

What Are Makerspaces?

Makerspaces are part of a growing movement of immersive, hands-on spaces where people can tinker, invent, collaborate, experiment, create, and learn. Also known by other names, these spaces generally feature a diverse assortment of materials, supplies, tools, and technologies for people to use as they explore and create. The Institute of Museum and Library Services (IMLS) is pleased to support the first Capitol Hill Maker Faire on June 11, 2015.

Makerspaces in Museums and Libraries

As leaders in participatory learning, museums and libraries are ideal settings for community makerspaces. More and more institutions are leveraging their collections, networks, and staff resources for makerspaces. These spaces strengthen community-based learning, particularly for problem solving, creative thinking, innovation, collaboration, and engagement in STEM (Science, Technology, Engineering, and Math) and STEAM (Science, Technology, Art, Engineering, and Math).

IMLS Makerspace Support

Since 2011, IMLS has provided more than \$4 million in funding for library and museum makerspaces and maker-related projects. The investment not only includes support for a variety of learning spaces in libraries and museums, it also funds efforts to advance best practices for makerspaces and maker programming nationwide.

- With \$425,192, the **Children's Museum of Pittsburgh** and its library, university and other partners are creating a framework for effective makerspaces for learning in museums and libraries. An electronic publication highlighting the framework and additional online tools will be released in the fall of 2015 at www.makingandlearning.org. The tools, resources, and hands-on professional development experiences will help build a community of practice for library and museum practitioners everywhere.
- Through an Interagency Agreement with the U.S. Department of Education, IMLS is working with San Francisco's **Exploratorium** museum to pilot the pairing of museum maker experts with the staff of 21st Century Community Learning Centers to present STEM-

based after school tinkering activities in 25 sites in five states—California, Pennsylvania, New York, Texas, and Florida.

- With an award of \$499,411, the **University of Michigan School of Information** will develop a multi-step approach to cultivating maker culture in Michigan libraries in underserved communities. The school will share its findings in an online maker handbook and in a free virtual conference at the project’s conclusion.
- An award of \$499,046 is enabling the **Library Foundation of Los Angeles** to collaborate with Iridescent and Los Angeles Makerspace to provide STEAM training for 255 librarians and programming that will reach 9,560 children and adults. The project’s online platform will share the project curricula and resources with librarians nationwide.

- **The New York Hall of Science** received grants in 2011 and 2012 for a makers project and for planning a learning lab within its Cognizant Maker Space. The Queens Makes program, developed in partnership with the Queens Museum of Art, fosters invention, experimental problem solving, design, and building for young tinkerers and their families. It includes ongoing weekend programming targeting local Latino, Asian, and Caribbean communities, encouraging them to engage with the museum as a place to showcase their talents and passions. The learning lab grant enabled the museum to prototype a youth-centered, community engaged Digital Making program, where middle and high school youth could investigate and communicate STEM topics through digital media including sound, video, and games.

White House Maker Faire

In June 2014, at the first ever White House Maker Faire, President Obama issued a call to action that “every company, every college, every community, every citizen joins us as we lift up makers and builders and doers across the country. The Maker movement aligns with President Obama’s Educate to Innovate initiative and his call to “encourage young people to create and build and invent—to be makers of things, not just consumers of things.”

- The **Free Library of Philadelphia Foundation** received a 2014 grant of \$499,974 to create on-the-floor makerspaces in libraries in underserved neighborhoods in North Philadelphia. These spaces will help local residents of all ages to gain access to technology and participatory education, and encourage creative applications and collaborative projects. Mentors will guide multigenerational community members as they create electronic art projects, explore STEAM (Science, Technology, Engineering, Art, and Mathematics) subjects, and use tools to create artifacts that reflect their identities and communities. Through the experience of making, participants of all ages will have the opportunity to design meaningful digital and physical objects that capture the richness and diversity of their neighborhoods.
- With a 2013 grant, the **Center for Science & Industry (COSI)**, in partnership with the Columbus Idea Foundry and the Columbus Museum of Art, will increase staffing to focus on maker program development. The three partners will collaboratively develop and implement “maker” educational programs at STEM (Science, Technology, Engineering, and Math) high schools and within their own organizations that focus on building skills that embody the maker values of collaboration, risk-taking, creativity, and personalized learning.