

Museums for America

Sample Application MA-251558-OMS-22 Project Category: Lifelong Learning

The Tech

Amount awarded by IMLS: \$246,528 Amount of cost share: \$248,978

The Tech will conduct an evaluation of its virtual and in-person field trip programs to adapt to the evolving needs of the education community after the COVID-19 pandemic. Project activities will include conducting a landscape needs assessment to better understand educators' perspectives on field trips and barriers to participation; updating existing field trip programs, marketing, and operations in response to the findings with iterations as needed; and publishing/disseminating learnings as a case study to support other science museums with strategies for making field trips more accessible for schools. The results of the evaluation will aid The Tech in increasing field trip participation to provide more K-12 students with critical hands-on science and engineering learning experiences.

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.

Project Justification

The Tech Interactive (The Tech) is proposing a 3-year project to assess and adapt to the evolving needs of the education community in order to provide more students with critical hands-on STEM (Science, Technology, Engineering & Math) learning experiences as we come out of the COVID-19 pandemic.

Background

The Tech is a hands-on science and technology center in San Jose, CA with a mission to inspire the innovator in everyone. Of our ~500,000 visitors in a typical year (pre-pandemic), over 100,000 are field trip participants. More than half come from schools in economically disadvantaged communities which we support with free admission, programming, and bus subsidies through our Title I Field Trip Scholarship Fund. Facilitated programming includes 90-minute Science Labs in our classrooms, 45-minute Innovation Labs in our exhibits, and 15-minute drop-in science activities throughout our galleries. While The Tech was closed during the 2020-21 school year due to COVID-19, we pivoted to virtual field trip programming, including virtual Science Labs and "Book a Biologist" guest speakers for classrooms. We are offering both in-person and virtual experiences through at least the 2021-22 and 2022-23 school years. The Tech is in the process of designing a 60,000 square foot expansion to our building, as well as redesigning our current lobby, to be completed in 2024. This will increase our flexibility for field trip activities, whether in-person or virtual, and our capacity to improve and expand services to meet the needs of the community.

The Need

Field trips are important to supplement classroom learning and nurture interest in STEM. Field trips provide students with real-world, hands-on experience, reinforcing that what they are learning in school is relevant (Spiegel, 2019). The National Science Teachers Association "advocates for informal learning opportunities for all students and recommends expanding these opportunities, especially for students from communities underrepresented in STEM fields," as field trips can spark interest in science, deepen engagement, reinforce scientific concepts, and promote an appreciation for science (NSTA, 2012). Field trips can even contribute positively to student achievement, with maximum effects for Hispanic students and those who qualify for free or reduced lunch, helping to reduce the achievement gap (Whitesell, 2016). The Tech's annual survey results reinforce that California teachers see the educational benefits of field trips (Supporting Doc 3).

Next Generation Science Standards (NGSS), adopted by the California Board of Education, emphasize hands-on science projects. However, teachers are unprepared to teach to the standards and struggle to incorporate inquiry-based science learning into their classrooms (Nollmeyer et al., 2019). Many teachers, especially in low-income communities, do not have a background in STEM (Hansen et al., 2019), nor the classroom resources, time or experience to facilitate hands-on science activities (Education Trust, 2017). The Tech's field trip evaluations reflect these findings, as teachers comment each year that they rely on our NGSS-aligned curriculum and benefit from seeing our experienced educators model instruction. One teacher noted in our 2019 evaluations "We LOVE this lab and how well it connects with our science curriculum on forces and motion. It's much better and deeper than what we can do with the resources we have at our school." Another wrote, "I have noticed that I am more willing to try hands-on experiences after seeing the lab instructors lead the students. There is a lot I have learned from them in the past few years we have been attending." In our fall 2021 meetings with 9 local superintendents and assistant superintendents, we learned that schools are under unprecedented stress with staff shortages and COVID protocols. With teachers' focus on classroom management and learning recovery, students are less likely to receive regular hands-on STEM instruction in their classrooms, and districts need expanded learning opportunities to fill the gap.

We know that the teachers who participate in Science Labs are satisfied with the quality, as over 99% of teachers surveyed consistently positively rated the labs for content relevancy and standards connections, activity engagement, and educational value (Supporting Doc 3). Yet, even in the years leading up to the pandemic, The Tech observed a steady decline in field trip attendance. A 2018 study of 18 art museums' attendance concluded that field trips have declined since 2000 (Watson, 2019). We validated this trend anecdotally via meetings with our science center peers across the San Francisco Bay Area, but there is no existing formal research from the

Association of Science and Technology Centers or other peer sources. The Tech served ~10% fewer students in FY19 compared to FY16, and only 53% low income Title I students instead of our annual 60% target. In 2019, we increased our outreach efforts, including hiring an education marketing manager. We also secured a donation to increase transportation subsidies for Title I schools, resulting in a 17% increase in Title I field trip registration during the school year. Despite our efforts, there was no increase in scheduled attendance for non-Title I schools, and the gains with Title I schools were interrupted by COVID-19. Although some schools have begun to return as we reopen, the pandemic makes the future of field trips less certain.

The timing is right to reevaluate our field trips. We need to learn about our educational partners' current and anticipated needs coming out of the pandemic, better understand the barriers to field trip attendance beyond the identified transportation challenges, and determine the ongoing need for virtual offerings. This will allow us to develop and implement data-driven field trip strategies to support educators and provide more students with impactful learning experiences.

Target Group & Beneficiaries

The primary project beneficiaries will be K-12 students and their educators, with a focus on our most popular field trip ages-- grades 3-8. Field trip participants historically come from throughout California, but primarily the urban/suburban San Francisco Bay Area and rural regions of the Central Coast and Central Valley. We serve an ethnically diverse student audience, including a large population of Latinx students. For example, at our closest school district, San Jose Unified, over 50% of students are Hispanic or Latino, and about a quarter of all students are English language learners (San Jose Unified, 2020). Students are integral to program development and will be incorporated in prototyping and design assessment to ensure audience appeal that is equitable, inclusive and engaging to all levels of STEM confidence.

Our target group, the educators who benefit from this project, are involved in the planning by providing the critical information and insights to drive our field trip updates. Since teachers in California have a large amount of autonomy to make decisions about field trips and best know the needs of their classes, they are the primary group we will engage in the project. To make sure outcomes are based on educators' actual needs and not assumptions, they will be involved in every step of the project-- participating in the needs assessment, providing feedback on proposed modifications, and piloting updates. We will also relaunch our Educator Advisory Board with former and new participants. The group is composed of ~25 diverse educators from public and private schools, home school, and after school programs. We plan to include several "Teachers on Special Assignment" (TOSAs) who focus on science and engineering curriculum in local school districts. TOSAs have expertise in district curriculum standards and provide curriculum support to other educators across the district. Our previous Educator Advisory Board provided feedback on barriers to field trips, which resulted in us increasing our transportation subsidies. They also provided critical input on the development of a new Science Lab, which helped us design an activity more relevant to their students' lives. Educators have been enthusiastic participants in our evaluation and pilot projects because they have seen how we incorporated previous input into programming to support their teaching practice and benefit their students.

We will also work with district administrators to make sure we are engaging stakeholders at every level of the school system. The Tech has long-term partnerships with ten school districts in our county that are most impacted by systemic inequalities. We have regular conversations with the district superintendents, some of whom have already committed support for this project (see Supporting Doc 2) and will recruit administrators less familiar with our programs for input as well. We will be using the year leading up to the grant project for deep community listening with superintendents from diverse communities, who will then provide feedback over the course of our project on how our updated plans align with their district field trip guidelines.

The tertiary project beneficiaries will be other science centers and museums. We know from conversations with our peers that declining field trip attendance is an issue across the industry and there is a lack of research on the causes and solutions. Our external evaluator will reach out to our peers when finalizing evaluation plans to incorporate any additional questions that would assure this becomes a useful case study for the broader museum field.

Strategic Plan Advancement

This project directly advances three of the six priorities in The Tech's current strategic plan:

- 1. *Create life-changing programs and learning experiences.* Field trips are one of our core programs, which we are committed to continuing. This project will help increase access to exciting hands-on STEM learning for diverse student audiences, including from the most underserved neighborhoods in our region. Impact will be measured through attendance as well as internal and external qualitative program assessments.
- 2. Continuously evaluate and improve our core programs, learning experiences and institutional practices. A major plank of our strategic plan is expanding evaluation practices to better design programs with our community. This project will allow us to do that with one of our core audiences-- schools in the region. Evaluations will assess needs not previously measured and collect feedback from wider groups of educators. This project will be integrated into the institution-wide strategic evidence plan we are currently building.
- 3. *Optimize revenue model for a balance of earned, endowment, and contributed revenue.* Field trips, which support our ongoing exhibit operations, are an important part of The Tech's financial model, comprising ~14% of our total revenue. Improving attendance increases earned revenue from paid field trips and allows us to raise more contributed revenue for our Title I Field Trip Scholarship Fund.

Museums for America Goals

This project aligns with the Museums for America's Lifelong Learning goals, because it enables us to increase access to and improve learning experiences for students from all backgrounds. Updated programs will provide engaging hands-on learning and discovery to spark students' imaginations and curiosity, while connecting back to K-12 curriculum standards. Our approach is both cross-disciplinary and inquiry-based, with student-driven problem-solving activities that merge science, technology, engineering and other subjects.

Project Work Plan

Project Activities & Sequence

Pre- Project Phase- September 2021- August 2022- Meet with superintendents to learn about district needs. Start planning and recruiting an Educator Advisory Board.

- **Phase 1:** Needs Assessment September 2022 January 2023 (Year 1): Our goal is to understand educators' perspectives on field trips in general and The Tech specifically to inform updates to our programs, marketing and operations. We will work with an external evaluator, MWA Insights, to explore the following evaluation questions for both in-person and virtual field trips (See Supporting Doc 1 for full questions).
- # 1: To what extent and in what ways do the current field trip programs support high quality STEM learning experiences for students? What aspects are working well, and which can be strengthened?
- #2: What are teachers' perceptions of the current programming, and to what extent does it meet their needs both in terms of STEM instruction and logistics? What is missing from the current offerings that could better support teachers? What do they want to see changed or added?
- # 3: How do educators learn and make decisions about field trips? What reasons or barriers cause challenges or prevent teachers from making use of the current field trip offerings? What would make a Tech Interactive field trip appealing to teachers who are not currently participating? What additional support do teachers need from The Tech, their school or district, or the broader community?
- #4: What new challenges were created due to the COVID-19 pandemic and/or school closures that affect the use of field trips? Which challenges do teachers expect to be short-term, long-term, or permanent?
- # 5: Given that logistical barriers may prevent some teachers from accessing on-site field trips at all, what preferences do teachers have for other programming formats (e.g., virtual, outreach programming)? What level of interest is there in ongoing virtual or hybrid programmatic offerings?

MWA Insights will use the following methods, based on best practices in the field and their experience evaluating science centers, to answer the above evaluation questions:

• Observations: MWA Insights will conduct observations of The Tech's current in-person and virtual facilitated experiences using the Dimensions of Success (DoS) Observation Tool developed by The PEAR Institute at Harvard University. The DoS has a scoring rubric for 12 dimensions of high-quality out-of-school time STEM experiences (See Supporting Doc 1 for details). The MWA Insights team will complete the certification process through the PEAR Institute to ensure consistent data collection. Each of the Tech's 15 facilitated field trip offerings will be observed on 3 occasions, for a total of 45 observations.

- MWA Insights will also assist The Tech to develop a tool for staff to observe other field trip components such as school check-in and exhibit participation.
- Teacher Focus Groups: MWA Insights will host a series of 10 focus groups with educators from different grade levels to explore the factors that educators use to make decisions about field trips, satisfaction with the Tech's current offerings, and reasons that may be preventing teachers from taking advantage of the current offerings. Focus group audiences will include recent participants and educators who have never booked a field trip or attended in the past but stopped participating. (See Supporting Doc 1 for details).
- <u>Teacher Surveys</u>: The Tech has historically collected surveys from teachers whose classes participate in Science Labs with questions focused on program satisfaction and feedback. MWA Insights will help The Tech revise the survey to better align with this project. The updated survey will be used by a larger cross-section of all educators at the end of their field trip to assess the effectiveness of programming, as well as marketing and operations. We anticipate completion of approximately 1,750 surveys per year.

Phase 2: Parsing the results/developing recommendations - January - June 2023 (Year 1): MWA Insights will process the data, look for recommendations, and host a working session with The Tech's staff to review the results and discuss next steps. The project team will make choices on updates and take proposed changes back to the Educator Advisory Board for feedback and validation. Our Chief Learning Officer will liaison with the senior leadership team for institutional approval on any major changes or budget adjustments.

Phase 3: Developing and making changes- June - August 2023 (Year 1): We will develop a project plan for Year 2, including program, marketing and operations adjustments to prototype and pilot, assigned staff, and evaluation plans/schedule. Our goal during this phase is to plan updates, based on the needs assessment, in order to increase field trip attendance so more students receive the proven benefits. We have a long history of successfully updating programs over the summer to pilot during the following school year.

Phase 4: Prototyping changes and making updates: September 2023- August 2024 (Year 2): The program team will pilot curriculum changes while the operations team will make any procedural changes around booking, transportation and marketing. We will complete any necessary staff training and order supplies for updates. As with all our programs, development will be highly iterative--testing, soliciting feedback and tweaking as we go. In prototyping, we will prioritize testing with diverse groups of teachers and students to ensure the broadest audience engagement especially with marginalized populations.

• <u>Formative Evaluation</u>- MWA Insights will conduct formative evaluation of the pilot programs and provide iterative feedback on the changes. This will include another round of observations, focus groups, and analysis of ongoing teacher surveys. Data will be used to fine tune updates for a wider roll-out in Year 3.

Phase 5: Launching updates and measuring impact: September 2024 - May 2025 (Year 3): Roll out updates based on pilots and evaluations from Year 2.

• <u>Summative Evaluation</u>- Summative evaluation, also conducted by MWA Insights, will include a third round of observations of the revised field trip programs to document areas of improvement and any continued challenges. Survey collection will continue through Year 3 to make comparisons between the new and existing programs on STEM learning impacts. By the end of this phase, our goal is to have updated and re-evaluated our field trips to increase access for schools and support educators with the NGSS-aligned learning experiences they need for their students going forward.

Phase 6: Analyzing & Disseminating Results: June -August 2025 (Year 3): Our final goal is to support peer museums who are also struggling with declining field trip attendance. The Tech and MWA Insights will co-author and publish a case study article on Medium about our learnings and how museums and schools can work together to increase access to impactful informal learning opportunities. We will involve a member of the Educator Advisory Board in the writing to make sure we are directly incorporating their voice. The article will be disseminated broadly through the Educator Advisory Board's network, The Tech's education contacts, and MWA Insights. We will also share the article with and apply to present at conferences through the following associations, at which we have experience presenting: American Alliance of Museums (AAM), Association of Science and Technology Centers (ASTC), and California Association of Science Educators (CASE).

Project Risks

We assume the COVID-19 pandemic will get better as younger children are eligible for vaccines over the next year and more schools will start returning to in-person field trips. As such, we expect that we will have plenty of participation for field trip evaluations during the project. However, there is always the risk that the pandemic worsens and requires a return to shelter-in-place and museum closures. We mitigate this risk by having the infrastructure in place to continue virtual programming, and are prepared to engage educators and other stakeholders in evaluations remotely as needed. We also included transportation reimbursements in the project budget to mitigate the challenge of reduced school budgets posing a barrier to returning on a field trip.

We are planning this project with the understanding that the evaluation recommendations might require substantial changes to our field trip programs, including curriculum, operations, and/or marketing. We are also prepared that the findings could reveal insurmountable barriers to field trips for some schools. In this case we are prepared to look at programming more holistically in terms of virtual experiences and/or other opportunities to bring programs to schools in addition to bringing students to The Tech. There is still a risk though that the evaluation recommendations are beyond the scope of this project and budgeted resources, which we mitigate by having a long enough timeline to expand the scope if necessary. We can use Year 2 for any additional planning and prototyping, fundraising, and realignment with institutional priorities necessary to make updates in Year 3.

Project Team

Key Staff

- *Kristen Martin Lai*, *Senior Director of Interactive Learning Programs*, project director, will lead the overall project. Kristen has a Master's in Interdisciplinary Education and currently leads our field trip programs. She personally developed six new field trip labs for The Tech during her 10-year tenure, as well as converted in-person labs to virtual for distance learning during the COVID-19 pandemic.
- *Dr. Prinda Wanakule, Senior Director of Inclusive Research, Development, and Impact Measurement*, will align and integrate this project into The Tech's institution-wide strategic evidence plan, theory of change, and impact measures. She will also support research and development of new programs, as needed. A former biomedical engineer and researcher with a Ph.D. in Biomedical Engineering, Dr. Wanakule has led the design of new STEM education experiences at The Tech for over 8 years.
- Claire Fowler, Senior Manager of Facilitated Experiences, will serve as the project's learning programs lead and will manage the labs for field trips and implement any updates in Years 2-3 of our project. Claire trains lab instructors, manages lab logistics for field trips, liaisons with teachers, and collects and compiles teacher surveys. Claire has worked in many capacities at The Tech over the last 8 years, including as a Lab Instructor, and has a track record of providing excellent training for all our instructors.
- *Tara Komar, Education Marketing Manager*, will serve as the project's marketing lead and liaison with the Educator Advisory Board. Tara will help identify focus group participants, analyze results, strategize on communicating program updates to our target audiences, and determine how the project findings will impact our marketing efforts. Tara, a former high school teacher, has a Master's in Mass Communications/Media Studies and over two decades of experience in marketing and communications.
- Sue Fondacaro, Visitor Services Manager, will be the project's operations lead, managing any operational updates in Years 2-3 of the project. Sue trains and manages front-line staff involved in field trip booking and check-in, oversees operational logistics of field trips, and liaisons with teachers. Sue has worked in many capacities over her 8 years at The Tech, including as the Lab Department Administrator, and has a track record of providing excellent training for staff and service to our customers.
- *Gretchen Walker, Chief Learning Officer*, will provide executive-level oversight and support as needed for the project, particularly any program changes that require organizational budget adjustments or cross-departmental collaboration. Gretchen has a Master's in Science Education and over 25 years' experience in education, including K-12 instruction, content development, and science center leadership.

Consultants

Maia Werner-Avidon, Museum Evaluation Consultant at MWA Insights, is our primary project partner, providing expertise and implementation for external evaluations. Maia will conduct a teacher needs assessment, evaluate The Tech's current and updated field trip programs, and co-author an article for publication. Maia has nearly 15 years of experience evaluating STEM educational experiences and for the past four years, has led her own research and evaluation consulting practice, MWA Insights. She often studies ways that museums and other out-of-school educational providers can bring the benefits of informal learning into formal education. The Tech has partnered with Maia on a number of evaluation projects over the last few years. Her outside

perspective will be invaluable for us to hear feedback from our educational community through an objective lens and tease out recommendations beyond our existing framework. She will likely challenge our assumptions and help us to think outside our comfort zone to make meaningful changes in response to community listening.

Resources Needed

We anticipate the six phases of the project will require 36 months to complete. We budgeted \$498,506, with \$246,528 requested from IMLS and \$251,978 cost share. The largest portion of the grant will fund an external evaluator, who provides the necessary expertise and objective lens for all our evaluation activities.

No new personnel will be needed as The Tech has the staff in place with experience to weigh recommendations, develop and implement program changes, and collaborate with the external evaluator to author an article on the findings. In addition to our key project team, we will engage a number of long-time staff across operations, visitor services, and marketing to support the planning and implementation of program updates (see Budget Justification for specific staff members).

Beyond personnel time, we need to leverage our long-standing relationships with the education community to collect input from teachers and district-level stakeholders during all project phases. We budgeted for transportation funds for schools to participate in field trip observations and evaluations, incentives for completing surveys, incentives for Educator Advisory Board participants and meals at meetings, and our external evaluator's budget includes incentives for focus group participation.

Depending on the updates, we will need supplies for prototyping, new lab materials, and SMART Boards for The Tech's classrooms (See Budget Justification).

Historically, The Tech has relied on free or very low-cost outlets for marketing and outreach of our field trip program. To assess the most successful and cost-effective strategies, we will need paid advertising to evaluate return on investment.

Tracking Progress

The Tech uses SmartSheets project management software to share project information, communicate deadlines and course adjustments, and track progress toward the intended outcomes. The Tech's project director, Chief Learning Officer, and project leads continually monitor all projects to review progress toward key milestones and resolve issues around competition for resources to keep projects from stalling.

At monthly meetings, the project director and external evaluator will review upcoming activities, assess current work, and adjust plans as needed. The Tech project team will also meet frequently to review progress-monthly during most of the project and every other week during key phases of planning and development. Since the focus of this project is evaluation and iteration, each phase includes time to review progress toward intended results and determine next steps. We will track progress through project meeting notes on our Google Drive and updates on a Slack channel created for project collaboration, in addition to our formal SmartSheets system.

To track progress toward our intended results, we will review evaluation reports from MWA Insights at each step of the project. The Tech will continue analyzing attendance trends through our booking system, where we track overall field trip attendance, bookings of each facilitated activity, and what percentage of participants are from Title I schools. To track the project's success supporting institutions beyond The Tech, we will measure audience reach and engagement of our case study article online at the end of the grant period.

Project Results

Intended Results

The following are our project results, including key outputs and corresponding outcomes:

- *Comprehensive needs assessment report*: This will give The Tech the necessary insights into the educational community's evolving needs, including factors impacting field trip attendance, in order to develop data-driven strategic plans for programs, marketing, and operations.
- New and/or modified field trip programs (in-person and potentially virtual/offsite), marketing & operations, responsive to the evaluations: Teachers will have increased awareness of and access to programs that meet their needs, supporting them to provide their students with hands-on, NGSS-aligned STEM experiences that are challenging to offer solely in the classroom.

- *Increased field trip participation & final evaluation report:* The target outcome is to recover our pre-COVID field trip attendance and grow an additional 10-15%, resulting in more students participating in meaningful hands-on STEM experiences. Our goal is to maintain 99% positive ratings from teacher post-visit surveys while implementing ongoing evaluation systems for continuous improvement.
- Published article on field trips with this project as a case study. Disseminating an article publicly and presenting findings at one or more conferences will allow other museums facing similar challenges with field trip attendance to extrapolate useful insights to improve their own strategies. Since the populations we serve are geographically, socioeconomically and ethnically diverse, we expect that other institutions will be able to glean relevant insights.

Audience Impacts

Educators will become more aware of The Tech's field trip offerings and more likely to consider The Tech as an educational resource as they see we have programs and practices aligned with their evolving needs. More teachers will book field trips (in-person or virtual) as we reduce barriers to participation and adapt our programs and operations based on community feedback. Participating educators will provide more hands-on science lessons that meet NGSS expectations by observing The Tech's facilitation methods and utilizing the classroom resources to extend field trip activities into the classroom.

Students, including those from underserved communities, will be inspired by hands-on experiences that spark or nurture an interest in STEM. Through even a short lab activity, The Tech's field trip participants have the chance to think of themselves as scientists and engineers. Students will connect classroom learning to real-world applications and deepen their understanding of scientific concepts through our NGSS-aligned programs.

Products

Tangible products resulting from our project will include a landscape needs assessment, new evaluation tools, a final evaluation report, and a published article. Additional products will be determined based on the needs assessment and recommendations. Current products we may expand and/or revise include facilitated experience curriculum, materials, supplies, and facilitator training guides. Teacher resources include lesson guides with links to state and national standards, lab journal writing prompts, and additional classroom activities. Our virtual labs additionally have videos to support remote facilitation, and we offer guides for our IMAX educational films. All tangible products will be made freely available to educators, with most resources published on our public-facing website. Updated marketing materials will likely result from this project as well.

Sustaining the Project's Benefits

The updates created during the grant period-- curriculum, marketing strategies, operational processes, and evaluation tools-- will be integrated into The Tech's field trips on an ongoing basis. We have a track record of making sustainable program changes based on community feedback, such as adding different types of facilitated experiences to meet educators' needs (see Organizational Profile for examples). This project will help us evaluate our programs, at a pivotal time coming out of the COVID-19 pandemic, to create a roadmap that we can use to better serve the community over the coming decade.

Beyond the one-time adjustments within the grant period, this project creates benefits that will inform our work moving forward-- a landscape needs assessment, improved evaluation tools and methodology, and the cultivation of a broader educator network. These will allow us to more rapidly recognize the changing needs of our audiences in the future, and apply our learnings and tools from this project to respond.

We have the institutional support to sustain the benefits of our project. In alignment with The Tech's 5-year and 20-year plans, our board of directors and senior leadership team have a long-term commitment to funding and staffing field trips for deep local engagement, expanding our evaluation practices for data-driven design, and increasing access to schools with the greatest barriers to participation. A grant from IMLS will help us invest in deep community listening during a critical period, giving us a foundation that we can build on to provide life-changing field trip experiences for years to come.

Schedule of Completion - The Tech Interactive

PRE-PROJECT: SEPT 2021- AUG 2022	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Meetings with district-level administrators												
Educator Advisory Board planning & recruitment												
Administer teacher surveys (with ongoing review)												
YEAR 1: SEPT 2022-AUG 2023	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Recruit educators for focus groups												
Revise teacher surveys with external evaluator												
Administer revised teacher surveys (with ongoing review)												
Meetings with district-level administrators												
PEAR Institute certification of MWA Insights staff												
Conduct field trip observations												
Host focus groups with educators/administrators												
Host kick-off Educator Advisory Board meeting												
Process and parse evaluation data												
Review evaluation recommendations												
Plan draft program updates based on recommendations												
Host Educator Advisory Board meetings for feedback												
Finalize plan for field trip updates												
Make updates to pilot in Year 2												
Train staff in each department on updates												
YEAR 2: SEPT 2023-AUG 2024	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Order supplies and equipment as needed												
Pilot and iterate on updates												
Train staff on ongoing updates												
Conduct focus groups on new pilots												
Conduct observations- formative evaluation												
Host Educator Advisory Board meetings for feedback												
Administer teacher surveys (with ongoing review)												
Revise program updates based on feedback for Year 3												
YEAR 3: SEPT 2024-AUG 2025	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Roll out updates more broadly												
Conduct observations- summative evaluation												
Administer teacher surveys (with ongoing review)												
Host Educator Advisory Board meetings												
Process & review final evaluation data												
Write case study article												

Schedule of Completion - The Tech Interactive

YEAR 3 (CONT'D): SEPT 2024-AUG 2025	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Publish article on Medium and start sharing widely												
Apply to present at AAM & ASTC conferences												
Prepare & present preliminary findings at AAM (if accepted)												
Apply to present at CASE conference												
POST PROJECT: SEPT-OCT 2025	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Prepare & present at ASTC; CASE conferences (if accepted)												