



Museums Empowered

Sample Application ME-253333-OMS-23
Project Category: Digital Technology

Exploration Place

Amount awarded by IMLS:	\$28,383
Amount of cost share:	\$28,708

Exploration Place will implement a digital audience engagement professional development program for its 13 virtual educators and presenters to build staff skills and understanding of digital audience engagement.

Project activities include developing and implementing digital engagement best practices training, developing a virtual engagement roadmap, delivering new programs using the newly acquired skills, and evaluating the new programs. Project funds will support engaging a digital audience consultant who will guide the project team to create a train-the-trainer manual, support the initial creation of new digital programs, and provide team coaching and support. The project will build staff skills and processes to deliver impactful and engaging programs changing the culture around digital programs, enabling the museum to reach every Kansas county and school district.

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.

Virtual Engagement & Science Promotion Training

Project Justification

Which program goal/project category and associated objective(s) will your project address?

To support and champion lifelong learning in our community, this Virtual Engagement and Science Promotion Training project aligns to the Museums Empowered Digital Technology Goal 1, “Provide museum staff with the skills to integrate digital technology into museum operations.” The project will support Objective 1.1 to “Support staff learning and integration of digital communication platforms and social media tools to enhance audience engagement and community outreach.” Specifically, this project will empower staff to engage digital audiences in the museum’s mission by helping them develop a roadmap for effective digital engagement using video on social media and interactive instruction via virtual learning platforms. Project goals are to: a) Embed digital engagement skills and best practices in the public programs and education teams; and b) Expand the science center’s impact to every Kansas County and school district.

How will your project advance your museum’s strategic plan?

This project will advance Exploration Place’s 2021-2026 Strategic Plan in several ways. First, the strategic plan outlines several measurable goals for the organization, including “Delivering educational programs into all 105 counties in Kansas.” The project also aligns to three of the four Strategic Initiatives in the plan: Accessible Educational Outreach, Strengthen Programming Engagement, and Build Organizational Capacity. Exploration Place reaches a diverse group of students and visitors in the Wichita region. However, traveling five hours to reach the sparsely populated western half of the state is unrealistic and costly. A more cost-efficient solution to support all three initiatives is to leverage the increasingly affordable and interactive technology now available in homes, schools and at Exploration Place as a direct result of pandemic investments. High-quality distance learning that is creative, interactive, and fun would make it possible for students across the state to participate in the organization’s proven educational programs. Because of the recent investments in the latest technology and in talented staff, including a media specialist with extensive filming and editing capabilities and a talented group of educators and live science presenters, Exploration Place believes it will be on the forefront of delivering interactive, inquiry-based instruction for children and youth to support the Kansas Department of Education’s goals in STEM learning. Additionally, this project will position the organization to bring world-renowned experts into the living rooms of rural families to have conversations via Zoom-like technology.

What need, problem, or challenge will your project address, and how was it identified? Describe how you have used demographic information, economic circumstances, condition assessments, and other relevant data from reliable sources to define the need, problem, or challenge and develop the scope for the project.

Nearly 25%, or 111,000, of Kansas' K-12 students are in rural schools, and 46 percent of the school districts in the state are deemed rural by the U.S. Census Bureau. Nearly two-thirds of these districts are considered small rural districts with enrollments below the national median for rural school districts. Additionally, 73% of Kansans live too far away to visit the museum easily or take advantage of live lectures and in-person programs. Staff members have been traveling to and from schools across the state to provide a 1- or 2-hour program for classes or schools. Because this is not cost-efficient and because a single program has minimal impact on student STEM interest and academics, Exploration Place needs to be able to deliver more digital programming to these rural schools.

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Second, the pandemic resulted in increased use of technology by the public and schools; it also required a large investment in the digital recording and instructional tools of Exploration Place to continue delivering on its STEM mission. Thus, the tools are in place to expand the museum's impact beyond our metropolitan region.

However, once the pandemic ended, staff reverted to driving to deliver every program live and in-person; they feel that teachers and parents don't want kids using digital technology for school because many parents had bad experiences. Several studies suggest this may be true, but they are the result of parents and teachers being forced to do it with no training (Dong et al., 2020; Nguyen et al., 2021; Roy et al., 2021).

On the other hand, numerous pre- and post-pandemic studies suggest that blended instruction and distance learning may be better for some children and can be an effective teaching tool (Abramson, 2021; Burns, 2012; Roy et al., 2021; Fleming, 2020; Holland, 2022; Plowman et al., 2012).

Effectively teaching STEM that is aligned to Next Generation Science Standards using hands-on instruction is a time-intensive process that many teachers struggle to do, particularly elementary teachers who must focus on literacy and foundational math. This information was learned through interviews during strategic planning. Exploration Place already supports numerous schools in the Wichita metro area by providing in-school STEM instruction that is proven to positively impact interest in STEM careers and subjects, as well as standardized science scores (Blount et al., 2018; see Supportingdoc3).

The challenge faced by Exploration Place is that scientific demonstrations, exhibit discussions and presentations, live science shows and community conversations between the public and scientific experts cannot be delivered in the same manner in a digital environment. The instructional skills and methodology of imparting knowledge and directing inquiry-based instruction for children in a classroom require the instructor to change their communication style and the activities for the digital environment (Burns, 2011).

This project will train the staff to effectively leverage the technology the science center invested in during and following the pandemic to make the same impact as its in-person programs. It will build a culture of considering digital delivery options while planning all programs. Ultimately, it will help staff increase their interactive engagement techniques to engage audiences and students in the learning process.

Target Group

This project will provide 62 hours of training, practice, and program delivery coaching for 7 Outreach Education Team members and 5 Exhibit and Public Programs team members. These individuals regularly instruct students, develop and deliver outreach videos, or deliver live presentations. Directors are included because they will serve as coaches and trainers and be responsible for maintaining the cultural changes involved in the project. The Media Specialist will participate in some sessions to be an effective video coach and he will film and edit the output videos.

Beneficiaries

Exploration Place's project is designed to reach those who don't have access to in-person programs for any reason, including distance from the museum, disability or illness. With this training, by the end of 2026, Exploration Place estimates reaching more people as follows:

- Deliver programs to every Kansas County
- Serve 5,000 students a year with Exploration Place's high-impact NGSS aligned curriculum
- Sell Live Science Shows, exhibit education outreach, and school lessons on the Center for Interactive Learning and Collaboration (cilc.org) website for which reach is currently unknown because it is new to the organization.

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- Reach an additional 100,000 persons on social video platforms, such as You Tube, Facebook and Vimeo with both live and recorded outreach programming
- Provide the Explorer Club Program to at least 500 persons a year (live-stream discussions with local, national and international STEM experts and celebrities)
- Provide inquiry based instruction training to 100 teachers a year
- During the implementation of this project beginning 2025, additional resources will be used to ensure videos are accessible for those with disabilities to align with Federal standards.

Project Work Plan

What specific activities will you carry out and in what sequence?

The central goal of this project is to empower staff to integrate digital plans into programs for education, outreach, and community engagement while also learning how to evaluate their programs and work toward continuous improvement. The main objective is to give the participants the confidence and skills to develop and deliver outstanding virtual engagement and digital learning experiences. This project will give the team the skills and tools to develop future digital programs engage underserved audiences in scientific thinking and fact-finding. The program will make it possible to increase the museum's reach, influence and lifelong connections between its community and collections. If Exploration Place receives this grant, CREW will be hired to provide live and digital audience engagement and program development training (See Supportingdoc2, which is the proposal from CREW).

From 9/1/23 through 11/15/24, education and public programs staff members will participate in 62 hours of training and coaching to build their general and digital presentation and audience engagement skills, create attention-getting STEM programs, and promote the programs using social media and partnerships with other organizations. Training and train-the-trainer manual development processes will incorporate best practices for helping staff support cultural change, including involving the staff to create their audience engagement values, coaching materials, training steps, and program evaluation plans. While learning, staff will also build two digital programs of their choice.

Measurable objectives are:

1. Participants will feel more confident in their ability to develop, deliver and adapt their message and communication style for high-impact digital programs based on pre-, mid-program, and post-program participant surveys.
2. Participants will have a greater understanding of how to use audience feedback to improve communication styles and programs based on pre-, mid-, and post participant surveys.
3. Audience Net Promoter Score and program satisfaction will increase based on pre- and post-program surveys.

All activities will be guided by CREW facilitators and evaluators from Sept. 1, 2023-Aug. 30, 2024:

- In September, define the values, training goals, and evaluation criteria for the training and their program and determine the formats and topics for the two digital programs each staff member will develop.
- Pre-program evaluations (participants and audience) will take place through Nov. 30, 2022.
- In October and November, the team will learn best practices for engaging live, in-person audiences in the mission of Exploration Place and how to adapt based on audience feedback and characteristics. CREW will begin developing the team's "Virtual Engagement Development Road Map" based on team input from September and October.

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- From Mid-November 2023 through January 2024, participants will practice live audience engagement skills in current live science shows, classrooms, and at events and practice coaching each other for continuous improvement. At the same time, mid-project participant and audience surveys will be administered to ensure the team is progressing.
- Beginning in March 2024, the team will learn and rehearse best practices for digital engagement and work on aspects of their chosen digital science outreach video or lesson.
- From April through June 2024, participants will be developing, writing, and practicing digital performances while being coached by CREW. Groups will perform the “shows” or lessons in pairs and receive personalized coaching from CREW.
- The remainder of the project through October is for continuous improvement evaluation practice. Staff will deliver live digital outreach presentations and lessons and videos will be distributed with surveys being administered as decided in the first month of training. Post-project evaluation data will be shared with Exploration Place and the evaluation processes will be handed off to Directors by Nov. 15, 2024.

What are the risks to the project and how will you mitigate them?

First, the vast majority of people struggle with change, even when positive, according to scientists who study how the brain works and its impact on emotions. Change triggers the fight, flight or freeze response. Staff going through the changes may quietly attend and choose not to learn. Others may leave the organization, and some may be in a fighting mood, which comes out as dissatisfaction and anger at work. To address this, managers will watch for signs of negativity and frustration, be sure the employee(s) feel heard and assign a related project that engages their mind and passion.

A second risk is that staff will not continue to practice the engagement strategies after training. To mitigate, the engagement strategies will be incorporated into meetings and performance goals in annual employee evaluations. All team members will be expected to set personal audience engagement goals and to help improve audience digital engagement ratings.

Third, it is possible that some school districts lack the technology for live-stream or video recording delivery through the internet. Exploration Place’s Reservationist has been contacting districts and education support centers across the state to learn how we can help resolve this issue for the districts and schools that simply do not have it. This may also include some homeschool families.

Finally, potentially, the appetite for digital STEM lessons, lectures, exhibit presentations, and shows are less than believed. To mitigate the risk for the high-cost, high-impact programs that take a long time to develop for classrooms, the museum is involving rural educators and science specialists in the discussion of the lesson topics needed, delivery format, and approach to managing the students during the lessons.

Who will plan, implement, and manage your project?

Chris Flippo is the project director. She is currently the Interim Director of Education and a Grants Officer at Exploration Place. She will help guide the new Director through the process because this position is open.

Victoria Mitchell, Director of Exhibits and Programs, will manage the Public Programs team throughout the project. She has led numerous major projects that support diversity, accessibility, equity and inclusion in programs at Exploration Place, including a larger than-life-outdoor exhibit featuring scientists of color in 2022 and a Women in STEM outdoor exhibit. Directors must attend in order to manage evaluation processes and serve as a mentor to new team members after project completion.

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Adam Senior, leader of CREW, will deliver the training, and his staff will develop the train-the-trainer materials with continuous input from the Exploration Place teams that will be impacted by the project and cultural changes. His evaluation team, led by Nette Pletcher, will develop the surveys and evaluation mechanisms. The attached Contract Proposal from CREW Appendix outlines the company expertise in training.

Exploration Place's President, Adam Smith, will participate and support the team in completing the project training and output video and lessons.

Finally, the Grants Administrator is Laurel Zhang. Laurel is an educator who earned an MA and years of experience guiding teams to fulfill grant requirements. Resumes for Exploration Place staff and Curriculum Vitae for CREW key staff have been uploaded as an attachment.

How is the project team organized and structured to support engagement of all participants?

Exploration Place specifically selected CREW for this project because they excel at including staff in the planning of the actual training program and work with managers to leverage the strengths of the staff and current culture to support the changes (Katzenbach, 2012). To learn more about CREW's ability to deliver this program, see the "Who is CREW" section and the Appendix of the CREW Proposal, attached as Supportingdoc2. The live and digital program delivery staff of both Public Programs and Education teams will be involved in the early planning stages in which the train-the-trainer materials and coaching cards are created. In other words, the directors are not designing the training for them. Instead, the team is collaborating to design their own training, coaching guidelines, and continuous improvement materials and processes in a way that makes sense to them. The project director will guide both teams through the process and serve as a project manager.

It is also worth noting that a few Board members served on the Education Committee and they are working on detailed education strategic plan with strategic planning consultants from Wichita State University. This process involved interviews with numerous stakeholders from educators across the state to funders to workforce development professionals in the community to major STEM employers. The teams will use this input to develop the digital program strategy and detailed topics that the community has an appetite to consume. Upon completing this phase of training and the strategic plan, the Education and Public Programs teams will work to implement the digital outreach projects that align to the education strategic plan.

What time, financial, personnel, and other resources will you need to carry out the activities?

Much of the work for this project is being done by the CREW team, who will lead the training, write and design the train the trainer materials, and assess the training impact. Internally, Chris Flippo as the project director will work with CREW and the teams to schedule trainings, reserve the training space, provide snacks, and ensure team members have the opportunity to perform the required number of times for the coaching to be effective. Participants will complete 62 hours of training, coaching and practice with Adam Senior of CREW, and an additional 20 hours of outside homework in small groups. Additionally, to edit and prep the video, Exploration Place's media specialist will work on the project videos for about 16 hours.

How will you track your progress toward achieving your intended results?

CREW will work with all participants to develop a project participant survey and an audience engagement survey. Both will be implemented prior to, mid-way through, and after the project is completed. Participant questions will address whether they feel the training is helping them improve skills and audience engagement will likely include a net promoter score, which is a function of whether persons would refer the program to a friend, family member or colleague.

Project Results

Intended Results and benefits to society

The primary goal is cultural change in that staff will always be considering how programs, such as live science shows, STEM lessons, public conversations and lectures, and field trips can be delivered to underserved audiences by building skills and processes that make it impactful, fun and engaging. Ultimately, this will benefit those families and students living in very rural communities who do not have a science center where they can access STEM learning on a regular basis. It will solve the challenges outlined above in the following ways:

Digital outreach is the only way students and teachers in western Kansas will be able to access our most impactful STEM in-school education programs. We will offer it via live-stream and video options. This, we believe, will help increase student interest in STEM subjects and careers, as well as embed the belief that all students can learn and thrive in STEM subjects and careers. This training will enable staff to adapt programs for virtual delivery to classrooms and for teachers to use videos to support their STEM student learning. Staff will have their “Virtual Engagement Development Road Map” (developed in this training) available to develop each virtual lesson plan.

In summary, a compelling, engaging distance education and outreach program is an ideal way to reach the rural and disability communities of Kansas and others who may not be comfortable or able to access the museum resources regularly. This program is designed to build knowledge and to produce a plan to make digital engagement part of everything the instructional and presentation staff plans and delivers for the public and to help the community overcome skepticism about distance learning.

How will the knowledge, skills, behaviors or attitudes of the target group change as a result of your project?

Participating staff members have more skills and knowledge to develop and deliver engaging programs using digital technology. This will be measured using the pre, mid-program, and post-training participant and audience surveys. Results will be analyzed by the CREW evaluation team and presented at each stage.

What products will result from your project?

During the second half of the project, participants will develop at least two outputs that they will design, plan, and implement at least two programs using the “Virtual Engagement Development Road Map” with coaching and direction from CREW:

- A video field trip, community education event, exhibit presentation, or Live Science Show.
- An instructional program that is delivered live over the Internet to homes and/or classrooms.

How will you sustain the benefit(s) of your project beyond the conclusion of the period of performance?

The program is designed with train-the-trainer elements and materials built into it. First, some staff will be identified as ambassadors and mentors for using best-practices in presentations, lesson development and delivery via live-stream and video. Their role will be to carry it forward. Additionally, the directors will include the best-practices in staff evaluations, reward systems, and staff meetings. The following outlines the train the trainer materials and how the two teams will use them:

- **The Virtual Engagement Development Road Map** is a step-by-step guide for developing future virtual programs that the teams will use to create virtual engagement that is interactive, personal and engaging.

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- **Virtual Service Delivery Values** will be developed by CREW in partnership with the team and will be incorporated into the train-the-trainer materials. The staff who attend will be ambassadors for delivering these values throughout all virtual interactions and engagements.
- **Virtual Engagement Standards and related evaluations** will be developed and used to help the team evaluate their programs and delivery and continuously improve. Staff will be encouraged to observe and coach each other after the engagement, and managers will help the team evaluate data from audiences to maintain high-quality digital delivery based on the standards that support providing consistently engaging, flexible, and interactive participatory experiences adapted for each audience. Each year, the team will set personal and team audience engagement goals and continuously track progress using the evaluation tools created during the project.
- The **Live Presentation Skills Manual** and **Live Virtual Engagement Training Manuals** will be developed to be used to train new staff, coach staff, and for setting goals for program improvement.

Bibliography (Supportingdoc1)

Exploration Place Museums Empowered Grant 2023

Schedule of Completion (with number of days to complete tasks)

