$324,164.40. The administrative costs are \$45,383.02. Additional funding supporting the Statewide School and Community Initiative project includes gifts from private donors totaling \$975,821. The support provided by the Arts and Cultural Heritage Fund has given us the ability to invest in new program development and to create new resources that directly address state academic standards and ensure teachers and students have high-quality educational experiences with Science Museum of Minnesota programs.

We are grateful for the support from the Arts and Cultural Heritage Fund to realize this project.

Information | July 1, 2019–June 30, 2020

The Science Museum of Minnesota is pleased to submit this report on the work supported by the Arts and Cultural Heritage Fund of the Legacy Amendment. We are proud of our work on these projects and look forward to continuing the important initiatives that these funds make possible. We would be thrilled to provide a tour of the museum, our school services, our RACE exhibit, or our collections vault, which is being brought directly to the public through our digitization and access program! We would also be happy to answer any additional questions. Please contact Jon Severson for additional information at jseverson@smm.org or 651-221-9499.

Legacy project information is accessible online at: <http://www.smm.org/legacy>
<https://www.legacy.mn.gov/funds/arts-cultural-heritage-fund/reports/science-museum-minnesota>

ADDENDUM: Science Museum of Minnesota - Board of Trustees 2020

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