

Institute of Museum and Library Services Laura Bush 21st Century Librarian Program

Chicago Public Library's Librarians Lead Learning Project

The Chicago Public Library Foundation (CPLF) proposes a three-year, \$316,069 **Project Grant** to support the refinement, documentation and national dissemination of professional development for librarians focused on participatory learning in libraries. Chicago Public Library (CPL) and the Museum of Science and Industry (MSI) will lead the proposed **Librarians Lead Learning Project**, in the **Community Anchors** category, to build capacity among librarians to foster community-based, informal learning that supports school-aged patrons as they become critical thinkers and problem solvers using the strategies and habits of mind associated with science and engineering instruction. The **Librarians Lead Learning Project** falls into the **Continuing Education** project type.

About half of Americans say that their local public schools do not put enough emphasis on teaching science and math.¹ This results in low STEM academic achievement and few young people entering STEM careers. Low-income communities systemically suffer from limited access to essential infrastructure that supports STEM learning and opportunities to connect that learning to their everyday needs and challenges.² Only one out of five households takes advantage of STEM-related after-school programming.³ Yet, we know that out-of-school-time STEM learning can empower underrepresented youth by providing learning environments that address their needs through self-directed learning and individual discovery.⁴

By leveraging the accessibility of public libraries and community trust in librarians, CPL and MSI have developed a replicable approach to community-based learning that has shown positive outcomes for children, and empowered librarians to confidently deliver these learning supports for families. As a result, CPL has been approached by over 200 libraries seeking assistance in the design and delivery of participatory learning programs. While the CPL team has widely shared program design concepts and materials, they have been unable to share the most critical and necessary ingredient for delivering high quality learning experiences in libraries: *their hands-on approach to librarian professional development, built through deep collaboration with MSI*. The LLL Project proposes to create and disseminate a set of tools and resources libraries can use to build the capacity of their staffs to engage patrons in understanding the fundamental science behind the real-world issues important to them (e.g. the costs of heating homes and the health effects of pollution).

The LLL Project is relevant to the Community Anchors category because it will make the tools, processes, methodologies and mindsets associated with effective participatory learning accessible to librarians, enabling them to support patrons' lifelong learning and to encourage economic vitality through relevant programming and services. The proposed project brings together two of Chicago's premier institutions, Chicago Public Library and the Museum of Science and Industry, around a common goal. The project will build the capacity of library professionals to integrate participatory STEM learning into their existing programs, and to expand their skills for effectively engaging youth and families. Thus, participating librarians will be better positioned to serve the needs of their communities. Each of CPL's 80 branches serves as an anchor for its community, providing access to high quality information and civic, cultural and educational resources, while offering expanded learning opportunities for children and families that bridge formal learning with the real world. Through the strong relationships library staff have in local communities, they have become a conduit for bringing the resources of the Museum of Science and Industry into Chicago's neighborhoods and building a community-based presence for science.

An existing, foundational initiative -- the STEM-focused *Summer Learning Challenge*, recognized by the National Summer Learning Association with its inaugural Founder's Award for Excellence in Summer Learning for improving math and language arts outcomes for participating children -- will serve as a laboratory for the LLL Professional Development (PD) curriculum, which will then be refined through Chicago's 80 urban libraries and King County Library

¹ <http://www.nsf.gov/statistics/seind12/>

² Buxton, C. A. (2010). Social problem solving through science: An approach to critical, place-based, science teaching and learning. *Equity & Excellence in Education*, 43(1), 120-135

³ http://www.changetheequation.org/sites/default/files/CTEq_VitalSigns2011_National_0.pdf

⁴ <http://www.nsf.gov/statistics/seind14/content/etc/nsb1401.pdf>

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System's (KCLS) 48 suburban and rural libraries. This curriculum will help librarians facilitate participatory, age-appropriate STEM learning activities, as outlined in the Next Generation Science Standards, for preschoolers and school-aged learners. MSI will facilitate professional development with CPL and KCLS librarians in order to build their capacity to support ongoing PD. Other libraries will be able to adopt this PD curriculum to support participatory learning through free sharing of training materials, national conference presentations, nationally-available webinars and other kinds of peer knowledge sharing and best practices delivered by MSI and CPL.

The project team will design, test and deliver PD curricula and accompanying resources through multiple modes, to be made available through Public Library Association, Urban Libraries Council, National Summer Learning Association and other relevant sources of information for librarians. These modes include:

- Face-to-face facilitated sessions for librarians, delivered at libraries, conferences and with partner institutions;
- Written step-by-step guides for these sessions, made widely available for libraries to use;
- Webinars designed and offered through national library networks;
- Program implementation materials, including sample lesson videos, Activity and Facilitators' Guides, shared online and through relevant professional networks, like those mentioned above.

CPL will convene a National Advisory Group to guide this project over the life of the grant, with participation from recognized experts in the STEM, libraries and informal learning fields.

The overall goal of the LLL Project is to help public librarians develop the necessary skills to improve the quality of library-based learning. This will be achieved through:

- Training at least 280 professional library staff, representing 128 urban, suburban and rural libraries, in these participatory instructional methods. With their feedback, a final curricula will be optimized for quality and ease of use for broad and ongoing impact on the skills and confidence of librarians throughout the field.
- The design and wide dissemination of project deliverables, including curriculum guides, handbooks, and web-based materials through at least six presentations and workshops at national library conferences and meetings;
- Providing peer mentorships to help librarians beyond the initial cohort sustain and build upon these skills and tools after the term of this project has ended.

Ultimately, the librarians who receive this PD will serve as amplifiers by promoting and helping other librarians adopt the PD and related tools through professional networks. Regular evaluation through surveys and observation will provide iterative feedback on the development of program components. In order to assess the project's impact, CPL and MSI will measure library staff knowledge of and attitudes toward STEM participatory learning concepts, changes in library staff practice (integration of STEM activities, levels of implementation, etc.) as a result of the PD, and the use of the program materials. During the project, the project team will seek regular feedback from CPL and KCLS librarians on the quality and relevance of the PD and materials.

The proposed three-year \$316,069 project budget is allocated as follows: \$40,800 for **supplies and materials**, such as science learning kits for hands-on activities in libraries to support librarians' practice of their emerging skills with learners. \$46,500 for **other costs** that support CPL staff travel to King County and to national conferences to deliver and refine PD offerings, King County Library System staff travel to Chicago for PD, and two national Advisory Board member convenings, once at the beginning of the project and once at the end, to get input into project design and final deliverables. Finally, \$228,769 will cover **contract costs** to support MSI's work to develop and refine the PD curriculum and materials for librarians, including resources they will use to support learning activities for patrons. An annual cost of \$129,995 of CPL staff time (total of \$389,985 over three years) is included as **cost share**, through in-kind project support from CPL.