



Museums for America

Sample Application MA-255534-OMS-24
Project Category: Lifelong Learning

Discovery Children's Museum

Amount awarded by IMLS:	\$250,000
Amount of cost share:	\$258,683

The Discovery Children's Museum will launch the fabrication and installation phase of its project to create a centerpiece climber exhibit that explores the theme of the Southern Nevada natural environment. Building on a previous grant, the project team will continue working closely with partners to address visitor feedback in prioritizing a welcoming environment, learning goals, and visitor safety. Project activities will include fabricating the exhibition components; developing programs and materials for families and school groups; producing signage; installing the components and opening to the public. The gallery experience will be designed to meet the interests of families, children from birth to 12 years old, caregivers, and educators while promoting curiosity and enhancing learning efficacy, and strengthening gross-motor skills in a safe and educational environment.

Attached are the following components excerpted from the original application.

- Narrative
- Schedule of Completion
- Performance Measurement Plan

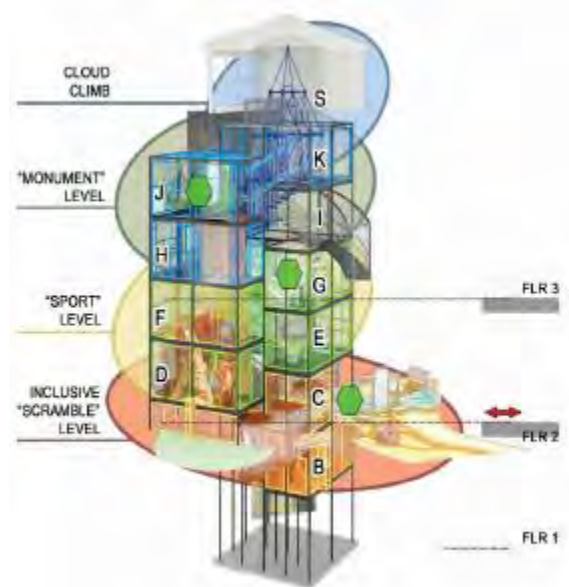
When preparing an application for the next deadline, be sure to follow the instructions in the most recent Notice of Funding Opportunity for the grant program to which you are applying.

Section 1: Project Justification

Overview and Support of MFA Goals & Objectives

DISCOVERY Children’s Museum (DCM), Southern Nevada’s only museum focused exclusively on families and childhood development, requests a \$250,000 grant from IMLS to fabricate, install, and conduct summative evaluation of a re-envisioned centerpiece exhibit, *Desert to the Stars*. Themed to the natural environment of Southern Nevada, the multi-story structure is currently being designed to achieve five key goals: 1) promote curiosity and exploration of the natural environment; 2) strengthen gross motor skills and physical activity; 3) modulate excess sound in the Museum; 4) provide a welcoming, accessible environment for all ages and abilities, and 5) prioritize the safety of all guests. Informed by a master planning process, research around children and nature, as well as years of informal conversations with families and educators, *Desert to the Stars* will expand visitors’ understandings of what lies *beyond* the city limits of Las Vegas. *Desert to the Stars* and its complementary, community-informed programming will increase the Museum’s capacity to facilitate experiences that incentivize discovery of nature and highlight the importance of environmental stewardship.

Desert to the Stars (at right) re-envisioned a multi-story exhibit called *The Summit* originally installed in 2013 when DCM opened. An innovative combination of science exhibits within a “climber” structure, *The Summit* is now beyond its expected lifespan, and has posed an increasing number of challenges, identified by both stakeholder input and professional evaluation (detailed below). To support the first phase of the re-envisioning process, DCM was awarded a 2-year IMLS grant in 2022. DCM is currently implementing the second year (Sep. 2023–Aug. 2024) of Phase 1, completing detailed design and finalizing engineering and fabrication cost estimates. This proposed project requests funding for **Phase 2 (Sept. 2024 – Aug. 2026)** to support prototyping, fabrication, installation, and summative evaluation to complete the transformation of *The Summit* into *Desert to the Stars*. [See Attachment: Overview of *Desert to the Stars*]



This project strongly aligns with the IMLS agency goal and *Museums for America* project category of **Lifelong Learning**. *Desert to the Stars* will engage visitors of all ages and backgrounds in experiential and cross-disciplinary learning and discovery. The project is also aligned with **all three objectives** of this goal through public and family programs, exhibitions, interpretation, and in-school programs. **DCM is the only place in Las Vegas specifically designed to engage children, families, and schools in informal, learner-directed educational experiences.**

STRATEGIC PLAN ALIGNMENT: The *Desert to the Stars* exhibit project supports DCM’s strategic goal for exhibits: “Offer state-of-the-art exhibits and programs that stimulate growth through interactive educational experiences serving the diverse needs of our community.” The project took shape as a direct extension of the master planning process identified as an objective of the exhibit goal, “Conduct museum-wide master planning to identify areas in need of refurbishment, new content/retirement, and address diversity access with a focus on broadening cultural programming and partnerships.” Among goals identified in the process, four became important guideposts for reimagining *The Summit*: 1) Ensure everyone feels welcome and a sense of belonging; 2) Modulate sound, activity, and visual stimulation to create different levels of engagement and energy; 3) Make all exhibits high-quality, innovative, and unique to offer an experience not available elsewhere; and 4) Ensure that all new exhibits support toddlers as a developing, pipeline audience.

CHALLENGE AND NEED: In 2013, when DCM relocated to a new, larger facility to meet community demands, an innovative climber/STEM exhibit called *The Summit* was conceived as the centerpiece of the new building. The 12-level, 70-foot tower is centrally located in the Museum, ascending all three floors and through the roof to provide a view of the city from the top. *The Summit* is the first exhibit to welcome visitors when they enter the Museum. It encompasses 2,200 square feet

(10% of the Museum's permanent exhibit space) and was intended to circulate children between exhibits with multiple entrances and exits connecting it to the rest of the Museum. The distinctive undertaking of *The Summit* was to weave interactive learning exhibits into a traditional climber: it incorporated 36 exhibit elements exploring STEM concepts such as sound, light, simple machinery, force, electricity, and topography.

Over the past decade, DCM has assessed the effectiveness of each exhibition in the Museum and collected ongoing visitor feedback. Although very popular, *The Summit* consistently received the most pointed and issue-based visitor comments and complaints. For example, in response to a May 2020 visitor survey, *The Summit* had the highest frequency of mentions, citing specific issues and ranking it as the experience visitors "liked LEAST" in the Museum. One of the most challenging aspects for parents and caregivers was the number of entrances and exits. While the multiple access points were originally intended to be exciting and engaging, ultimately, they made it difficult for families and groups to stay together or ensure they experienced the entire climber. The master planning evaluation helped DCM identify the strengths and weaknesses of *The Summit* that made it both a distinctive and problematic experience.

The master planning process, exhibit evaluation, and stakeholder feedback identified three main challenges to address in transforming *The Summit* to *Desert to the Stars*: 1) *Welcoming Environment*, 2) *Learning Efficacy*, and 3) *Visitor Safety*.

Welcoming Environment: *Desert to the Stars* is intended to resonate with the community by grounding the interactives in a sense of place: exploring the natural environment, flora, and fauna of Southern Nevada. In addition, DCM's stakeholder survey and interviews of under-represented audiences were designed to help the Museum understand the relationship between the visitor experience and their sense of belonging, ownership, and feeling welcome. A correlation emerged between visitors who felt they did not belong and an environment that was perceived as overcrowded or overwhelming.

The Summit was the exhibit with the greatest incidence of noise, crowding, and stimulation, particularly for young climbers. The exhibit's location in the center of the Museum allowed the noise of *The Summit* to bleed into other areas of the Museum. Parents of children on the autism spectrum or those with sensory sensitivities often requested that DCM provide special hours when some of *The Summit* exhibits were closed so their children could experience the space with less auditory stimulation. *Desert to the Stars* will incorporate the modulation of sound, visuals, and activity levels to make the exhibit, and the Museum as a whole, a more inviting environment for *all* children. Additionally, the content and design of *Desert to the Stars* will draw on the natural world to evoke calming scenes and sounds through the exhibit elements and immersive contexts. [See Attachment: *Desert to the Stars* – Content & Nature-Based Learning]

Graduated activity levels will create increasingly challenging experiences for children as they grow. Welcoming the Museum's youngest visitors has been an important element in the redesign of *The Summit* as there were no activities for toddlers. The *Scramble Zone* is designed to engage all ages and features a soft play area for toddlers, encouraging safe and age-appropriate exploration of animal homes, habitats, and environments.

The modulation of sound will also be supported through the inclusion of quiet corners and "hangout" spaces separate from heavier traffic areas within the exhibit. These include a "basecamp tent" hangout midway up the climber as well as smaller "birds' nests" hangouts. These will increase the accessibility of the space for children who need breaks from noise and activity. Additional design modifications in the updated climber will allow for the participation of children with diverse abilities in ways that were not previously possible on *The Summit*. For example, the entrance level of *Desert to the Stars* will be fully accessible and offer activities that engage the upper body for children with limited mobility.

Increasing Learning Efficacy by Promoting Curiosity: During Phase 1 for *Desert to the Stars*, DCM leadership and FRAME Integrative Design Strategy have collaborated to develop new exhibit content featuring inquiry-based educational activations to promote curiosity and integrate gross motor skills and kinetic motion into the exploration of exhibit elements. This plan connects the educational aspects of the experience to physical challenges in age-appropriate and progressively challenging ways.

From the *Scramble Zone* on the Museum's second floor, children will begin their climb. As they ascend from the "desert floor" to the "sky and stars" they will experience rock climbing, hiking, camping, and stargazing while learning about

environmental science, biology, and astronomy. Throughout the climb, visitors will learn about the distinctive attributes and history of the desert—its climate, geologic features, animal habitats, and the Indigenous people who have lived in Nevada for thousands of years. Four distinct levels comprise *Desert to the Stars*: 1) *Scramble Zone* designed for **3–5 year-olds** emphasizing inclusive play features for children of all abilities; 2) *Sport Zone* designed for **5-8 year-olds**; 3) *Monument Zone* designed for **8-10 year-olds**; and 4) *Cloud Climb Zone* designed for **10-12 year-olds**.

Age-appropriate learning prompts on each level will combine experiential learning into the intent of each space (climb, crawl, balance, slide, etc.) and align with Nevada Academic Content Standards for Physical Education, Health and Science (specifically, Environmental, Earth, and Natural Sciences). In keeping with all other exhibitions and public spaces, interpretive signage will be bilingual (English/Spanish). The cross-disciplinary approach of the *Desert to the Stars* design will amplify learning efficacy by engaging body and mind together. Research emphasizes that “children actually learn best when they are moving and learning at the same time... learning by doing is imperative to a child’s ability to take in data and utilize that data in effective ways.”¹

Although COVID-19 has lessened its grip, students are still recovering from its effects. Studies indicate that physical activity decreased for most children while sedentary activities increased (nearly half engaging in two or more hours of screen time per day).² Stakeholder feedback emphasized an appreciation of DCM as a place where children can be active and interact with other children. More than any other exhibit, *Desert to the Stars* will encourage gross motor activity and facilitate interaction with other children as they traverse up and down the climber.

Visitor Safety: The safety of visitors is DCM’s highest priority, and the Museum is proud of its reputation as a safe and welcoming place for families.

Attendance is currently exceeding pre-pandemic levels. One of the safety challenges of *The Summit’s* design was the multiple entrances and exits, with seven open access points across the three floors of the Museum. This resulted in parents often losing sight of their children, as a child could easily zip down a slide and exit two levels below—out of view. When this happened, children became separated from their adults and caregivers. On a typical weekend, an average of 15 missing-child radio codes (Code ADAM) were called per 600 visitors. When *The Summit* was closed during the pandemic, only three Code ADAMs were called per 600 weekend visitors. Even before the pandemic, these structural challenges required DCM to prevent school field trip groups from entering *The Summit* as chaperones were unable to keep track of all the students. Field trips experienced an average of 20 Code ADAM events per 3-hour field trip, which dropped to two codes after designating *The Summit* off-limits.

To ensure the highest degree of safety, *Desert to the Stars’* design will comply with ASTM International’s (formerly American Society for Testing and Materials) standards for *Consumer Safety Performance Specifications for Playground Equipment for Public Use* and *Safety Performance Specifications for Soft Contained Play Equipment*. During the final year of Phase 1, plans are being thoroughly reviewed by a safety engineer to address concerns such as clearances, fall zones, barriers, entry/exit paths, accessibility, and surfacing materials. The new design eliminates multiple entrances and exits or converts them into emergency exits to address the issue of Code ADAM incidents. This modification allows kids to explore the space with more independence and enables less-mobile adults to monitor children without climbing stairs.

TARGET GROUP & BENEFICIARIES: The target group and beneficiaries of the *Desert to the Stars* project are Southern Nevada’s **more than 375,000 children from birth to 12 years of age and their families, caregivers, and educators**. This age range is greater than most children’s museums due to the lack of science centers in the region. [See Letters of Support: State of Nevada Superintendent of Public Instruction and Get Outdoors Nevada]

DCM’s audience is a diverse majority-minority community, with nearly 19% of children living in poverty. In 2018, DCM became the first museum in Nevada to participate in the IMLS *Museums for All* admission subsidy program for families receiving public assistance. Since 2018, DCM has welcomed more than 195,000 through the program, which now accounts for 20% of the Museum’s visitors. Another 5% visit through other admission subsidy programs. While there is still much

¹ Stevens-Smith, D. [Movement and Learning: A Valuable Connection](#). Strategies. Vol 18, n1 (Sept/Oct 2004), p 10-11.

² Dunton, G.F., Do, B. & Wang, S.D. [Early effects of the COVID-19 pandemic on physical activity and sedentary behavior in children living in the U.S.](#) BMC Public Health 20, 1351 (2020).

more work to do to engage *all facets* of the community, these figures give DCM confidence that the accessibility programs are reaching children who can most benefit from the Museum's high-quality, experiential learning opportunities.

Section 2: WORK PLAN

Desert to the Stars: Fabrication & Installation will take place over two years, from **September 2024 to August 2026**.

Pre-Grant Period: September 2023 through August 2024 (Phase 1): Final Design & Engineering

As of the writing of this proposal, DCM has begun the second year of Phase 1, encompassing **September 2023 to August 2024**. During this time, DCM is working with Turner Exhibits and FRAME Integrative Design Strategy to: complete the detailed design phase; conduct safety engineering evaluation; obtain necessary permits; finalize fabrication cost estimates; and begin production of elements requiring a longer lead time. DCM is also continuing to involve community groups and partners to inform specific content areas and is seeking guidance from Indigenous communities in January 2024. These focus groups will shape specific interpretive threads throughout the exhibit. (*Note: These activities occur **prior to the grant period proposed** in this application and are separately funded.*)

Grant Period: September 2024 to August 2026 (Phase 2) [See Attachment: Schedule of Completion]

- Year 1 focuses on production, prototyping, fabrication, interpretive signage, and removal of current exhibit elements.
- Year 2 focuses on the installation of new exhibit elements, integrating *Desert to the Stars* into DCM's internal operations (Exhibits and Education Departments), a soft opening and official public opening, summative evaluation, and development of public programming internally and with community partners.³

RISKS & MITIGATION: Risks to the successful implementation of the project include: 1) Missed needs or inadvertently creating new exhibit challenges: Proposed exhibit changes were identified through an extensive evaluation process prior to Phase 1, and the development of content has been informed by stakeholder feedback. The Phase 2 work plan includes prototyping and testing during the fabrication period, as prototyping may reveal as-yet-unforeseen design challenges. A virtual CAD tour with signage is planned to test the flow of the experience. The work plan also allows ample time after installation for Education and Exhibits/Operations staff to prepare and train before welcoming visitors. As with all new exhibits, DCM will conduct a soft opening of *Desert to the Stars* to allow for internal adjustments to ensure that visitor flow is intuitive and engagement strategies meet goals and expectations.

2) Cost overruns/supply chain impacts: The project budget is based on current material/supply prices and includes a 10% contingency for contracts. Any additional unexpected expenses during fabrication or installation will be temporarily funded by cash reserves or a capital line of credit and made up in an extended fundraising period.

3) Disruption of the visitor experience: The exhibit area will be shut down for removal of current exhibit components and installation of new components. DCM is phasing the transition to *Desert to the Stars* with other exhibit areas to avoid multiple closures. DCM estimates that the area will be inaccessible for nine months during Phase 2. During this time, the Marketing Department will build excitement around the unveiling of the new exhibit, manage expectations, and reduce visitor complaints through virtual tours, 360-degree images, time-lapse videos, and viewing portals for children to look through along the gallery's perimeter. If needed, DCM is prepared to offer reduced admission during any of these time periods and will focus on having as much work occur at night and on Mondays when the Museum is closed.

PROJECT MANAGEMENT: LEADERSHIP & INDUSTRY PARTNERS: The *Desert to the Stars* project will be led by DCM's leadership team and implemented by industry professionals.

³ Planned partners: Get Outdoors Nevada [see *Letter of Support*], Las Vegas Paiute Tribe, Fort Mohave Indian Tribe, Anya Itpak Elementary School, Clark County School District, Springs Preserve, National Wildlife Refuge, Red Rock Audubon Society, National Park Service, Clark County Wetlands Park, Bureau of Land Management Junior Rangers, and Girl & Boy Scouts. Related dates: e.g. Native American Heritage Month, Nevada Day, Astronomy Day, Galaxy Far Away Day, National Fossil Day, National Public Lands Day, Earth Day.

Melissa D. Kaiser, Chief Executive Officer, joined DCM in 2018, bringing 20-plus years of professional fundraising experience and best practices of world-class museums. She was Executive Vice President of Development at the Pennsylvania Academy of the Fine Arts for eight years and worked at the Pennsylvania Horticultural Society and Pennsylvania Ballet, all in Philadelphia. She holds a B.A. in Art History & French from Dickinson College (Carlisle, PA). Kaiser also serves on the Board and Finance Committee of the Association of Children's Museums. She will maintain administrative oversight of the project, working closely with the DCM project team and as well as Jill Randerson (JREM.co), Turner Exhibits, FRAME Interactive Design Strategy, and the Museum's Board of Trustees.

Gary Haleamau, Vice President of Operations (overseeing Facilities and Exhibits), is the **Project Director**. He has been with DCM for 18 years and administers a \$1.5 million annual budget. He played a leading role during the four-year exhibition development process for the Museum's current building. He collaborated with five exhibition development firms and a team of consultants to take nine exhibitions from conceptual development to installation to opening in 2013. Prior to joining DCM, he oversaw exhibits and facilities management at the Neon Museum and the Liberace Museum, both in Las Vegas. He attended the University of Hawaii at Hilo and majored in Animal Science. As **Project Director**, he will lead the internal Project Team and all aspects of managing and implementing the project, including regular communication with Turner Exhibits, FRAME Interactive Design Strategy, and Jill Randerson (JREM.co). He will collaborate with JREM.co to implement the Performance Measurement Plan [See Attachment] and coordinate the work of staff in the Facilities and Exhibits Department during demolition and installation.

Laura Christian, Vice President of Learning Experiences, joined DCM in 2013 and leads the Museum's Education Department comprised of 40 staff members. Prior to DCM, Laura taught first grade for five years and preschool for three years. She holds a B.S. from Eastern Michigan University (with a triple minor in Science, Language Arts, and Early Education) as well as Elementary and Early Childhood teaching certificates. Christian has played a critical role in the research and development of content for exhibits, including *Desert to the Stars*. For this project she will also revise educator materials, develop messaging for exhibition signage, and collaborate with community organizations to create resources and partnerships. Christian will oversee the work of **Chris Lucas** and **Tina Tetter**, who are supporting education-related tasks and collaborate with the Project Director to create operational and interpretive training for Floor Staff.

Jill Randerson, Jill Randerson Exhibit Management (JREM.co) (WA), project management. As part of Randerson's contract to manage the implementation of the exhibitions master plan, she is providing project management for *Desert to the Stars*. During the grant period, JREM.co will support alignment with master plan goals and work with the Project Director to implement the Performance Measurement Plan. [See Attachment: Letter of Commitment]

Erika K. Baer, Exhibits Director, and **Levi Schmitt**, Project Manager: **Turner Exhibits**. Turner Exhibits delivers full-service design, engineering, fabrication, and installation services for a wide variety of clients, applications, and activities throughout North America. Turner Exhibits produces indoor and outdoor visitor centers, museum installations, art installations, and kinetic architecture features for private and public spaces. For this project, Turner Exhibits will provide engineering and exhibit fabrication services. The scope for Turner Exhibits also encompasses the work of **Alissa Rupp**, Founder of **FRAME Interactive Design Strategy**. Rupp, FAIA, is a leader in the design and planning of museums and visitor centers, which she considers places for community building, informal education, and lifelong learning. For this project, Rupp will coordinate with Turner Exhibits' fabrication of exhibit components based on FRAMES' design. [See Attachment: Turner Exhibits - Letter of Commitment]

Dr. Jessica Luke, JLuke Consulting (WA), **Evaluator**. Luke earned her Ph.D. in Educational Psychology from the University of Maryland (College Park, MD) and is a Teaching Professor in the Information School, and the Director of the Museology Graduate Program, at the University of Washington in Seattle, WA. At UW, she conducts research on how and what people learn in museums, including play, social emotional development, and critical thinking. She recently completed a four-year research partnership with the Association of Children's Museums, called the Children's Museum Research Network, in which she coached a group of practitioners from 15 children's museums to conduct action research designed to enhance practice in these organizations. For this project, she will design and conduct summative evaluation. [See Attachment: Letter of Commitment and Proposal]

RESOURCES: DCM requests \$250,000 in IMLS grant funds to support the costs of prototyping and fabrication, installation, and summative evaluation. DCM is committing \$258,683 in matching funds. The DCM Board and staff are fully committed to the successful implementation of *Desert to the Stars*, as demonstrated by the allocation of resources to support the master planning process, stakeholder engagement, exhibit evaluation, campaign feasibility study, and design work for *Desert to the Stars* during Phase 1 (Sept. 2022–Aug. 2024). With campaign counsel from Campbell & Company, the Board of Trustees launched a Capital Campaign, *Our Next DISCOVERY* to raise \$12 million for exhibit redesign (including *Desert to the Stars* and other projects) and \$10 million for the endowment. To date, DCM has secured commitments totaling **\$4.1 million**, including **\$1.6 million** to support *Desert to the Stars*. DCM has and will commit significant staff time (as outlined in the Budget Justification) to manage the project, coordinate with contractors, install the new exhibit, integrate with Exhibition and Education staff protocols and training, and develop complementary education programs.

TRACKING PROGRESS TOWARD INTENDED RESULTS: Dr. Jessica Luke, of JLuke Consulting, will provide evaluation services in support of the *Desert to the Stars* exhibition. In Year 2 of Phase 2, summative evaluation will assess the ways in which *Desert to the Stars* achieves the goals identified by DCM: 1) promote curiosity and exploration of the natural environment; 2) strengthen gross motor skills and physical activity; 3) modulate excess sound; 4) provide a welcoming, accessible environment for all ages and abilities, and 5) prioritize the safety of all guests.

Data will be collected from 80-100 visiting families using at least three methods: 1) timing and tracking observations of families' interactions with the exhibit levels and components, looking specifically for evidence of interactive/collaborative play and physical activity; 2) post-exhibition interviews with children aged 5-12 years immediately after their exhibition experience, to measure how playing in *Desert to the Stars* impacted their thinking about Southern Nevada's natural environments, and with parents/caregivers to gauge their perception of safety, sound levels and the degree to which they felt the exhibit was both welcoming and accessible; and 3) delayed post-exhibition questionnaires administered to parents/caregivers two to three weeks after their visit, to understand how families extended their thinking about Southern Nevada's flora, fauna, and geographical features beyond their experience with the exhibition.

As a complement to this effort, the Project Director will implement and oversee the Performance Measurement Plan in concert with the Schedule of Completion and Project Budget.

Section 3: Project Results

INTENDED RESULTS: The overarching goal of the *Desert to the Stars* project is to **improve the experience of discovery and learning at DCM**. An investment in this project can generate benefits for other children's museums or science centers considering similar climbing structure-type exhibits. DCM staff regularly attend professional conferences (ACM, AAM, ASTC, etc.) during which they present and share successes and challenges with peers. By transforming *The Summit* into *Desert to the Stars*, DCM will:

- 1) **Promote curiosity and enhance learning efficacy, while strengthening gross motor skills** through the use of a central educational theme to promote a cohesive experience. Visitors will embark on "an outdoor adventure," complete with trailhead markers and supplementary information about the area's flora and fauna. Visitors will be guided on their adventure by cross-disciplinary content and curiosity prompts while simultaneously engaging with the physical challenges.
- 2) **Increase accessibility, modulate sound, and support children's comfort levels.** The design will create opportunities for young children and children of different abilities to explore in ways that are individually appropriate. The design plan includes the integration of calming, natural audio elements including water flowing down a stream or breezes rustling leaves. By modulating sound and visual stimulation for children with sensory sensitivities, and providing age-graduated physical challenges, *Desert to the Stars* will allow for children to create their own pathways through the exhibit.

3) **Prioritize the safety of children** through the elimination of multiple entrances and exits on each floor. The design will establish **one** entrance and exit on one floor, modify the central staircase, and decrease congestion around exhibit elements.

SHIFTING KNOWLEDGE, SKILLS, BEHAVIORS, AND/OR ATTITUDES OF THE TARGET GROUP: In its exhibits and programs, DCM staff strives to distill complex or potentially unfamiliar subjects to their most essential messages to support visitors' understandings. In doing this, ideas are not diluted, but expressed as understandable concepts that start conversations, support the acquisition of knowledge over time, and shape behaviors and attitudes. Through the exploration of *Desert to the Stars*, visitors will be encouraged to extend the learning experience beyond the Museum's walls to find out more about the distinctive features of Southern Nevada's natural environment. This is particularly important for local families and schools given the Museum's location in Las Vegas, a city somewhat disconnected from natural environments.

DCM's redesign of the exhibit will ground children in a specific place while highlighting the distinctive features of the natural environment. Encouraging children to find their own place in nature and to begin embracing the concept of being an integral part of something *much larger* than themselves is one of DCM's desired shifts in attitude. Summative evaluation will measure the ways in which *Desert to the Stars* impacts children's curiosity about and knowledge of the natural environment, as well as their use of gross motor skills to explore the exhibit and collaborate with other visitors.

With this newly redesigned climber exhibition, DCM aims to promote curiosity and imaginative, physical play—helping the Museum's target group and ultimate beneficiaries to develop social, cognitive, physical, and emotional skills. By addressing the challenges that impeded learning experiences in *The Summit*, completion of *Desert to the Stars* will support positive shifts in knowledge, skills, behaviors, and attitudes in the following ways:

1) *Knowledge and Skills:* Visitors can increase their knowledge of, and curiosity about, the natural environment of the local area. The physical features and challenges within *Desert to the Stars* will help children develop gross motor skills at graduated ages and competencies. Children can "self-select" into or out of a climbing experience based on their perception of the challenge and can "grow" with the exhibit as they refine coordination, agility, and balance. This process, over time, contributes to building confidence and self-esteem as well as improving concentration, focus, patience, and problem-solving and decision-making skills. Further, learning that physical activity can be an effective stress reducer is also an important tool for children to develop.

2) *Behaviors and Attitudes:* Children can develop a sense of achievement and increased capability as they conquer physical challenges. Through opportunities for children to interact and engage with the exhibit and each other, DCM aims to increase comfort levels around unexpected collaboration. Further, visitors can exercise their curiosity and broaden understanding of the connections within the community through participation in programs like Earth Day or National Trails Day when DCM partners with other community organizations. DCM also intends to foster curiosity about the natural environment of Southern Nevada *not immediately apparent* in Las Vegas, but in abundance just beyond city limits. Interpretive signage and prompts will encourage visitors to continue their exploration of Southern Nevada's natural environment outside the Museum. It is DCM's hope that when children and families branch out and interact with nature, the experiences can support feelings of wonder and awe.

RESULTING PRODUCTS: The project will result in a redesigned multi-level climber focusing on physical activity and geographically specific content about Southern Nevada's natural environments; new Floor Educator training materials; new Exhibits and Operations maintenance protocols; new orientation materials for educators highlighting connections to Nevada's science standards; and a summative evaluation report to inform future exhibition development.

SUSTAINING BENEFITS OF THE PROJECT: As part of the *Our Next DISCOVERY* campaign, DCM is raising \$10 million in endowment funds to generate annual support for the maintenance needs for re-envisioned and refreshed exhibits, including *Desert to the Stars*. In addition to maintenance, funds will also support ongoing short-term replacements and content updates. This will ensure that *Desert to the Stars* and DCM continue to meet key strategic goals around exhibits and programs.

It is DCM's intention that the benefits of this project and the broader campaign will support the growth of the Museum and the community it serves.

DISCOVERY Children’s Museum – IMLS Museums for America FY24 – *Desert to the Stars: Fabrication & Installation* – Schedule of Completion

Activities & Tasks in Year 1 ■ = multi-day events	PRE-GRANT ACTIVITIES: Nov. 2023 – July 2024	Sept. 2024 – November 2024	Dec. 2024 – February 2025	March 2025 – May 2025	June 2025 – August 2025
Project Director and DISCOVERY Children’s Museum (DCM) Project Team: Work with Turner Exhibits and FRAME Integrative Design Strategy to: 1) complete the detailed design phase, 2) conduct safety engineering evaluation, 3) obtain necessary permits, 4) finalize fabrication cost estimates, and 5) begin production of elements requiring a longer lead time.					
Project Director and Project Team: Meets to review project timeline, tasks & budget for <i>Desert to the Stars</i> (DTTS) fabrication & installation.		■			
Project Director: Works w/Project Manager (JREM.co) to create detailed project schedule, reviews w/Project Team; implements Performance Measurement Plan including regular meetings w/Project Team & DCM leadership. (Ongoing communication through Year 2)					
Fabrication (<i>Desert to the Stars</i>): Regular review points with Project Director and Project Manager.					
Fabrication: Exhibit components engineered for construction drawings.					
Fabrication: Shop drawings completed.					
Fabrication: Production & fabrication of elements requiring shorter lead times.					
Fabrication: Exhibit components prototyped.					
Marketing Dept.: Begin preparing public for closure of exhibit; support Project Team with signage, social media posts, newsletter, and website updates; plan press packets and media event for opening.					
Project Team: Development and testing of interpretive and content signage.					
Project Director: Plan and implement close of exhibit space and removal of exhibit elements being replaced: demolition of existing climber elements; repair and modification of structure as necessary; modification of entrances. [Exhibit to be closed for 9 months]					

Activities & Tasks in Year 2 ■ = multi-day events		Sept. 2025 – November 2025	Dec. 2025– February 2026	March 2026 – May 2026	June 2026 – August 2026
Project Director: Continues to oversee removal of exhibit elements being replaced; manage and assist with installation of new exhibit elements and all scenic and climbing elements. [Exhibit closed for 9 months]					
Installation: New <i>Desert to the Stars</i> exhibit elements and interactive interactives are installed.					
Project Team: Translation of interpretive/content signage into Spanish; production and installation of signage.					
Marketing Dept.: Lead up to opening: Develop time-lapse video of installation for social media posts and website updates; plan press packets and media event for opening and related programming.					
Education Dept.: Develop and conduct staff training (Education staff and Floor Educators).					
Project Director & Exhibit Dept. Staff: Develop exhibition operational protocols.					
Project Team: Soft opening & public preview (2 weeks after installation); observation of visitor flow and testing/adjusting staff engagement methods.					
Project Team: Opening of <i>Desert to the Stars</i> (End of December).			■		
Evaluator: Conducts summative evaluation, generates report, and discusses with Project Team.					
Education Dept.: Revise curriculum-based materials for K-7th educators around new DTTS content ahead of heavy field trip season; finalize new section of Floor Educator manual.					
Education Dept.: Continue developing community partnerships and working collaboratively to strengthen programming; research and develop slate of new public programs related to <i>Desert to the Stars</i> .					
Project Director, Project Team, and Project Manager (JREM.co): Debrief on project, identify next steps.					■
Full Project Team: Final reporting.					

Applicant Name: DISCOVERY Children’s Museum

Project Title: *Desert to the Stars: Fabrication & Installation*

Performance Measure	Data We Will Collect (e.g., counts, costs, weights, volumes, temperatures, percentages, hours, observations, opinions, feelings)	Source of Our Data (e.g., members of the target group, project staff, stakeholders, internal/external documents, recording devices, databases)	Method We Will Use (e.g., survey, questionnaire, interview, focus group, informal discussion, observation, assessment, document analysis)	Schedule (e.g., daily, weekly, monthly, quarterly, annually, beginning/end)
Effectiveness: The extent to which activities contribute to achieving the intended results	<p>The Project Director will collaborate with JREM.co, Turner Exhibits & FRAME Interactive Design Strategy, and the internal Project Team to add detail to the activities and tasks outlined in the Schedule of Completion and make specific assignments to team members. In this way, the Project Director will ensure that activities are contributing to the achievement of the intended results.</p> <p>Every month, the Project Director and JREM.co will assess the effectiveness of activities and tasks and adjust where needed. Weekly meetings of the Project Team will inform this process and shape the coordination and implementation of preparing for the installation of new exhibit components into <i>Desert to the Stars</i>.</p>			
Efficiency: How well resources (e.g., funds, expertise, time) are used and costs are minimized while generating maximum value for the target group	<p>The Project Director will use the Project Budget and Budget Justification documents to review expenses and time logs of Project Team staff members to ensure costs and staff time are on track. Resources (time, funds) will be reallocated where/when needed. Because the major cost is fabricating and installing the new components for <i>Desert to the Stars</i>, regular meetings between the Project Director, JREM.co and Turner Exhibits will ensure that the budget is kept on track while supporting intended results for target and benefitting audiences.</p>			
Quality: How well the activities meet the requirements and expectations of the target group	<p>Quarterly throughout the first year of the grant period, activities & tasks supporting production, fabrication, prototyping, interpretive signage, and removal of current exhibit elements will be assessed by the Project Director and JREM.co for alignment with project goals to meet expectations of the target and benefitting audiences.</p> <p>Summative evaluation during the second year of the grant period will also support the requirements and expectations of the target and benefitting audiences. Summative evaluation will assess the degree to which intended results were met.</p>			
Timeliness: The extent to which each task/activity is completed within the proposed timeframe	<p>Quarterly throughout the project period, the Project Director and JREM.co will gather information for progress reports from Turner Exhibits, and other Project Team members as needed. Milestones will be compared against the Schedule of Completion. The Project Director will share these reports with DCM Leadership and design alternative plans when needed to keep the project on schedule.</p> <p>Weekly meetings of the Project Team will inform quarterly progress reviews and alert Project Director of adjustments to be made.</p>			