

**Chicago STEM Pathways Cooperative
FY16 End of Year Report
(September 1, 2015 – August 31, 2016)**

Executive Summary

Chicago boasts a rich, diverse, and wide range of Science, Technology, Engineering, and Math (STEM) education opportunities for young people. These experiences are offered at schools, in summer and afterschool programs, at family engagement events, and online. The Chicago STEM Pathways Cooperative (STEM Co-op) emerged as an effort in 2011 to document the city's rich array of STEM learning opportunities and harness the unique contributions of these different settings to provide access for all students - particularly youth from communities traditionally underrepresented in the sciences.

Now, the STEM Co-op is working to create the **Chicago STEM Learning Ecosystem**. This initiative brings together cross-sector stakeholders, including Chicago Public Schools (CPS), nonprofit organizations, foundations, cultural and civic institutions, corporations and higher education institutions to consider how young people can develop STEM skills and knowledge as they progress from early childhood to college. The goal of this collective work is not to create new programming, but to develop an ecosystem of learning "pathways" that bridge existing and seemingly disjointed STEM opportunities and experiences across the city.

This report will provide a summary of the Co-op's activities since Fall 2015, when the STEM Co-op was formally selected for the inaugural cohort of STEM Learning Ecosystems, a nationwide initiative of the STEM Funders Network. Some of the highlights of the STEM Co-op's accomplishments include:

- Three citywide convenings to build momentum and develop a collective strategy for developing the Chicago's STEM learning ecosystem;
- Formalization of the Co-op's key infrastructure, including a core team and a cross-sector leadership board;
- The launch of working groups to shepherd key priority areas, including professional development, evaluation, and a funders' council;
- Mapping of Chicago's STEM learning landscape by gathering and analyzing citywide data about existing opportunities and;
- Identifying and working in partnership with two neighborhoods to develop a strategy for enhancing localized STEM learning pathways.

Over the next year, the STEM Co-op will continue to lead the development of a STEM learning ecosystem by enhancing existing work and embarking on new work that will focus on the following:

- Continue to convene cross-sector stakeholders to increase communication and collaboration.
- Increase visibility and raise the profile of existing STEM work.
- Raise funds to develop the STEM ecosystem infrastructure and support the general work of the cooperative.
- Host a retreat with the Leadership Team and key stakeholders to formalize a strategic plan as well as begin to look at the development of an Advisory Team.
- Re-administer the *STEM Landscape Survey* and develop an online tool that will begin to visualize data in real time.
- Begin a multi-year project of developing *Demonstration Communities*. These micro-ecosystems of STEM learning at the local level will focus on specific neighborhoods, and will exemplify how local stakeholders and community-based organizations can work collaboratively to broaden access to high-quality STEM learning.
- Explore themes that have emerged from various meetings to begin respond to the key questions:
 - What can a Chicago STEM Learning Ecosystem do for local organizations - both big institutions and community-based?
 - What can a Chicago STEM Learning Ecosystem do for local STEM professionals, ranging from executive directors to front-line facilitators?
 - What can a Chicago STEM Learning Ecosystem do for students, particularly youth from communities traditionally underrepresented in the sciences and/or with limited access to high quality STEM experiences?

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History and Leadership

In 2011, the Chicago STEM Pathways Cooperative, led by Project Exploration, was formed with support from the Noyce Foundation and the Chicago Foundation for Women as a year-long, community-based effort to survey out-of-school (OST) time programs and consider the ways in which education institutions, businesses and city services could cooperate to build and support equitable and accessible pathways into STEM for Chicago's young people. This project had three goals:

1. Gather and analyze data about Chicago's STEM opportunities in out-of-school time by distributing a citywide survey.
2. Bring stakeholders together to discuss what is most important when it comes to creating and supporting youth pathways into STEM.
3. Develop a set of recommendations and an action plan that would enable diverse young people to get, and stay involved with STEM experiences from kindergarten through college.

The findings from the year-long *STEM Landscape Survey* were presented at a conference in December 2012, attended by nearly 200 national and local leaders in STEM learning. Among the key findings, the data showed:

- More than 2,032 STEM OST programs were run by more than 500 organizations in 2011, serving an estimated 88,576 students.
- The greatest number of programs were in middle schools (42%), followed by elementary school-age students (34%) and high school students (24%).
- Programs were generally available throughout most, but not all, Chicago neighborhoods.
- Programs served more girls than boys (56.2% and 43.8%, respectively).
- Latinos were underrepresented in programs compared to their representation in Chicago Public Schools—28% of participants vs. 44% of CPS population.
- Programs were most likely to target low-income students (91.6%) and students with existing interest in STEM (63.3%)

Between 2012 and 2014, the work of the STEM Co-op was dedicated to sharing the data and findings with key stakeholders in the STEM OST landscape, including funders and the Office of the Mayor, to build momentum for greater coordination in serving all of Chicago's youth with quality STEM programming. During this time the STEM Co-op also looked at existing work that was being done across the City to determine if there were any synergies and ways this work could be connected. Reports from the 2012 conference, as well as stakeholder meetings can be found on the Chicago STEM Pathways website (www.chicagoSTEMpathways.org).

In 2015, the STEM Co-op was selected for the nationwide inaugural cohort of STEM Learning Ecosystems, an initiative designed and supported by the STEM Funders Network to enhance cross-sector partnerships to leverage and connect existing STEM-rich learning environments. In addition to providing seed funding for the development of the Chicago STEM Learning Ecosystem, the initiative provides expert technical assistance individualized to our local needs.

The work of the STEM Co-op is shepherded by Project Exploration, a community-based nonprofit organization dedicated to providing free quality STEM OST programming for Chicago public middle and high school youth - particularly girls and minorities. Having been founded in 1999, Project Exploration is well rooted in delivering STEM programs to students and communities that are underserved and the STEM Co-op work aligns fully our vision to provide access, equity and opportunity for all students to engage in high quality STEM programming. In addition, Project Exploration is a partnership based organization which leverages the various cross-sector partners needed to develop a robust STEM Learning Ecosystem. The STEM Co-op's membership into the STEM Learning Ecosystem initiative and grant-writing endeavors are steered by Project Exploration and a core team dedicated to this work, with guidance from a cross-sector Leadership Team representing members and stakeholders of Chicago's STEM learning ecosystem. (see page 11 for members)

STEM Learning Ecosystems Background

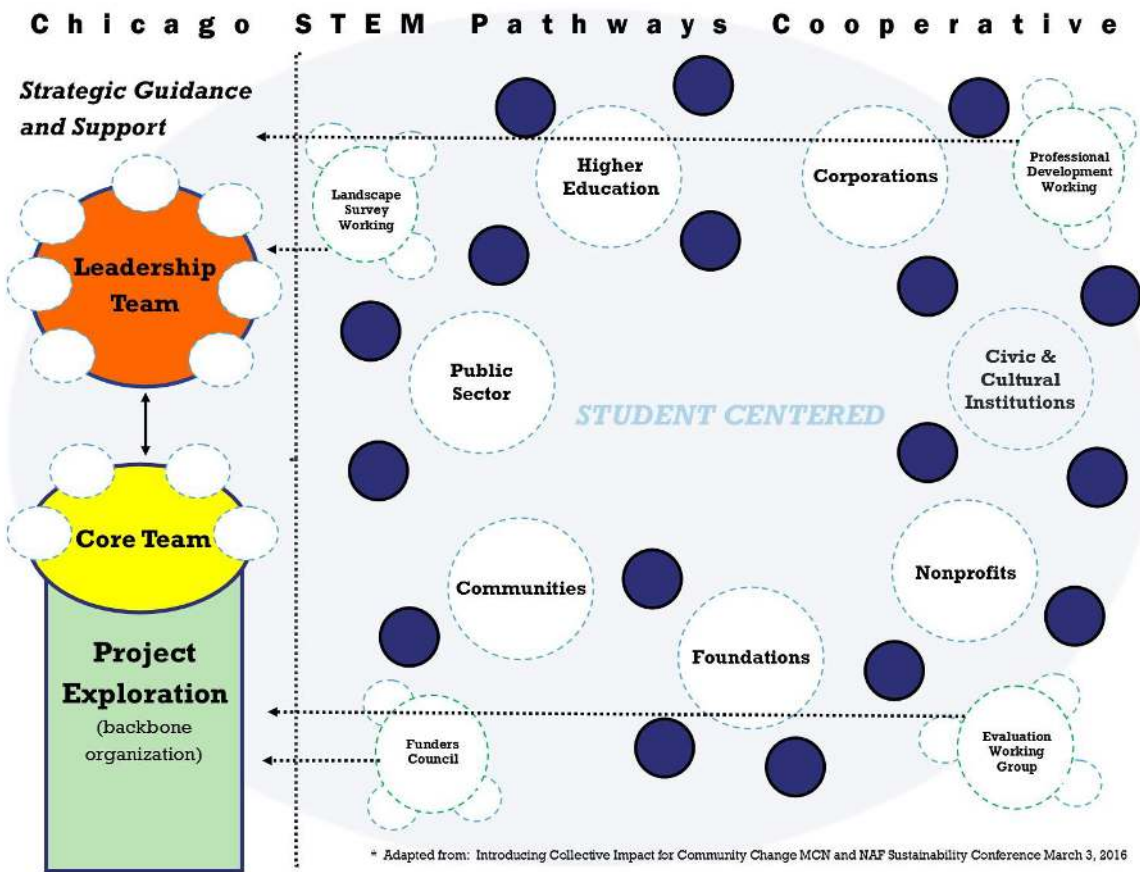
At STEM Learning Ecosystem encompasses schools, community settings such as after-school and summer programs, science centers and museums, and informal experiences at home and in a variety of environments that together constitute a rich array of learning opportunities for young people. A learning ecosystem harnesses the unique contributions of all these different settings in symbiosis to deliver STEM learning for all children. Designed pathways enable young people to become engaged, knowledgeable and skilled in the STEM disciplines as they progress through childhood into adolescence and early adulthood. For more information, visit: <http://stemecosystems.org/>.

A map of the United States showing the locations of 20 data centers. The map includes state names and major cities. Red pins are located in Washington, Oregon, California (San Francisco, Los Angeles, San Diego), Nevada, Utah, Arizona, New Mexico, Colorado, Nebraska, Kansas, Missouri, Texas (Dallas, Houston), Oklahoma, Louisiana, Mississippi, Alabama, Georgia, Florida, Michigan, Illinois, Indiana, Ohio, Pennsylvania, New York, New Jersey, Delaware, Maryland, Virginia, North Carolina, and South Carolina. Blue pins are located in Montana, Wyoming, North Dakota, South Dakota, Minnesota, Iowa, Wisconsin, Illinois, Indiana, Ohio, Pennsylvania, New York, New Jersey, Delaware, Maryland, Virginia, North Carolina, and South Carolina. The map also shows the Gulf of California and the Gulf of Mexico.

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Chicago STEM Pathways Cooperative Visualization



Chicago STEM Pathways Cooperative Stakeholder Key

Stakeholder / Group	Description of Role
	Sector Stakeholders: Individual organizations and members of the community (e.g., nonprofit, funder, corporate, public sector, foundations, civic & cultural institutions, communities and high education institutions).
	Sectors: The STEM Co-op works to engage partners across all sectors in working group and, the Leadership and Core Team
	Working Groups: Comprised of cross-sector partners targeting particular areas. Will design a targeted action plan, involving non-work group members as needed.
	Leadership Team: Comprised of cross-sector partners (representative of the large ecosystem), they provide strategic direction for the initiative and champions the work, some members are chairs for working groups.
	Core Team: Comprised of cross-sector partners and STEM Co-op specific team members. Oversees day to day activity of the STEM Co-op, team members are co-chairs for working groups.
	Backbone Organization: Provides dedicated staff, supports the work of partners by assisting with strategic guidance, supporting aligned activity, establishing shared measurement, building public will, advancing policy, and mobilizing funding.

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Activities of the STEM Co-op

Over the past year, the Co-op has regularly convened the following stakeholders to discuss the opportunities and challenges of developing a STEM learning ecosystem in Chicago:

- Funders and Supporters - Chicago's leading funders of STEM education, including private foundations, corporate partners, the Office of the Mayor, and Chicago's largest OST network, After School Matters.
- Providers - Community-based organizations, OST networks, higher education, CPS, civic and cultural institutions, and other direct providers of STEM learning experiences for Chicago's youth.

These gatherings support consensus-building towards a common agenda, build public will, and harness the resources and intellectual capital available across the city to improve STEM learning for youth and families.

In addition to these convenings, the Co-op has identified and embarked on three areas of work to strategically coordinate STEM learning for Chicago's youth:

1. Launch cross-sector working groups in three key areas that impact STEM education - professional development; evaluation and metrics; and funding.
2. Re-administer the *STEM Landscape Survey* to compare to the original 2011 data, determine current gaps, and new opportunities while adding key questions around quality and computer science.
3. Identify and develop a strategy for two *Demonstration Communities* as micro-ecosystem models for K-12 STEM learning.

The activities of the STEM Co-op in supporting the development of Chicago's STEM learning ecosystem are guided by three big questions:

- What can a Chicago STEM Learning Ecosystem do for local organizations - both big institutions and community-based?
- What can a Chicago STEM Learning Ecosystem do for local STEM professionals, ranging from executive directors to front-line facilitators?
- What can a Chicago STEM Learning Ecosystem do for students, particularly youth from communities traditionally underrepresented in the sciences and/or with limited access to high quality STEM experiences?

Below we provide a summary of our activities since the formal launch of the STEM Funders Network's national development of STEM ecosystems in which the STEM Co-op became an inaugural member the fall of 2015.

Convenings and Meetings

Funders and Supporters Meeting:

On February 10, 2016, Motorola Solutions Foundation, as the local Chicago corporation, spearheaded a STEM Co-op Funders and Supporters meeting to discuss the development and sustainability of a Chicago STEM Learning Ecosystem. The meeting with 52 participants included local funders and key stakeholders from the STEM Funders Network and The Teaching Institute for Excellence in STEM education (TIES). TIES a national leader in STEM School design, STEM curriculum, and STEM instructional support to schools is a key partner with the STEM Funders Network in leading the development of STEM ecosystems and provide technical assistance to participating cities. The meeting provided background, context and an overview of STEM ecosystems across the country. The STEM Co-op shared its business plan, detailing the need to raise \$220,000 for three years to develop the STEM learning ecosystem infrastructure.

Providers Meeting:

On March 11, 2016 the STEM Co-op hosted a providers meeting for 50 participants at Forefront. This gathering began to lay the groundwork for the Chicago STEM learning ecosystem by providing a recap of the supporters and funders meeting which included sharing the business plan and logic model, it shared the process in which TIES

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would provide technical assistance and it took the opportunity to use a prototyping activity to begin help participants envision an effective STEM Learning Ecosystem.

Chicago STEM Pathways Cooperative Convening:

On April 28, 2016 the STEM Co-op hosted an all member, cross-sector convening at the Peggy Notebaert Nature Museum. This meeting with 72 attendees introduced the key priorities for the STEM Co-op and launched a number of working groups focused on specific priority areas, including professional development and evaluation. The goal of the convening was to provide an understanding of each of the key priorities, begin to workshop around specific priorities and have members choose what area of work most interested and suited their participation. The key priorities are as follows:

- Communication – Development a structured process to effectively and regularly communicate objectives, goals and progress of the STEM Co-op with appropriate audiences.
- Outreach – Engagement of key stakeholder to ensure cross-sector participation is broad and includes local community voice.
- Professional Development – Development of a strategy to inform, equip and prepare all educators to lead highly effective and engaging STEM opportunities through existing opportunities.
- Evaluation and Common Metrics – Building a common outcome framework to measure success for student engagement, progression and skill development.
- Landscape Survey Refresh – Re-administration of the 2012 *STEM Landscape Survey* to provide a comparative analysis of state of STEM from 2012 to present, as well as identify additional data to collect.
- Demonstration Communities - Development a strategy with Chicago Public Schools, Community Schools, local and key stakeholders to create a framework around competency-based learning and progression to demonstrate skill acquisition during OST to count towards school day within specific communities as a pilot approach.

After this meeting working groups were asked to convene in May 2016 to expand what had been gleaned at this convening.

Working Group Meetings:

During the month of May 2016, the STEM Co-op facilitated working group meetings to expand what had been gleaned and discussed at the April convening.

The Professional Development working group is led by Beth Crownover, Director of Learning at the [Field Museum](#), and David Bild, Coordinator of Teen and Young Adult Programs at the [Peggy Notebaert Nature Museum](#). The working group has gathered twice to discuss and map the kinds of professional development opportunities available to different audiences, such as in-school teachers, out-of-school time educators, family, and administrators. Some of the take-aways from the activity and discussion include:

- It is not clear what professional development is available (and being utilized) online.
- Based on the data collected at the sessions, most professional development opportunities are targeted to in-school teachers.
- Professional development to engage family and parents - who often serve as first educators to their children - seems to be lacking.
- Networks, such as [Hive](#), serve as professional development supports for OST educators.
- A strategy to communicate the available offerings across the Chicago STEM learning ecosystem is lacking.

The Landscape Refresh working group is led by Stephanie Levi, PhD, STEM Co-op Consultant along with Jennifer Schwarz Ballard, Ph.D., VP of Education and Community programs for the Chicago Botanic Garden and Tony Streit, Senior Project Director for EDC. This working group began planning the 2016 survey of Chicago's STEM out-of-school time (OST) landscape. The work of the day was three-fold:

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1. Determine what questions are not currently included in the 2012 survey that the Landscape Refresh Working Group like to see included
2. Formulate questions to ask of funders for a funder survey
3. Determine which networks and organizations will help the Landscape Refresh Working Group disseminate the survey

The group engaged in interactive activities to consider questions that would provide the most meaningful questions to append to the 2012 STEM OST survey document, narrowing the options down to yield data to support ecosystem-wide learning about the nuances of Chicago's STEM OST landscape. Additionally, working group members assembled a survey to be disseminated to STEM funders in Chicago in order to produce data on STEM OST funding patterns. The anticipated result will be comprehensive perspective on STEM programs and the funding activities that support them, to better understand what's working well and current unmet needs in Chicago.

Chicago Public Schools gathered at Benito Juarez High School to begin discussing the role of the STEM Co-op and the newly approved competency-based learning bill for the State of Illinois. In addition, principal Juan Carlos Ocon presented the work that had been done at Juarez that was in line with the newly passed bill. Finally, a meeting with Digital Youth Network was held to understand their microsystem work at Dyett High School and how it could support the Demonstration Community project.

Chicago STEM Pathways Cooperative Design Studio:

On June 23, 2016 the STEM Co-op invited all cross-sector members to a Design Studio, held at After School Matters with support from the Boeing Foundation, Motorola Solutions Foundation, Exelon, and IBM. The gathering had 85 attendees and provided an opportunity to highlight and raise awareness of local STEM work and programming, as well as offer a glimpse into the work of other cities' ecosystems. Below, we offer a recap of the June 23rd Design Studio and a list of participants.

Amy Pratt, Interim Director of the Office of STEM Education Partnerships at Northwestern University and Technical Assistant for Chicago's STEM learning ecosystem, provided a snapshot of STEM learning ecosystems around the country. Dr. Pratt emphasized that Chicago is relatively far along in its STEM learning ecosystem development - a perspective she has gained from working with a variety of other cities as they cultivate their ecosystems.

A number of organizations shared highlights of their work, showcasing the diversity of Chicago's ecosystem:

- Benito Juarez Community Academy in Chicago's Pilsen neighborhood. - Under the leadership of principal Juan Carlos Ocon, the school's competency-based learning curriculum and approach has resulted in dramatic student improvements.
- Office of College and Career Success at Chicago Public Schools - Alan Mather's office runs a number of STEM initiatives including the Biotechnology Center for Excellence, CPS' STEM Schools, and the Computer Science 4 All (CS4All) initiatives.
- Digital Youth Network - Sybil Madison-Boyd shared reflections on the digital badge initiative, Chicago City of Learning.
- Year Up Chicago - Katy Githens and Kristina Cerney of Year Up Chicago discussed their incredible work to support young adults as they move into the workforce
- Austin Community Manufacturing Renaissance - Erica Swinney detailed their standout work to provide young people with new STEM career pathways into the manufacturing industry, which has a demand for STEM-ready employees

Participants were asked to reflect upon and discuss our guiding questions:

- What can a Chicago STEM Learning Ecosystem do for your organization?
- What can a Chicago STEM Learning Ecosystem do for you as a STEM professional?
- What can a Chicago STEM Learning Ecosystem do for students?

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Emergent Themes:

Increase Coordination Among STEM Education

- Enable them to define, as an ecosystem in Chicago, college alternatives for youth who may not want to pursue college, including certifications and vocational education.
- More broadly, enable organizations to define and crystallize better STEM options for individuals aged 18-25, rather than just focusing on K-12.
- Cross-refer participants among programs, and offer referral tools that work throughout the city.
- Enable organizations to learn about programs that can fill service gaps, and pursue a referral. For example, if a program does not offer college readiness support, are their programs that do, and could that organization fill the participants' needs?
- Connect with schools and teachers, who can be powerful advocates for STEM learning with youth and families.

Increase Resources to Provide Quality STEM Education

- Engage funders in a way that supports coordinated funding so that more organizations have support and can offer high quality learning opportunities that reach the most youth and families.
- Leverage publicly available data to enable organizations to tell their story and better secure funding.

Evaluation and Data Tracking

- Create a common language around quality, youth engagement, STEM, programming, and measurement.
- Track participants among programs as they pursue programs at varied organizations throughout the ecosystem
- Leverage publicly available data to enable organizations to tell their story and better secure funding.
- Provide very low-cost or free professional development to support organizations in learning how to work with data.
- Learn about evaluation methods employed by other organizations, and adopt methods as appropriate.
- Enable stakeholders to build a library of promising practices for STEM learning ecosystems development that can be shared in the city and beyond.
- Use "case studies" of organizations that serve as promising practices, and highlight the nature of their connections as examples of ecosystem-level dynamics.
- Connect with schools and teachers, who can be powerful advocates for STEM learning with youth and families.

Support the Work of STEM Education Professionals

- Create new connections and partnerships.
- Take stakeholders out of isolation - being part of the ecosystem has connected stakeholders to those "to whom we should have connected a while ago".
- Participants noted that their work with students often occurs during a specific segment of those students' lives (e.g. middle school, high school). Being connected to others allows them to "plug into the lifespan of the learner".
- Participants looked forward to sharing what is working, as well as what hasn't worked.
- The ecosystem can enable STEM professionals to expand their learning base, by having a city-wide community that specifically focuses on professional development issues.
- There is quite a lot of research on the OST sector that could be shared with the network as a learning opportunity for all.

Support the Work of Organizations/Institutions

- Practically, smaller organizations are looking to recruit more students and run evaluations.
- The ecosystem could be a way to help organizations with these two things, strengthening everyone's work.

Support Serving Students

- Enable STEM educators to better understand the lifespan of the learner in STEM.
- Enable youth and families to better learn about STEM opportunities.
- Enable programs to better coordinate logistics, such as transportation, for STEM learning opportunities.
- Engage and leverage youth and family voice in the STEM learning ecosystem.
- Create a structure that includes youth in planning of educational opportunities and meetings.
- Inform policies that affect youth and family education.
- Leverage educators to help youth connect with programs.
- Create a clearinghouse for programs, accessible to all.

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Leadership Team Meeting

To date, the Leadership Team has convened 3 times, providing strategic guidance and feedback on the Co-op's work. The most recent meeting on August 29, 2016 at Motorola Solutions Foundation centered on discussing upcoming activities including an all-member convening and the administration of the *STEM Landscape Survey*.

Looking A Year Ahead

Over the next year, the STEM Co-op will continue to lead the development of a STEM learning ecosystem by enhancing existing work and embarking on new work that will focus on the following:

- Convene cross-sector stakeholders to increase communication and collaboration. The STEM Co-op is actively ensuring that there is representation, diversity, and inclusion of all types of STEM learning providers for our city's youth. This also includes identifying key partners within Demonstration Communities to use an asset based approach to building micro ecosystems with the Austin and Pilsen communities.
- Increase visibility and raise the profile of existing STEM work. The STEM Co-op has launched a website: www.chicagoSTEMpathways.org, which will feature a blog, updates about the STEM Co-op's work, agendas from meetings, reports on convenings, and profiles of local collaborations of STEM learning.
- Raise funds to develop the STEM ecosystem infrastructure and support the general work of the cooperative. To date, Motorola Solutions Foundation, Boeing Foundation, Exelon and IBM have committed support to the STEM Co-op for leading the STEM ecosystem work, building upon the seed funding from the STEM Funders Network.
- Work with IBM to host a 1-2-day long retreat with the Leadership Team and key stakeholders to formalize a strategic plan as well as begin to look at the development of an Advisory Team.

In addition, the STEM Co-op is embarking on two major areas of work over the next year. The first is to re-administer the *STEM Landscape Survey* in Fall 2016. Originally conducted in 2012, the STEM Landscape Survey was a year-long study to gather and analyze data about Chicago's STEM OST opportunities for high school youth. The data revealed a number of trends, which are detailed here ([add link](#)). Results from the new survey will be used to determine current gaps and opportunities in Chicago. A new *Funder Survey* will help us understand and map STEM funder patterns in Chicago. These data will be used to further hone our common agenda and enable Chicago's STEM learning ecosystem to identify and address needs within specific neighborhoods.

Working with IBM, the STEM Co-op will develop an online tool that will begin to visualize data from the Landscape Survey, both 2012 and current data. The goal will be to develop a system to capture real time data, an ability to present opportunities, gaps and resources to a variety of audiences and continue to have data at the forefront of planning.

The second key area of work is to begin a multi-year project of developing *Demonstration Communities*. These micro-ecosystems of STEM learning at the local level will focus on specific neighborhoods, and will exemplify how local stakeholders and community-based organizations can work collaboratively to broaden access to high-quality STEM learning. The goal is not to create new programming in these communities, but to connect existing activities and neighborhood assets as they relate to STEM learning. This multi-year project will include data collection and asset mapping of the existing STEM learning infrastructure, community meetings with neighborhood stakeholders (including parents and youth), and supporting concrete collaborations between local partners. The first two *Demonstration Communities* will be Austin and Pilsen; the CPS high schools in these communities will serve as the anchoring sites for building STEM learning pathways for youth, K-12.

To support the work in the *Demonstration Communities*, the STEM Co-op submitted a proposal to the National Science Foundation 2016 INCLUDES solicitation. Although it was not selected for funding, we are committed to moving forward with the *Demonstration Communities*; over the next year, the STEM Co-op will begin the process of mapping community assets and convening neighborhood meetings with local residents, community-based organizations, private businesses, and educational institutions. Two AmeriCorps STEM VISTA (Volunteers in Service to America) members, based at Project Exploration, will support this work with the *Demonstration Communities* for one year. For more information, contact us at nwalker@projectexploration.org.

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Core Team

Jameela Jafri
Chicago STEM Pathways Cooperative Consultant

Liz Lehman, Ph.D., Associate Director, Science Companion Projects
UChicago STEM Education

Stephanie Levi, Ph.D.
Chicago STEM Pathways Cooperative Consultant

Amy Pratt, Ph.D., Associate Director
Office of STEM Education Partnerships (OSEP), Northwestern University

Natasha Smith-Walker, Executive Director
Project Exploration

Sirisha Yadlapti, Senior Program Director
Motorola Solutions Foundation

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Leadership Team

Adrienne Scherenzel-Curry, Chief Program Officer
After School Matters

Dr. Jennifer Schwarz-Ballard, Vice President of Education and Community Programs
Chicago Botanic Garden

David Bild, Coordinator of Teen and Young Adult Programs
Peggy Notebaert Nature Museum

Sybil Madison-Boyd, Learning Pathways Program Director
Digital Youth Network, DePaul University College of Computing and Digital Media

Meridith Bruozas, Manager, Educational Programs and Outreach
Argonne National Laboratory

Beth Crownover, Director of Learning
Field Museum

Kassie Davis, Executive Director
CME Group Foundation

Dean Grosshandler, Research Assistant Professor, STEM Education
Department of Chemistry, University of Illinois at Chicago

Jameela Jafri
Chicago STEM Pathways Cooperative Consultant

Liz Lehman, PhD, Associate Director, Science Companion Projects
UChicago STEM Education

Stephanie Levi, Ph.D.
Chicago STEM Pathways Cooperative Consultant

Alan Mather, Chief Officer
Office of College and Career Success, Chicago Public Schools

Amy Pratt, Ph.D., Associate Director
Office of STEM Education Partnerships (OSEP), Northwestern University

Tony Streit, Senior Project Director
EDC

Natasha Smith-Walker, Executive Director
Project Exploration

Sirisha Yadlapti, Senior Program Director
Motorola Solutions Foundation

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Chicago STEM Pathways Cooperative Participants

Civic & Cultural Institutions

First Name	Last Name	Organization
Kelly	Borden	Adler Planetarium
Nathalie	Rayter	Adler Planetarium
Amaris	Alanis Ribeiro	Chicago Botanic Garden
Jennifer	Schwarz Ballard	Chicago Botanic Garden
Elizabeth	Crownover	Field Museum
Dana	Murphy	Lincoln Park Zoo
Stacy	Rosenbaum	Lincoln Park Zoo
Leslie	Sadowski-Fugitt	Lincoln Park Zoo
Sarah	Anderson	Peggy Notebaert Nature Museum
David	Bild	Peggy Notebaert Nature Museum
Michelle	Rabkin	Peggy Notebaert Nature Museum
Samantha	Norton	Shedd Aquarium

Corporations

First Name	Last Name	Organization
Angela	Whitfield	AGL Resources
Beth	Spurgeon	ArcelorMittal
Marcy	Twete	ArcelorMittal
Meridith	Bruozas	Argonne National Laboratory
Jerry	Rocco	Cisco
Steven	Shaw	Civic Consulting Alliance
Steven	Solomon	Exelon Corporation
Susan	Dahl	Fermilab
Alicia	Koch	Groupon
Cassandra	Black	Groupon
Matt	Kruse	Groupon
Tamelia	Johnson	Groupon
Charlotte	Johnson	IBM Corporation
Mary	Haupt	Integrus Group
Cheryl	Lamm	McMaster-Carr
Allyson	Knox	Microsoft
Raamel	Mitchell	Microsoft
Shelley	Stern Grach	Microsoft
Laura	Kingsbury	Mission Measurement Corporation
Sirisha	Yadlapati	Motorola Solutions Foundation
Mary	Ashe	Motorola Solutions, Inc.
Christa	Markgraff	Nicor Gas
Margi	Schiemann	Peoples Gas and North Shore Gas Corporate Contributions

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Charley	Cohen	Siemens
Bernice	Billups	The Boeing Company
Michael	Cassel	The Boeing Company
Deepa	Shankar	UL Laboratories
Higher Education		
Marcelo	Caplan	Columbia College Chicago, Department of Science and Mathematics, Scientists for Tomorrow
Tamara	Kaldor	Erikson Institute
Annie	Senior	Illinois Institute of Technology, Global Leaders Program
Yoojin	Choi	North Park University
Heather	Patay	Northeastern Illinois University
Brittany	Pines	Northeastern Illinois University
Steve	Bonomo	Northeastern Illinois University, Center for College Access and Success
Aaron	Cortes	Northeastern Illinois University, Center for College Access and Success
Roxana	Hadad	Northeastern Illinois University, Center for College Access and Success
Meghan	Hausman	Northeastern Illinois University, Center for College Access and Success
Paloma	Vargas	Northeastern Illinois University, Center for College Access and Success
Amy	Pratt	Northwestern University, Office of STEM Education Programs
Lannon	Broughton	University of Chicago
Jeanne	Di Domenico	University of Chicago
Michael	Lach	University of Chicago
Shaz	Rasul	University of Chicago
Lisa	Rosen	University of Chicago Science & Learning Center
Liz	Lehman	University of Chicago, UChicago STEM Education
Dean	Grosshandler	University of Illinois at Chicago
Nonprofits		
First Name	Last Name	Organization
Shallie	Pittman	ACT Now
Susan	Stanton	ACT Now
Tammera L.	Holmes	AeroStar Consulting Corporation

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Carolyn	Broughton	After School Matters
Mark	Jamrozek	After School Matters
Melissa	Mister	After School Matters
Marlil	Razo	After School Matters
Elsa	Rodriguez	After School Matters
Maranielly	Vazquez	After School Matters
Jackie	Moore	Agape Werks
Darnell	Shields	Austin Coming Together
David	Mills	Boys and Girls Clubs of Chicago
Gina	Grant	Chicago Architecture Foundation
Jennifer	Groot	Chicago Architecture Foundation
Chris	Eppig	Chicago Council on Science and Technology
Kenneth	Hill	Chicago Pre-College Science and Engineering Program (ChiS&E)
Aisha	Bell	Communities In Schools Chicago
Robin	Koelsch	Communities In Schools Chicago
Celia	Lozano	Communities In Schools Chicago
Sybil	Madison-Boyd	Digital Youth Network
Tony	Streit	Education Development Center, Inc.
Robert (Bob)	Johnson	Engineering Week/SEAOI/Future City
Lisa	Simpson	Forefront
Eve	Tulbert	Freedom Games
Deborah	Hodges	Golden Square
Abby	Sabri	Green City Market
Lee	Hart	High Jump
Edie	Dobrez	Homewood Science Center
Allie	Barwise	Illinois Science and Technology Coalition
Kate	Maskel	Kids Science Labs
Vidhya	Sivakumaran	Kids Science Labs
Julie	Henderson	Lumity
Tashiara	Little	Lumity
Erica	Swinney	Manufacturing Renaissance
Kiara	Byrd	Project Exploration
Jaclyn	Carmichael	Project Exploration
Judy	Lubin	Project Exploration
Natasha	Smith-Walker	Project Exploration
Jameela	Jafri	Project Exploration, Chicago STEM Pathways Cooperative

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Stephanie	Levi	Project Exploration, Chicago STEM Pathways Cooperative
Jason	Coleman	Project Syncere
Julie	Stolzer	STEM Funders Network
Kate	Warach	Thrive Chicago
Pamela	Sherley	Tolton STREAM Academy
Daniel	Bassil	Tutor Mentor Connection
Kristina	Cerney	Year Up Chicago
Katy	Githens	Year Up Chicago

Private Foundation

First Name	Last Name	Organization
Christy	Uchida	Brinson Foundation
Lora	York	Chicago Foundation for Women
Lora	York	Chicago Foundation for Women
Sydney	Sidwell	Lloyd A. Fry Foundation
Jenny	Shanks	The Siragusa Foundation
Sharmila	Thakkar	The Siragusa Foundation
Gerald	Solomon	Samueli Foundation

Public Sector

First Name	Last Name	Organization
Dani	Lubin	A Better Chicago
Jeremy	Dunn	Chicago Public Library
Daniel	Tamayo	Chicago Public Library
Kate	Nardin	Chicago Public Library Foundation
Kelli	Easterly	Chicago Public Schools
Rukiya Curvey	Johnson	Chicago Public Schools
Bernadette	Limos	Chicago Public Schools
Alan	Mather	Chicago Public Schools
Allison	Parker	Chicago Public Schools
Mike	Davis	City Colleges of Chicago
Kyle	Westbrook	Mayor's Office City of Chicago
Shelley	Davis	Forest Preserve Foundation
Ann	Vogel	iBIO Institute EDUCATE Center
Gwen	Seeley-Joose	Illinois Math and Science Academy (IMSA)
Clare	Butterfield	Illinois Science and Energy Innovation Foundation
Monica	Metzler	Illinois Science Council
Rafael	Rosa	Student Conservation Association

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Chicago STEM Pathways Cooperative Sector Participants
Civic & Cultural Institutions

Adler Planetarium
Chicago Botanic Garden
Field Museum
Lincoln Park Zoo
Peggy Notebaert Nature Museum
Shedd Aquarium

Corporations

AGL Resources
ArcelorMittal
Argonne National Laboratory
Cisco
Civic Consulting Alliance
Exelon Corporation
Fermilab
Groupon
IBM Corporation
Integrus Group
McMaster-Carr
Microsoft
Mission Measurement Corporation
Motorola Solutions Foundation
Nicor Gas
Peoples Gas and North Shore Gas Corporate Contributions
Siemens
The Boeing Company
UL Laboratories

Higher Education

Columbia College Chicago, Department of Science and Mathematics, Scientists for Tomorrow
Erikson Institute
Illinois Institute of Technology, Global Leaders Program
North Park University
Northeastern Illinois University
Northeastern Illinois University, Center for College Access and Success
Northwestern University, Office of STEM Education Programs
University of Chicago
University of Chicago Science & Learning Center

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University of Chicago, UChicago STEM Education
University of Illinois at Chicago

Nonprofit

ACT Now
AeroStar Consulting Corporation
After School Matters
Agape Werks
Austin Coming Together
Boys and Girls Clubs of Chicago
Chicago Architecture Foundation
Chicago Council on Science and Technology
Chicago Pre-College Science and Engineering Program (ChiS&E)
Chicago STEM Pathways Coop
Communities In Schools Chicago
Digital Youth Network
Education Development Center, Inc.
Engineering Week/SEAOI/Future City
Forefront
Freedom Games
Golden Square
Green City Market
High Jump
Homewood Science Center
Illinois Science and Technology Coalition
Kids Science Labs
Lumity
Manufacturing Renaissance
Project Exploration
Project Exploration, Chicago STEM Pathways Cooperative
Project Syncere
STEM Funders Network
Thrive Chicago
Tolton STREAM Academy
Tutor Mentor Connection
Year Up Chicago

Private Foundations

Albert Pick, Jr. Fund
Brinson Foundation
Chicago Community Trust
Chicago Foundation for Education
Chicago Foundation for Women

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Driskill Foundation

Gorter Family Foundation

Hive Chicago

Lloyd A. Fry Foundation

Steans Family Foundation

The Siragusa Foundation

Public Sector

A Better Chicago

Chicago Public Library

Chicago Public Library Foundation

Chicago Public Schools

City Colleges of Chicago

City of Chicago

Forest Preserve Foundation

iBIO Institute EDUCATE Center

Illinois Math and Science Academy (IMSA)

Illinois Science and Energy Innovation Foundation

Illinois Science Council

Student Conservation Association