



## Museums for America

Sample Application MA-253277-OMS-23  
Project Category: Lifelong Learning

### Explora

Amount awarded by IMLS:	\$190,946
Amount of cost share:	\$191,273

Explora will partner with local community groups and libraries to increase the museum's relevance for blind and low-vision visitors. The project team will host listening sessions and design charrettes to better understand the aspirations of the blind community; make modifications to the exhibit floor that utilize advisors' expertise and best practice from other museums to improve accessibility for blind and low-vision visitors; employ blind and low-vision teens to work as near-peer mentors with younger blind students in co-created out-of-school time programs; train the frontline museum staff to support blind visitors at the museum; and enhance the museum's website to improve accessibility for blind and low-vision users. The outcome of the project activities will be enhancements to the museum's exhibits, programs, and online resources that make them more relevant to the blind community as well as increase access to educational opportunities that support pathways to STEAM courses and careers.

Attached are the following components excerpted from the original application.

- Narrative
- Schedule of Completion

When preparing an application for the next deadline, be sure to follow the instructions in the current Notice of Funding Opportunity for the grant program and project category to which you are applying.

## **NARRATIVE: A STEAM Co-creation Project to Increase Explora's Relevance for Blind and Low-vision Visitors**

### I. Project Justification

*Which IMLS Museums for America (MFA) program goal/project category and associated objectives will your project address?* Explora is an experiential learning center in Albuquerque, NM, providing inquiry-based programs and exhibits that illuminate basic concepts in science, technology, engineering, art & math (STEAM) for visitors of all ages. This two-year MFA proposal, *A STEAM Co-creation Project to Increase Explora's Relevance for Blind and Low-vision Visitors*, is a collaboration among Explora, New Mexico Commission for the Blind, New Mexico School for the Blind & Visually Impaired, the Native American Professional Parent Resource group, and the New Mexico State Library's Library for the Blind & Print Disabled (Project Team). The project aligns with the MFA's program goal/project category of Lifelong Learning: "empower people of all ages and backgrounds through experiential and cross-disciplinary learning and discovery."

The goal of this project is three-fold: 1) to increase Explora's relationships with & relevance to New Mexico's blind and low-vision (BLV) communities; 2) to increase opportunities for blind and low-vision (BLV) students in Albuquerque to pursue STEAM activities, courses & careers; and 3) to increase the capacity of museum staff to support BLV students & visitors during hands-on museum exploration and out-of-school time programming. This project aligns with IMLS' strategic goals of promoting lifelong learning among diverse students & families and building capacities of museum staff to engage deeply with communities. Overlap exists with MFA's Lifelong Learning goals to "support public programs" (Obj. 1.1), "support exhibitions & interpretation" (Obj. 1.2), and "support out-of-school programs" (Obj. 1.3).

*How will your project advance your museum's strategic plan?* Explora's *Cradle through Career STEAM Learning Strategic Plan* aims to engage, educate & employ New Mexico students in STEAM. The Explora board and staff have identified five strands of work to advance strategic goals. This project aligns well with the strands of *Community Value*—"understand the unique communities & cultures statewide, including underserved populations, and work together to achieve shared goals; expand access to Explora's offerings;" *Partner for Success*—"build active, supportive partnerships with multi-dimensional collaborations & mutual benefits; partner with...other non-profit agencies and community based organizations to develop and deliver high-quality exhibits and programming;" *Learning Impact*—"develop & implement a range of public exhibits & programs for a variety of audiences, seeking excellence in terms of audience and community outcomes & impact;" and *Organizational Strength*—"recruit & retain qualified, diverse staff & board members on every level and provide ongoing professional development opportunities to keep skills current and diverse."

To achieve our goals, the Project Team will utilize a well-tested "listen, welcome, co-create" engagement strategy to better understand aspirations & challenges of BLV learners in Albuquerque, develop & facilitate accessible STEAM-rich learning opportunities for BLV students & museum visitors, and increase the capacity of museum staff to support BLV learners.

*What need, problem, or challenge will your project address, and how was it identified? How have you used demographic information, economic circumstances, condition assessments & relevant data from reliable sources to develop the project.:* About five years ago, Explora's then-Deputy Director, Kristin Leigh, and Director of Exhibits & Environments, Shane Montoya, stood in our *Curiosa Burbujas/Curious Bubbles* exhibit area with a handful of educators and occupational therapists from the New Mexico School for the Blind and Visually Impaired (NMSBVI). Explora staff first met the team during a series of formal community listening sessions the museum held throughout Albuquerque. The listening sessions utilized The Harwood Institute for Public Innovation's format for community conversations, which asks participants to describe the kind of community they want, their aspirations, and the obstacles standing in the way. During the session with NMSBVI, Explora staff learned a lot about the group's aspirations for a more aware and accessible community and began conversations about things we might try together to make a difference.

In theory, Kristin & Shane now were asking the NMSBVI team for feedback on how to ensure the new exhibits, which were slated to open soon, would be accessible for BLV museum visitors. The NMSBVI team played with the bubbles—they built 3D, geometric bubble blowers, they crafted sculptures out of foam, and they were very complimentary

about the hands-on nature of the exhibits and the potential for immersive learning experiences. However, they said one thing would be critical to make this exhibition successful for low-vision visitors: we would have to use a very dark surface for all of the exhibits and tabletops, in order to provide high contrast between the surface and the bubbles, enabling low-vision users to see the bubble formations. Shane still can describe how his heart sank in that moment, knowing that he'd just ordered, paid for, and received a huge shipment of very pale gray Corian countertops for all of the exhibit surfaces. It was a gut-wrenching lesson on *when* in the development process feedback should be solicited, if you're honest about your willingness to receive it. Inviting community members in after-the-fact, in the hopes they'll bless the exhibition, was a misstep. Community voices early in the process—better yet, co-creation with the community from the beginning—is critical, in order to implement their expertise and make a project relevant. We had demonstrated why “nothing about us without us” is a useful refrain in the disability justice community.

Fortunately, NMSBVI has treated us with grace; we've continued relationship-building. Explora staff has toured NMSBVI's physical spaces, sensory-friendly rooms, and playgrounds, in an effort to learn more about how these environments support BLV children, and NMSBVI students & families have no-cost memberships to Explora, so they can use the museum whenever and however they'd like. The NMSBVI occupational therapists use Explora as a site to teach preschoolers how to use white canes. NMSBVI staff have taken part in a design charrette on exhibit graphics & museum signage. However, this new project, *A STEAM Co-creation Project to Increase Explora's Relevance for Blind and Low-vision Visitors*, will be the first opportunity to dive deep and turn the ideas we've had over several years into reality.

Driven by interest within the museum staff, Explora has held more listening sessions with a variety of disability groups, and staff selected disability justice as a learning topic for the 2022 All-staff Training Schedule. Kate Zankowicz, co-author of the paper, “The Call for Disability Justice in Museum Education: Re-Framing Accessibility as Anti-Ableism,” presented to Explora staff this fall on key issues around disability justice & how museums can better serve visitors with disabilities. Data suggests it's a conversation that museums & science centers should be having. STEM fields are ripe for enrichment by the minds, voices & perspectives of members of the disability community, yet only 9% of STEM professionals are people with disabilities (Bernard, 2021). Students with disabilities indicate interest in & intent to major in STEM fields at the same rate as their peers without disabilities, but they don't receive undergraduate degrees or pursue STEM graduate studies at the same rates (Thurston et al., 2017). High school students with disabilities acquire the same number of credits in English as students without disabilities, but far fewer credits in math or science. This underrepresentation can lead people (particularly non-disabled people) to assume that students with disabilities are less capable, particularly in STEM fields. The students may begin to believe they are less qualified, feeding a cycle of low expectations & underperformance (Schneiderwind and Johnson, 2020). This idea was echoed by blind students during Explora listening sessions.

*Who is the target group for your project, and how have they been involved in the planning? Identify the number of individuals in the target.:* In addition to the students at NMSBVI, this project will target clients of the New Mexico Commission for the Blind (NMCFB). Explora first got to know the NMCFB team through their *Students in Transition to Employment Program*, which has placed several students at Explora as paid staff in the visitor services and education departments. We met more of NMCFB's client families during additional community listening sessions Explora held during the COVID-19 pandemic. During these sessions, blind participants and parents of blind students described several aspirations, like the desire for an aware & accessible community, better jobs & job preparation, and more opportunities to engage in accessible educational activities. One mom described how excluded her blind 15-year-old daughter feels, now that all of her friends are starting driver's education classes. Another spoke about how badly her son wants to join a soccer team. While some larger cities have youth sports leagues for blind children, Albuquerque does not.

Despite the potential for youth with disabilities to be creative, productive adults, they are less likely to go to college and less likely to live independently than peers without disabilities (Kekelis, 2018). As we learned from our listening sessions, this often is related to the expectations & opportunities afforded to them. One blind student shared, “In math, I have faced a lot of challenges, because it is so visual, and people have low expectations, because they think I can't do it. And so they don't teach us. And then we get to high school, and it's like, why didn't you learn this earlier?” On the contrary, STEAM

learning opportunities can provide the skills, confidence, and grit necessary to move beyond expectations into a variety of courses & careers. As Shireen Hafeez, Founder of Deaf Kids Code, once said, “Sometimes it is the people no one imagines anything of who can do the things no one can imagine” (Kekelis, 2018). Out-of-school time programs are well-poised to provide STEAM learning for students with disabilities. “For youth with disabilities these programs can be especially important. Rather than sitting on the sidelines as they sometimes do in their mainstreamed classrooms, youth with disabilities may experience more hands-on STEM...in afterschool & summer programs” (Kekelis, 2018).

4-5% of New Mexico’s population is low-vision, or approximately 65,000+ adults and 25,000+ children (NFB, 2019). There are few out-of-school-time STEAM programs available for these children. *A STEAM Co-creation Project to Increase Explora’s Relevance for Blind and Low-vision Visitors* aims to work with the BLV community to co-create new STEAM learning opportunities through Explora’s programs, exhibits, and online resources, while also increasing the museum staff’s capacity for supporting BLV learners. The Project Team’s client families have expressed how deeply and naturally blind students are connected to STEAM topics, like acoustics and echolocation, which they use daily to navigate physical spaces. They’ve expressed strong interest in learning coding that can help them 3D-print objects, in order to better understand mathematical concepts & more. The time is right to collaborate on new, highly-relevant STEAM activities for BLV students and museum visitors.

*Who are the ultimate beneficiaries for this project? Identify the number of individuals who will benefit from your project in the long term.* Our listening sessions spurred the questions, “How can we make it easier for blind visitors to utilize Explora’s exhibits, programs, and online resources? What might we try together that could lead to some of the aspirations expressed by conversation participants?” We will focus on two audiences as we work to answer these questions: 1) BLV students & museum visitors, and 2) museum staff. The Project Team will recruit program participants from among its client families and students in existing programs, with a goal to serve 100 BLV learners each year through museum visits (200 total), in addition to 30 BLV children through intensive afterschool and summer programming each year (60 total). We will provide training to over 50 museum educators, visitor experience facilitators, and exhibit developers, in order to increase their capacity to support BLV museum visitors. Additional BLV learners will be served through improved accessibility to online resources on Explora’s website. As we continue to iterate and build relationships over time, we hope that most of the 25,000 BLV children in New Mexico will have positive, enriching Explora STEAM learning experiences.

## II. Project Work Plan

*What specific activities, including evaluation and performance measurements, will you carry out and in what sequence?:* Project Team members already have experimented together with small-scale projects to learn more about the opportunities and needs identified by the community. For *A STEAM Co-creation Project to Increase Explora’s Relevance for Blind and Low-vision Visitors*, partners will utilize their combined resources & expertise, existing relationships & partnerships, and new research & recommendations to affect positive community change. The project has been informed by listening sessions, current research, and the release of associated reports, like STEM Next Opportunity Fund’s “Set a Place at the STEM Table” report (Kekelis, 2018).

In support of its goals, the Project Team will engage in the following strands of work: 1) additional listening sessions & design charrettes that make space to understand the aspirations & interests of BLV students & museum visitors; 2) modifications & affordances to the exhibit floor, including new exhibit activities & graphics that utilize advisors’ expertise, along with best practice from other museums, to improve accessibility for BLV visitors (Bahram and Timpson, n.d.); 3) co-creation of out-of-school time STEAM programs that respond to students’ expressed interest in coding, 3D printing, and other hands-on math & physics concepts; 4) employment of visually-impaired teens to work as near-peer mentors with younger blind students in the co-created out-of-school time programs; 5) professional development & training for Explora staff to support BLV learners at the museum; and 6) enhancements to Explora’s website to improve accessibility for low-vision users. An external evaluator will help the Project Team better understand its work, evaluating the programs, exhibit affordances, online resources, and change in museum staff’s knowledge & attitudes, along with collecting & reporting on performance measurements. The Project Team has assembled expert Project Advisors, to whom it will report twice a year for ongoing guidance & feedback.

Explora has extensive experience working with community partners to co-develop solutions to critical community issues. That work has refined a three-part “listen, welcome, co-create” community engagement process that has been used successfully in previous IMLS-funded projects, *Experiential Science for Families Affected by Autism* (#MG-10-16-0079016) and *√Roots: supporting Black scholars in STEAM* (#MA-249579-OMS-21). A *STEAM Co-creation Project to Increase Explora’s Relevance for Blind and Low-vision Visitors* provides an opportunity to apply learning from past projects and implement a similar engagement approach with a new audience, refining Explora’s program & exhibit development processes to co-develop initiatives and incorporate community voices. The Project Team expects this approach to lead to the creation of highly-relevant programmatic and exhibit activities that increase access to STEAM learning for BLV students in Albuquerque, keeping them on pathways to additional STEAM activities, courses, and careers.

*What are the risks to the project and how will you mitigate them?:* The Project Team has considered the risks that will be faced & how they might mitigate them. One serious risk that all collaborative projects must consider is that, often, the grassroots communities most affected by an issue are not included in collective decision making. This can result in ignoring critical community knowledge, ownership & support for sustainability and creating solutions that may not be appropriate for the population being served (Wolff, 2017). Our Project Team has minimized that risk by including community members on the Project Team. These team members will organize listening sessions with other community members to gain important data to bring to project development meetings.

Another risk faced when addressing community needs & underlying conditions is the potential treatment of adaptive challenges as if they were technical problems (Randall & Coakley, 2007). Technical problems cause high distress that can be alleviated quickly, because there’s a specific problem and the technical know-how to provide solutions. Adaptive challenges take much longer to address and require new learning among lots of partners. Adaptive challenges, like increasing educational outcomes for a particular segment of the population, require ongoing experiments, efforts, and attitudinal change. The Project Team will mitigate this risk by spending time in early planning meetings addressing the idea of technical vs. adaptive challenges head-on to develop common language & shared understanding and utilizing the relationships we’ve built over the years to support each other. Explora’s previous co-creation projects have clarified other risks related to relationship-building, including not investing enough time early to build & nurture relationships among project partners and not clearly defining the process of co-creation right from the start. Other risks come from not clearly defining the responsibilities and expectations for all partners and from not being clear about consensus and final decision-making. In most co-creation models, decision-making becomes more shared and consensus-driven the further along a team is on the co-creation spectrum. A dedicated Project Manager will schedule regular in-person meetings with clear agendas and time built in for both relationship building and project development.

*Who will plan, implement, and manage your project?:* A *STEAM Co-creation Project to Increase Explora’s Relevance for Blind and Low-vision Visitors* will be planned, managed, and implemented at Explora by a team led by Co-executive Director, Kristin Leigh, who has focused Explora staff on community engagement and made the “listen, welcome, co-create” initiative an institutional priority included in Explora’s Strategic Plan. As the lead partner, Explora will provide coordination, management, and oversight of project activities. Explora will parlay its strengths—nationally-recognized informal science education programs, inquiry-based STEAM exhibits, and engagement with over 90 community-based organizations—into support for the project. Explora is financially healthy with a \$4M+ budget and 100 staff. Explora has led and partnered on several IMLS- and NSF-funded projects and has the staff, budget, infrastructure, experience, and venue to host this work. Explora serves as the backbone organization for STEM-NM, the state’s STEM Learning Ecosystem, designated one of 94 Ecosystems across the globe by the STEM Funders Network. STEM-NM works to increase equity in and access to STEM experiences for students in our community, in order to prepare them for jobs in local science, technology, and health care sectors.

New Mexico Commission for the Blind (NMCFB) is a state agency, created in 1986 and governed by three Governor-appointed commissioners, with a mission to enable persons who are blind to achieve vocational, economic, and social equality by providing career preparation & training in the skills of blindness and promoting and conveying the belief that blindness is not a barrier to successful employment or to living an independent & meaningful life. NMCFB runs

several services for BLV New Mexicans, including the *Students in Transition to Employment Program*, which has placed several blind teens at Explora for paid work experience; an Assistive Technology program, which aims to bridge the digital divide by providing computers, printers, scanners, other assistive technology to blind users; *NEWSLINE*, a telephone-based system that provides access a variety of newspapers and publications; and much more.

New Mexico School for the Blind and Visually Impaired (NMSBVI) was founded in 1903 as a land grant school governed by a Board of Regents. It provides residential, academic, support, and outreach services to students who are blind and visually impaired. Today, the residential campus is located in Alamogordo, NM with a second campus in Albuquerque that houses an Early Childhood Program as well as the school's statewide services. NMSBVI's mission is to identify and ensure quality education through collaborative relationships with students, families, and local/state/national partners to provide outstanding advocacy, training, resources, and support services, ensuring that all students who are blind or visually impaired will become independent, productive members of their communities.

Native American Professional Parent Resource (NAPPR) is a non-profit 501c(3) organization dedicated to improving the lives of Native families in a variety of ways. They have multiple home-based services, where experienced staff work directly with caregivers & children, as well as a renowned Early Head Start day care center that provides superior early development education in the heart of Albuquerque. NAPPR also provides support for young children with special needs, including children who are blind and low-vision.

The New Mexico State Library's Library for the Blind & Print Disabled (LBPD) is responsible for meeting the reading and information needs of NM citizens who are blind, visually impaired, physically handicapped, or reading disabled. Patrons are issued playback equipment that allows them to utilize books, magazines, and other material in alternate formats (digital cartridge, cassette, Braille, and electronic text). The collection focuses mainly on recreational reading, and contains nearly 100,000 titles in a variety of genres.

Staff at all partner organizations will be paid as key members of the Project Team (see Letters of Support and Resumes). At Explora, Kristin Leigh will serve as Project Director, and Amon Haruta, Explora's Director of Project Management, will serve as Project Manager. Other members of the Project Team will include Shane Montoya, Director of Exhibits, Environments & Culture; Tara Henderson, Director of Education & Visitor Experience; Victoria Roanhorse, an Educator who focuses much of her work on Explora's outreach with Native communities; and Lenette Rodriguez, Educator/Project Manager and former public school teacher. Two blind/low-vision members of Explora's Visitor Experience staff, Antonio Martinez & Kolbey Kramm, also will serve on the Project Team. Antonio began his work at Explora several years ago during a placement from the NMCFB's *Students in Transition to Employment Program*. Additional participants include local students and families from the NM Association of Blind Students and NM Parents of Blind Children, who will contribute to our understanding of the community need, prototype deliverables, and participate in evaluation. Jessica Sickler (Principal, J. Sickler Consulting) will lead the external summative evaluation of this project. Jessica has led research & evaluation in the museum field for over 18 years, including evaluation at all phases of program & exhibit development; she helps museums document impacts that range from engaging with content to thinking differently about behaviors. Three content experts also will serve as Project Advisors, including Meghan Schiedel, a blind museum educator and Universal Design consultant; Brianna Blaser, PhD from the University of Washington DO-IT Center (Disabilities, Opportunities, Internetworking, and Technology); and Michelle Tregembo, Special Education Ombud for the State of New Mexico, who will share her expertise on Universal Design and the systemic barriers to education faced by blind and low-vision people of all ages.

*What time, financial, personnel, and other resources will you need to carry out the activities?:* As described in the Schedule of Completion, Explora will begin work on this two-year project in September 2023 and complete it in August 2025. The Project Manager will convene bi-monthly Project Team meetings for relationship building, clarifying expectations & responsibilities, planning, brainstorming, vetting ideas, activity co-development, reflection, and review of prototyping & evaluation. In October-December 2023 Explora will hold listening sessions with families recruited by partner organizations to better understand relevant aspirations & community conditions and will have a first meeting with

Project Advisors. By January 2024 the Project Team will commence an informal audit of accessibility on the exhibit floor with the project partners and will develop a list of potential exhibit modifications or affordances that increase access for BLV students & museum visitors. This work will continue throughout Year One, along with prototyping & testing exhibit activities and new graphics. Concurrently, Explora's educators will work with partners to co-develop activities for Spring and Summer 2024 afterschool programs and summer camps. Programs likely will provide opportunities for blind students to participate in programs just for them and programs where they work alongside sighted peers. During this first round of exhibit & program iterations, the Project Team will collect feedback from BLV students and their parents, BLV museum visitors, museum staff, & Project Advisors, in order to remediate for Year Two. Each summer, NMCFB will place paid BLV teens at Explora as near-peer mentors to work with younger BLV students in the camp programming. By Spring 2024, Explora will begin working with web partner, MediaDesk, to make improvements to its website and online resources, so that they are more accessible to low-vision users. We'll begin drafting a Sustainability Plan in Year Two and will apply to present at the 2024 Association of Science-Technology Centers conference to share learnings from this work.

IMLS-requested funding, along with contributed cost share, will support the key staff assigned to this project at partner organizations; development of programs and exhibit affordances, with associated equipment and materials; website upgrades; evaluation; meeting expenses; buses for student field trips to Explora; and conference travel. There also will be expenses for consumable & non-consumable materials and equipment and graphic design/printing of associated materials.

*How will you track your progress toward achieving your intended results?:* Rapid-cycle evaluation & feedback will be incorporated into exhibition & program development to allow time for changes that may be needed to effectively communicate concepts & ideas. Our Project Manager will track our Performance Measurements, and our Project Advisors will serve as critical friends at least four times throughout the project. Evaluation will be conducted by J. Sickler Consulting, an external evaluation firm with extensive experience in evaluating impact of museum programs & experiences. Summative evaluation will examine the ways in which the project increases the capacity of the museum and its staff to be more inclusive and welcoming for BLV audiences and stakeholders. We anticipate there will be shifts in museum structures, processes, & facilities, but also to the perspectives, mindsets & capacity of the individual museum staff who take part in the grant's activities. The project expects that through listening sessions, collaboration to revise exhibitions, and working side-by-side on programs, staff will gain many new skills & perspectives that they will apply to future museum work. Evaluation will examine these gains through individual interviews near the end of the project, conducted with Explora staff who participated in the grant activities, as well as with key BLV stakeholders who are deeply involved in working with the museum staff (20-25 people). These conversations will explore areas of anticipated impact, as well as allow staff to describe changes in mindset & skill in their own words, including how it continues to impact their work as museum professionals. Inductive coding of themes in interviews will reveal the qualities of professional impact & measure the areas of impact most frequently reported by staff, documenting the impact on the museum's overall capacity.

*A STEAM Co-creation Project to Increase Explora's Relevance for Blind and Low-vision Visitors* will improve access to STEAM-rich learning opportunities for BLV students in Albuquerque, and it will demonstrate how museums can be significant contributors within broader community conversations. The project will be undertaken with the involvement of several non-traditional audiences and cross-sector partners: BLV students and families, museum educators, state agencies, a school for the blind, and a Native-focused nonprofit organization. Team members have expertise & perspectives that aren't traditionally sought out by museums, and all will be equal partners, meeting monthly to co-develop the initiative, oversee the implementation, reflect on evaluation efforts, facilitate programs, and ensure that Explora, as the lead organization, develops a complete understanding of the opportunity & need.

### III. Project Results

*What are your project's intended results, and how will they address the need, problem, or challenge you have identified? Address this question from the dual perspectives of advancing knowledge and understanding and ensuring that the federal investment made through the grant generates benefits to society.* The intended results of this project include: 1) enhancement of Explora's exhibits, programs, and online resources to increase relevance to BLV students & visitors and increase access to educational opportunities that support pathways to STEAM courses and careers, and 2) increased

capacity of museum professionals to support BLV learners in STEAM exploration. The Project Team believes in the potential of this project to serve as a model for how museums across the country can co-create with community groups to advance accessibility and serve as important partners for disability justice.

*How will the knowledge, skills, behaviors, attitudes of the audience change as a result of your project?:* The goal of this project is three-fold: 1) to increase Explora's relationships with and relevance to New Mexico's blind and low-vision communities; 2) to increase opportunities for blind and low-vision students in Albuquerque to pursue STEAM activities, courses, and careers; and 3) to increase the capacity of museum staff to support blind and low-vision students and visitors during hands-on museum exploration and out-of-school time programming. Intended results of the project include: 1) co-creation of new out-of-school time STEAM programs designed to meet the needs, aspirations, and interests of BLV students; 2) co-creation of new exhibit modifications/affordances & exhibit graphics to increase accessibility to STEAM learning experiences on the museum's exhibit floor; 3) improvements to Explora's website/online resources that make them more accessible to low-vision users; and 4) increased capacity among museum professionals to support BLV students in STEAM learning opportunities at Explora.

Objectives include the following:

**Short-term:** 1) 60 K-8 students (30/year) participate in STEAM out-of-school time programming, expressing increased awareness of the content/subject matter; 2) 4 blind teens (2/year) participate in project as paid staff; 3) 200 blind visitors (100/year) experience Explora's exhibits, expressing increased awareness of the content/subject matter; 4) Explora's website become more accessible to low-vision users; 5) 50 museum staff members receive professional development/training on working with BLV students and museum visitors.

**Mid-term:** 1) local BLV students show increased awareness of, engagement in, and participation in STEAM-rich learning opportunities; 2) local BLV students & families demonstrate an increased interest in Explora as a relevant educational opportunity for their students; 3) museum staff become more comfortable supporting STEAM learning opportunities for BLV visitors

**Long-term:** 1) BLV students who participate in Explora programs pursue STEAM learning opportunities at a higher rate than before participation; 2) BLV students who participate in Explora programs pursue STEAM learning opportunities at a higher rate than their peers; 3) museum staff actively reflect anti-ableism and advance disability justice

*What products will result from your project?* Project deliverables will include new co-created programs, exhibit activities, and online resources that are accessible and highly-relevant to BLV students & museum visitors. Results of *A STEAM Co-creation Project to Increase Explora's Relevance for Blind and Low-vision Visitors* will be shared locally with all project partners and in a report that will be sent to everyone who participated in the listening sessions. Results also will be shared during a program at the NM Science Fiesta, one of the largest STEM education events in New Mexico. Findings that serve as the basis for approaches, processes, tools, and resources for other museums and libraries will be shared with partners across the country, through professional conferences like the Association of Science-Technology Centers Conference and other conferences for education-, and disability justice-focused audiences, facilitated by representatives from the partner organizations. Because the project lead at Explora is an alumni fellow of the Informal Learning Leadership Collaborative (formerly the Noyce Leadership Institute), the resources and lessons learned also will be shared among that network of over 100 leaders in the museum field, a group capable of creating systemic change in the way museums operate.

*How will you sustain the benefits of your project?:* The more engaged the museum is with the community, the more it becomes like a thread woven through a quilt; if the thread is pulled out, the quilt unravels. Because multiple partners share ownership of the project, there are more resources, funders, and stakeholders at the table to provide long-term support. As we move towards true engagement with partners, we can leverage each other's strengths and resources, support and stand up for each other's work, and have greater collective impact, helping all of our organizations be more stable and sustainable.



