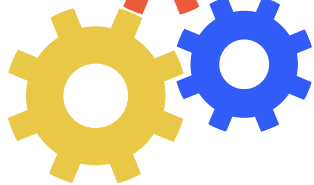
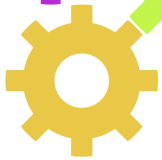
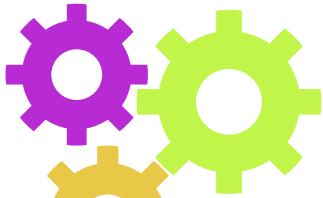
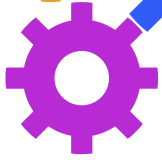
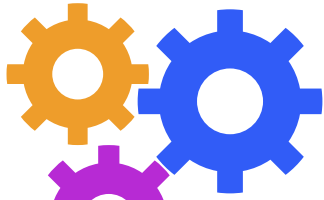


STEM Learning Ecosystems Community of Practice

2020-2021 Report



Photo courtesy of Chicago
STEM Pathways Cooperative



Special Thanks

It is with immense gratitude and our greatest appreciation to acknowledge the funders that make this work possible. Without you, Ecosystems' ability to transform their communities and create opportunities for all young people would not be possible.

Founding Funders



Legacy Supporters



2020 - 2021 Transformational Supporters



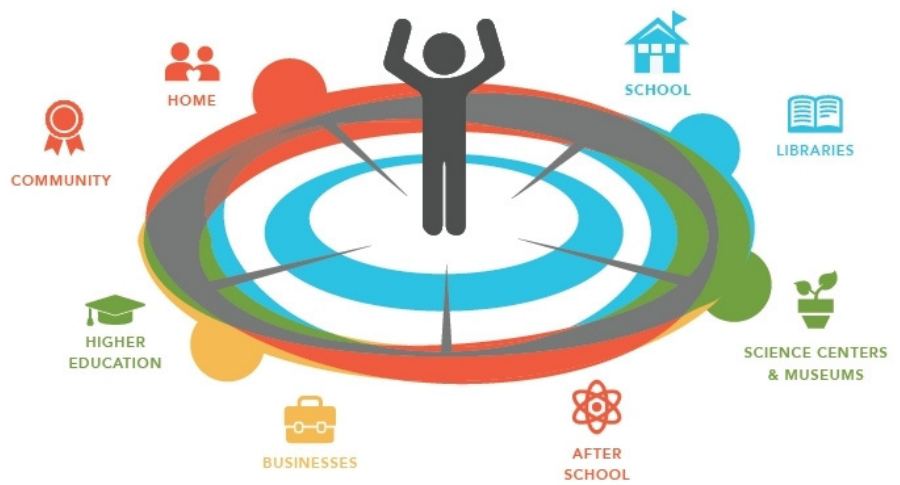
OVERVIEW

The mandate for the STEM Learning Ecosystems Community of Practice was clear during 2020 and 2021. Families, educators, Ecosystem leaders and others turned to the STEM Learning Ecosystems and its global network for inspiration, leadership and practical strategies for fueling learning during 2020 and 2021.

With 94 ecosystems, each with their own unique structure and focus but all aligned on their

mission to improve meaningful STEM opportunities and engagement for all, the STEM Learning Ecosystems' impact has been growing. TIES, the day-to-day operator of the STEM Learning Ecosystems, has worked to coordinate the operations of the ecosystems, seeking to facilitate effective communications among the ecosystems and external audiences, provide technical assistance to ecosystems, coordinate shared initiatives, lead programming, provide financial support and oversight and generally manage the work.

As the SLECoP transitions to a mature organization, Ecosystems are poised to play a larger role in the overall management and operations of the initiative with TIES serving in a backbone capacity.



HISTORY

Founded in 2015, the STEM Learning Ecosystem Initiative was designed by TIES in collaboration with the STEM Funders Network, under the leadership of the Samueli Family Foundation and Noyce Foundation (STEM Next) to empower local communities to thrive through collaboration and communication to deliver results for students, educators and business leaders. Numerous other philanthropic and corporate funders have recognized the value of the SLECoP and have offered support and leadership.

At the time of the founding of the SLECoP, the plethora of STEM programming was clearly not meeting the needs of the communities and their rising student talent. It was equally clear

that design of a strong local infrastructure was needed. The Initiative believes STEM Learning Ecosystems possess the tools and knowledge to create change.

Just as STEM education has embraced innovation at the program level, it must also embrace innovation at the infrastructure level. Community partners across sectors must do more than merely coordinate efforts. Stakeholders must work cohesively at a new, deeper level to provide more students with quality learning in and out of school. Communities in collaboration are in the best position to change the conversation about quality growth for STEM education, workforce and economic development.

WHAT IS A STEM LEARNING ECOSYSTEM & WHAT IS ITS VALUE?

The mission of the STEM Learning Ecosystems Community of Practice continues to be to unite diverse partners to work for shared goals and gains for STEM access and opportunity for all, with an understanding that STEM is a mindset and construct to innovate and to solve society's biggest challenges.

STEM Learning Ecosystems encompasses schools, community settings such as after-school and summer programs, science centers and museums, and informal experiences at home, businesses/industry, higher education including community colleges and in a variety of environments that together constitute a rich array of learning opportunities for young people. A STEM 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.

STEM Learning Ecosystems unite all community stakeholders to ensure

that all students and people are engaged STEM learners who are competent and college and career-ready, that the educational system and its out-of-school time partners are equipped with the resources they need to engage, teach and develop STEM competency, and that communities thrive through a robust and competitive STEM skilled workforce. STEM Learning Ecosystems develop their knowledge, strengthen their persistence and nurture their sense of identity and belonging in STEM disciplines. STEM ecosystems enable young people to connect what they learn in and out of school with real world learning opportunities, leading to STEM literacy, further education and careers.



Photo courtesy of the MidAmerica STEM Alliance



The MidAmerica STEM Alliance is a collaborative initiative designed to ensure that youth in rural northeast Oklahoma communities can develop skills in science, technology, engineering, and math (STEM) and connect with local career opportunities.

The photo above is of 13-month STEM Summer interns working with local youth.

Kaci Fankhauser, former VISTA turned staff member of the Arizona STEM Ecosystem



Photo of Artemis Academy student and her mother, at the WEX Foundation's Space Fest 2021 held at the San Antonio Museum of Science and Technology. Courtesy of Alamo STEM Ecosystem

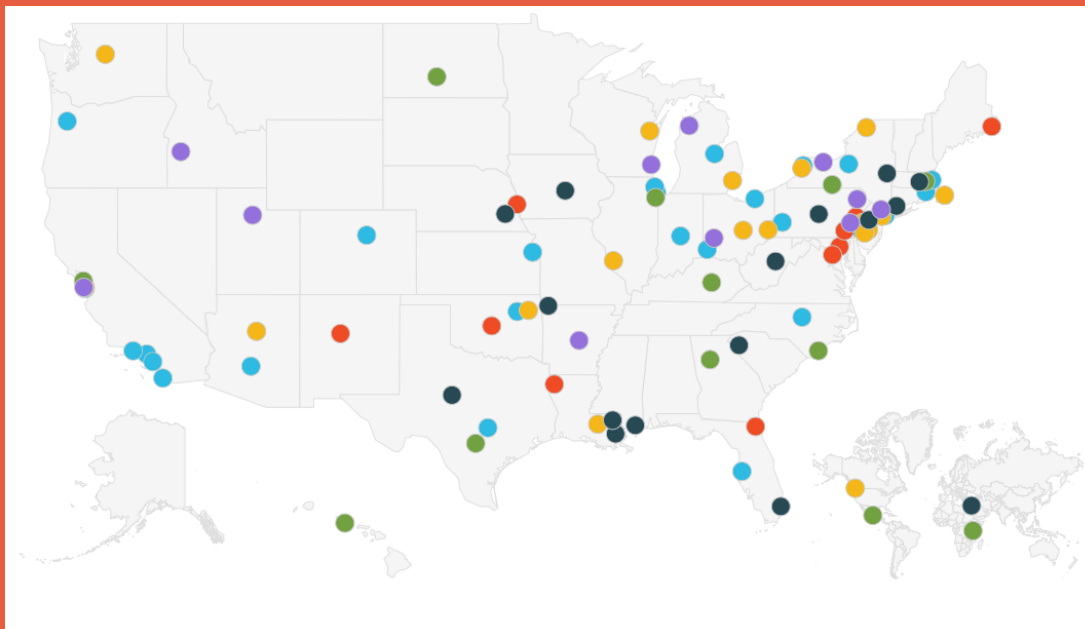


The heart of the Carbon, Schuylkill, Luzerne STEM Ecosystem is SHINE (Schools and Homes in Education) a nationally recognized OST program, which has cultivated partnerships reaching every facet of the community. Administered by Lehigh Carbon Community College, the 42 week program includes kindergarten home visiting, 1st-4th grade STEM centers, 5th- 8th grade STEM Career Academy and high school mentoring opportunities.

The Carbon, Schuylkill, Luzerne STEM Ecosystem has been focused on meeting the needs of the community by offering: The SHINE 42-week afterschool program with a focus on high priority STEM jobs; the Family-Parent Toolkit helping schools and afterschool programs focus on family engagement; the STEM Career Training Program for Teachers; and makerspace development in schools for teacher training and student use.



Lehigh Area SHINE Summer Camp



STEM Learning
Ecosystems
Community of
Practice - 94
Ecosystems

STEM ECOSYSTEM LEADER SPOTLIGHT

NATASHA SMITH-WALKER

On April 20, 2021, Natasha-Smith Walker, CEO of Project Exploration and Lead of Chicago's Ecosystem - Chicago STEM Pathways Cooperative, was awarded The Mayor's Medal of Honor in the city of Chicago.

Smith-Walker received the award for her leadership of a network of youth-serving community organizations in Chicago's neighborhood of Austin. The network has become a model for the city to scale in other Chicago neighborhoods.





U.S. Secretary of Education Miguel Cardona and Rep. Suzanne Bonamici visit Oregon students at Witch Hazel Elementary School in Hillsboro to see how the American Rescue Plan supported students during the pandemic. Photo courtesy of Beaverton ValleyTimes. This site is one of the 13 Regional STEM Hubs that make up STEM Oregon.



Photo courtesy of the Chicago Southland STEM Network





30 middle school students made concrete pillars with Stephens & Smith Construction, learned structural engineering and built bridges with The Durham School of Architectural Engineering and Construction and industry experts Electronic Contracting Company Cheever Construction ABC Nebraska - The Cornhusker Chapter.

"I was sitting home on a Sunday looking at Omaha and Tampa, reading Jeff Weld's book ,and thought Lincoln has all the ingredients for a STEM Ecosystem. I knew if I took it to my superintendent it would change my life forever...and it did.

It's pretty amazing how we've put our heads together and everybody just pitched in. I'm talking about senators and directors; the Chamber is here!

I get emotional talking about it, but it's been an amazing couple of years and we're going to help make it better for the kids of the city. "



Dr. James Blake, Lincoln Public Schools K-12 Science Curriculum Specialist



Photo courtesy of the KC STEM Alliance

KC
STEM
Alliance



Photo courtesy of Explora, the backbone of the STEM-NM (New Mexico) Ecosystem.

Organized by STEM-NM, the NM Science Fiesta brings partner organizations together to tell the story of STEM and STEAM throughout New Mexico.

More than 125 STEAM professionals for the 2020 Fiesta, and together partners engaged over 3,400 children, families, and teachers. Forty three organizations participated, 50 videos were created and 27 virtual activities were executed.



STEM ECOSYSTEM LEADER SPOTLIGHT

For over 20 years, Jose Garcia has worked for Greene County Schools. He is currently the STEM Education Director and has focused on curriculum development for the last 10 years.

Garcia has designed an innovative STEM curriculum that has been customized for the students. After seeing student complacency with learning the 'Grand Challenges,' Garcia combined the Ted Talk model with Citizen Science to create a new learning and inquiry approach: *Citizen Chat*.



“WE’RE DOING SOMETHING THAT’S DIFFERENT AND DISRUPTIVE, BECAUSE WHAT WE HAD BEEN DOING WASN’T WORKING”

- Jose Garcia, STEM Education Director, Greene County Schools



10th grade students, showing off their Biology Grand Challenge project: an affordable air filtration system for Brazil to detect COVID-19. Caroline Parker/EducationNC



RURAL ECOSYSTEM ENGAGEMENT

As part of an NSF Rural Activation and Innovation Network Grant (RAIN), the Arizona SciTech Ecosystem has led a series of virtual conversations with other rural Ecosystems. Post March 2020 Convening, rural Ecosystems came together to discuss the launch of a virtual convening to launch after the October 2020 Virtual SLECoP Convening.

Rural Ecosystems involved in the planning process included leaders from Pennsylvania, Oklahoma, New Mexico, Louisiana, Idaho, Texas, California, North Carolina, Kentucky, Kansas, Florida, Illinois, New York, North Dakota, Ohio, Maine, West Virginia and Missouri.

[Watch the Rural Convening highlights here.](#)



SYMBIOSIS
STEAM Ecosystem



BROADENING ACTIVE PARTICIPATION

STEM Ecosystem leaders from North Dakota; British Columbia, Canada; New York; and Arizona lead a series to discuss best practices in broadening participation. Asset mapping within a rural community was the primary focus of a large focus of the sessions, including the types of assets to focus on, how to use the data and the role of asset mapping in Ecosystem decision making.

A planning committee took several months to develop the agenda for the launch of the Virtual Rural Convening - Empowering Rural Communities - executed on October 29, 2020. This included a survey to the SLECoP to determine the most desired topics of discussion. Three topics - Broadening Active Participation; Advocacy and Building Relationships with Business - were selected as the top three priority areas and the central topics of breakout sessions for the October 29 convening as well as two additional meetings to follow.

On November 5, 2020 and January 28, 2021 rural leaders reconvened to do deeper dives into the three identified areas of priority and share learning around new strategies implemented after convening with the group during the initial sessions.

The group has continued to meet, per the request of participating members. The latest meetings have taken place in May 2021 and are scheduled for August and September 2021. Additionally, the group has scheduled informal meet-ups, like happy hours, just to build community during the pandemic.

More than 40 rural leaders within the SLECoP continue to share best practices and problem solve together on a regular basis.



ADVOCACY

The rural advocacy group was led by Ecosystem leaders in New York, Oklahoma, and Pennsylvania. The group helped other rural Ecosystem leaders explore their own stories, goals and strategies to develop an advocacy plan within their region.

Fun Physics Fridays with Interdisciplinary STEM Education Partnership (ISEP) - Buffalo, NY

Designated a homeland security resettlement area, Buffalo Public Schools P.S. 45, is public school with a large immigrant population.

Together with SUNY Buffalo State College, Buffalo Public Schools offers an afterschool program five days a week that primarily serves students from the international school.

On Fridays, a team of physics faculty, staff and pre-service teachers come together for *Fun Physics Friday* with students grade 3-8.

"We don't do math and we don't meet learning objectives except in that many of the fun things that we do overlap with those. Our deliberate goal is having fun and living with a positive attitude, not meeting objectives that are set up by the state or by anyone else, but nonetheless, we often do both." - Dr. Maclsaac

During these sessions, students have stepped up and expressed confidence, along with an interest in science.

For example, instructors were drawing on the board to explore triangles and magnification patterns with students and two girls stood up to show how the drawings looked like Eastern Arabic numbers.

Everyone got a lesson in physics and Eastern Arabic numerals that day.

[Read the Report](#)



Dan Maclsaac, Ph.D., Professor of Physics and Science Education at the State University of New York, SUNY Buffalo State College in Buffalo, New York.

ISEP Interdisciplinary
Science and
Engineering
Partnership



Girls model (magnified) upright image reflected from back of spoon. Images from a convex mirror (spoon back) are always upright at any distance from the spoon.

ECOSYSTEMS COVID-19 RESPONSE



Mark Uebler, librarian at Watertown High, was one of eight Watertown City School District staff that worked to develop PPE for health workers during the onset of the pandemic.

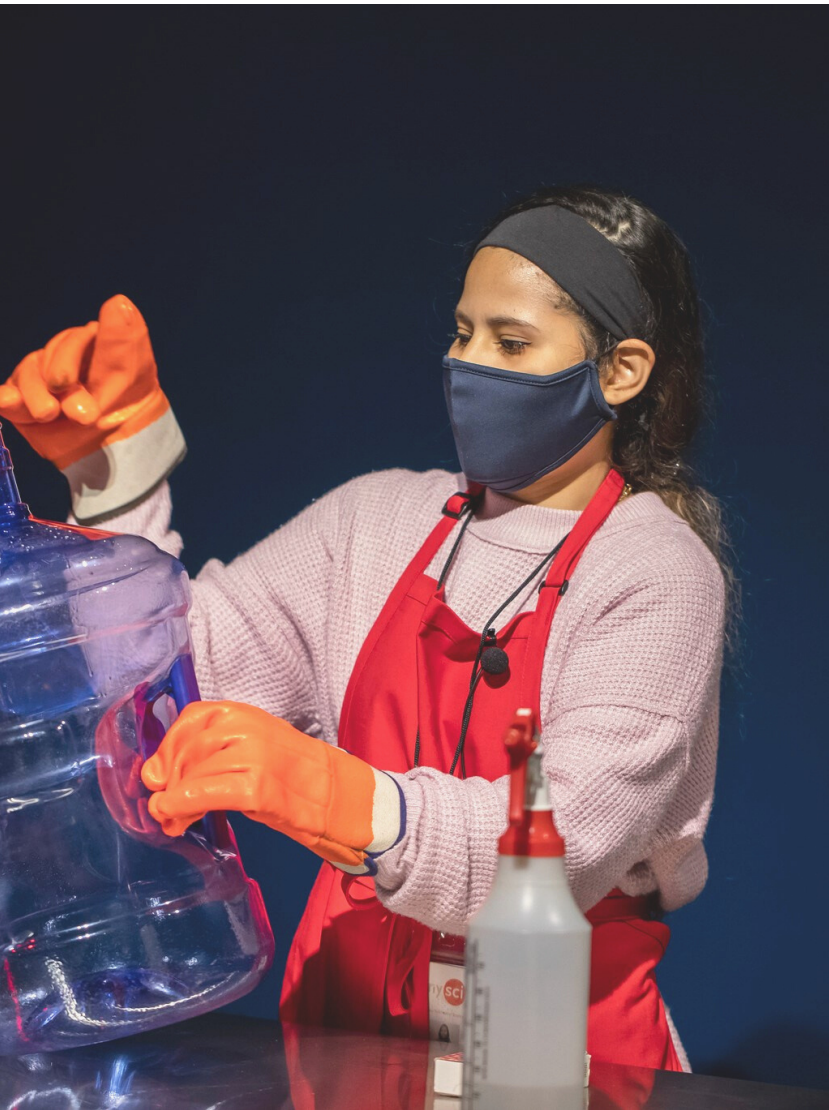


Lisa Blank

North Country STEM Ecosystem Leader and Watertown City School District Director of STEAM Programs, **Lisa Blank** helped led an effort to use school 3-D printing equipment to produce Personal Protective Equipment (PPE) at the height of the pandemic in the U.S. when materials were scarce. Blank leveraged Ecosystem connections to distribute more than 3,120 face shields from mid-March to mid-April 2020. [Read more.](#)



WCSD staff kitchen table



Photos courtesy of NYSCI Neighbors, the Queens, NYC STEM Ecosystem



Photos courtesy of VC STEM Network in Ventura County, CA

ECOSYSTEMS COVID-19 RESPONSE



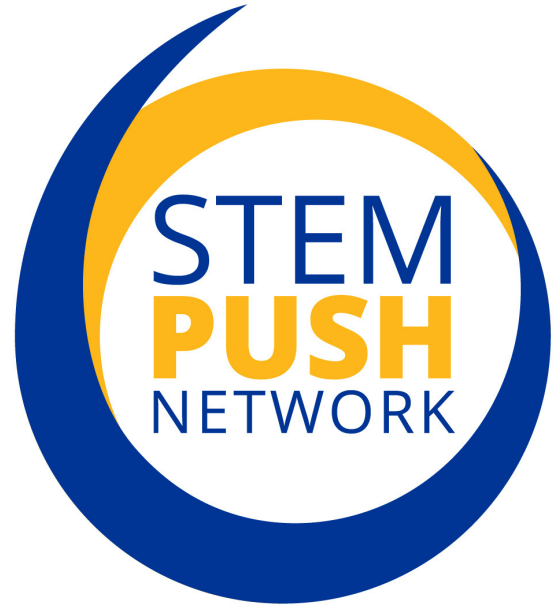
STEM NOLA continues to offer STEM programming for homes and school to support hybrid programming and the uncertainty of the pandemic.



The Greater Cincinnati STEM Collaborative distributed family STEM kits to reduce the impacts of the digital divide and ensure learning continued.

TIES serves as the backbone of the STEM PUSH Network, an NSF INCLUDES Alliance, is working to increase the number of ethnically and racialized underrepresented students who are admitted to, matriculate and persist in post-secondary STEM. STEM PUSH is currently working with four STEM Learning Ecosystems - New York City, Pittsburgh, Chicago and the San Francisco Bay Area. STEM PUSH plans to expand to other ecosystems within the STEM Learning Ecosystems Community of Practice.

STEM PUSH is establishing a powerful collaborative improvement space using the networked improvement community model and a next generation accreditation model that will serve as a mechanism for communicating the value of pre-college programs to college admissions officers.



STEM PUSH NETWORK ECOSYSTEMS AND LEADERS



Vince Stewart
Bay Area STEM
Ecosystem



Latrenda Leonard Sherrill
Remake Learning
(Pittsburgh STEAM
Ecosystem)



Tramia Jackson
NYC STEM
Education Network

NYC | **STEM EDUCATION** | NETWORK

Natasha Smith-Walker
Chicago STEM
Pathways Cooperative



In response to the COVID-19 pandemic, the NeoSTEM Ecosystem developed, designed, launched and iterated Wir'ED, a program that pays students for using their online skills to improve the digital presence of community businesses and organizations. [NeoSTEM shared how in an e-space course on the SLECoP website.](#)

Business owners needed supported with their online presence and students needed access to paid internship with shelter in place orders. Wir'ED was the community solution.



**Toni Chandler - Owner,
Metamorphosis Productions, Inc.**

“Overall, it was a great experience.”

“It’s been very informative about learning marketing and social media applications.”



Ryckia Sutton - Student

“This program teaches you a lot of different platforms.”

“You really have to really listen to what the business owners want.”

INVENTION EDUCATION:

PORTRAITS STRATEGIES STARTING POINTS

With support and direction from the Lemelson Foundation, TIES developed a series of Invention Education-focused podcasts for the STEM Learning Ecosystems. Invention Education: Portraits, Strategies, Starting Points

The series of podcasts and written summaries featured educators, entrepreneurs and engineers talking about practical ways of engaging students in invention. The podcasts were promoted through regular email blasts throughout the last half of 2020 and the first quarter of 2021.

Numerous ecosystems, including the SA-Bexar STEM Ecosystem of San Antonio, have been inspired by Invention Education and have launched programs or initiatives to foster invention among students.

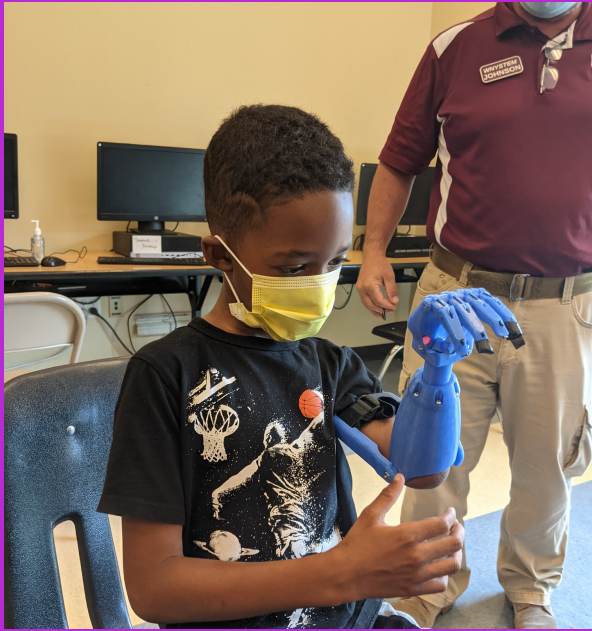


Students making slime at summer camp in Biloxi STREAMING STEM Ecosystem



Clara Mavour, Teacher, Northeast High School, Oakland Park, Florida

Interviewee of the Invention Education Series



Seven year old, Josiah Reid Clark received a new 3D printed prosthetic arm made by students in a free summer program implemented by the Western New York STEM Hub.



WNY  STEM Hub
Preparing today's learners to be tomorrow's innovators.

In the middle of the pandemic, Michigan also experienced tremendous flooding. The Great Lakes Bay Regional Alliance organized donation drives for household products and food to support local residents. As a great regional connector, the Alliance was able to help hundreds of local partners and families.





Chevron

fueling

math

Responding to yearly slides in Louisiana students’ performance in math, a team of families, educators and community leaders partnered with TIES and Louisiana ecosystems to launch Chevron: Fueling Math, a community awareness building and math awareness building initiative.

The six-week program, which included online tutoring for students conducted by local STEM professionals, was

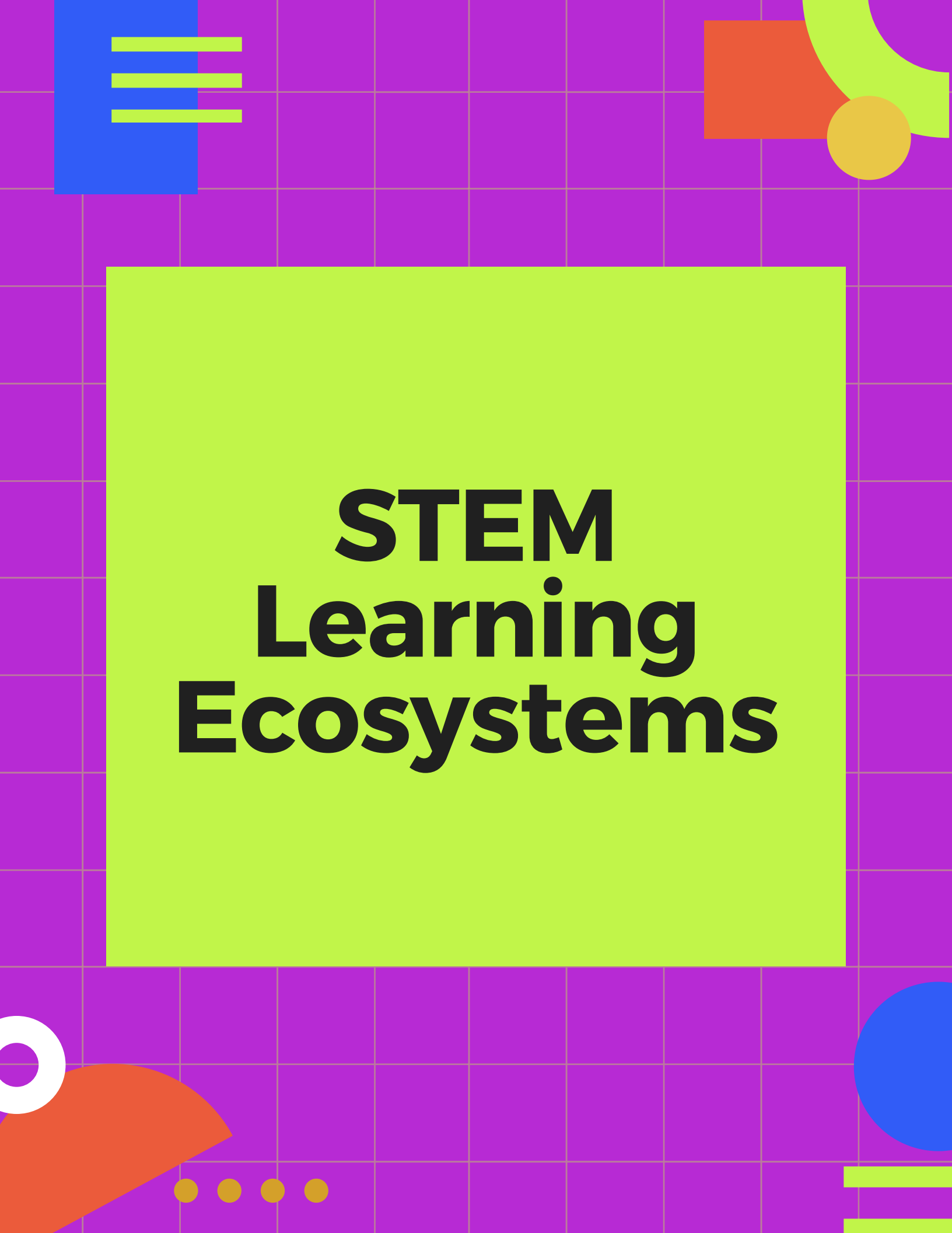
sponsored by Chevron with the plans for the program made available to all interested ecosystems. The NeoSTEM Ecosystem is now borrowing some of the tested concepts around community awareness building for its own “DreamSTEM” initiative.

The program featured extensive community outreach with widespread media coverage and billboards in and around the New Orleans region.



www.fuelingmath.org

One of several billboards produce to advertise the math program to families in the New Orleans region



STEM Learning Ecosystems



ALAMO STEM ECOSYSTEM

The Alamo STEM Ecosystem is a county wide Community of Practice with a commitment to provide STEM/STEAM experiences for all students with a focus on students traditionally underrepresented in STEM/STEAM. The Alamo STEM Ecosystem acts to cultivate a STEM/STEAM mindset with a focus on equity and innovation in our community by aligning and connecting efforts. Some of the current projects that the Alamo STEM Ecosystem has undertaken include Chief Science Officers (hosted by the Intercultural Development Research Association), increasing the number of 8th grade students who select the STEM Endorsement as they transition into high school, Boeing STEM Signing Day, STEM Professional Development Day, and a STEM Asset Map for the community. The Alamo STEM Ecosystem is organized into 18+ committees to enable collaboration within our COP. In a cross-border partnership, the Alamo STEM Ecosystem is partnering with Mexico's Movimiento STEM on projects like Chief Science Officers and student exchange programs.



ARIZONA SCITECH ECOSYSTEM

A collaborative initiative of the Arizona Technology Council and the Arizona Commerce Authority, the Arizona STEM Ecosystem is a grassroots network of over 900 organizations. SciTech Institute, serving as the ecosystem's backbone organization, works with these entities to promote STEM awareness and career pathways, build leadership and employability skills, and foster a diverse pipeline of qualified Arizonans entering higher education institutions and the workforce. The network is an inaugural member of an international community of practice, STEM Funders Network STEM Learning Ecosystems, that enables practitioners to share and replicate successful STEM learning opportunities.



ARKANSAS STEM ECOSYSTEM

The Arkansas Science, Technology, Engineering and Math (STEM) Coalition is a statewide partnership of leaders from the corporate, education, government and community sectors which plans, encourages, coordinates and advocates policies, strategies, and programs supportive of excellence in science, technology, engineering, and mathematics (STEM) teaching and learning in order to expand the economy of Arkansas and produce higher paying jobs.



ATLANTA STEAM LEARNING ECOSYSTEM

TAG-Ed strengthens Georgia's future workforce by providing students with access, exposure and awareness to STEM opportunities through innovative and relevant hands-on learning experiences. By providing exposure today through internships, professional development, immersion experiences and connections to industry professionals we help shape the future workforce possibilities and talent of tomorrow.



BAY AREA STEM ECOSYSTEM

The Bay Area STEM Ecosystem is participating in the NSF funded STEM PUSH Network to leverage pre-college programs to broaden participation in STEM. In addition, we are collaborating with the East Bay STEM Ecosystem and Region 5 STEAM to support a regional approach to increasing access to and increasing the quality of STEM education in the San Francisco Bay Area. In addition, the Bay Area STEM Ecosystem is participating in a 100Kin10 Project Team to develop a regional marketing campaign to recruit and retain diverse STEM teachers.

BE'ER SHEVA STEM ECOSYSTEM

BERKS STEM CONNECTION ECOSYSTEM



Berks STEM Connection Ecosystem is focused on providing STEM thinking and learning opportunities for the 70,000+ students in Berks County, Pennsylvania. Through an alliance of business and industry, post-secondary partners, community organizations, and school districts, Berks STEM Connection Ecosystem is able to provide the latest innovations in the fields of science, technology, engineering, and math together with the Pre-K to post-secondary population to ensure a viable, thriving workforce for the future of Berks County. Initiatives include the creation of the Eastern Pennsylvania Innovation Catalyst (EPIC) Network, the result of a 2019 PAsmart Advancing Grant, through which a strong cadre of teacher leadership and extensive STEM resource lending library available to the county's schools was developed. Through a partnership with the Science Research Institute, students have opportunities to work in state of the art labs and forge connections with STEM businesses and industries around the world. Berks STEM Connection Ecosystem works in conjunction with Career Ready Berks to provide career readiness information and experiences for students and teachers in Berks County.

BILOXI STREAMING



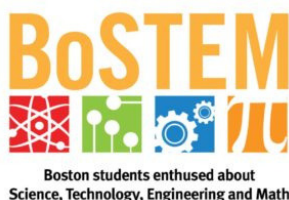
Through Biloxi School District, Biloxi STREAMing provides high quality STREAM opportunities for all Pre K – 12th grade students after school and during the summer. STREAM stands for Science, Technology, Reading, Engineering, Economic Readiness, Entrepreneurship and Mathematics. Biloxi STREAMing advocates the increased access of all students to STEM courses and experiences, including after school and out of school programs that will accelerate and engage students to consider STEM career pathways. Biloxi Public Schools supports comprehensive STEM content professional development opportunities for PreK – 12 teachers that bolster their STEM content knowledge and expand STEM pedagogy to include but not limited to inquiry-based learning techniques. BPS identifies partners that can contribute to STEM learning opportunities, communicate the STEM education vision to stakeholders and network with and learn from other STEM organizations.

BMORE STEM



BmoreSTEM is structured around three supporting organizational groups. The heart of BmoreSTEM are its members.

BOSTEM



BoSTEM is bringing high-quality science, technology, engineering, and math (STEM) opportunities to every Boston middle schooler through an innovative citywide coalition of nonprofits, schools, researchers, and industry partners. Convened by Boston Beyond and the United Way of Massachusetts Bay and Merrimack Valley, BoSTEM aims to close the opportunity and achievement gap for youth traditionally underrepresented in STEM through exciting, hands-on learning and career mentorship.



BROWARD AREA STEM ECOSYSTEM (BASE)

Located in South Florida's diverse socio-economic and cultural community, the Broward Area STEM Ecosystem (BASE) strives to increase the focus on STEM opportunities, engagement, and benefits within the South Florida area. The Broward Area STEM Ecosystem (BASE) is a regional collaboration of STEM stakeholders in the South Florida community aligned with three primary common goals: (1) Engage and interest youth with hands-on STEM through authentic experiences and competitions; (2) Ensure foundational skills in collaboration, communication, critical thinking, computational thinking, problem-solving and perseverance; and (3) Prepare students to be life-ready for future studies and careers in any area, not only those typically thought of as STEM-related. The mission of BASE is to reach our diverse population with a diverse portfolio of STEM opportunities, assuring that STEM is for ALL students. The diverse BASE participants work collaboratively to define STEM pathways, support local STEM initiatives in and out of school, and provide a network of mentorship and volunteerism opportunities between the school district, outside of school informal STEM organizations, and local businesses with a STEM workforce. As the preK-12 education lead for BASE, opportunities for student and family engagement are shared at <http://browardschools.com/stem>



CAPE COD REGIONAL STEM NETWORK

We are educators, business leaders, and community members who share a commitment to supporting young people's interest and achievement in science, technology, engineering, and mathematics learning and careers. We're inspired by ideas and examples from all over the world, but we're about building best practices in our local Massachusetts communities—on Cape Cod and the Islands and across Plymouth County.



CAPITAL AREA STEM LEARNING NETWORK

Designated as a LaSTEM Regional STEM Network Center and hosted by the LSU Cain Center for STEM Literacy, the Capital Area STEM Network re-imagines how business and community partners can work together to provide quality STEM education throughout a youth's lifetime in the capital region which includes 9 parishes. Four key focus areas form the basis of the roadmap that guides activities which include investments, programmatic initiatives, partnerships, and advocacy.



CARBON, SCHUYLKILL, LUZERNE COUNTIES ECOSYSTEM

The CSL Ecosystem is the result of a grass root initiative that began in 2004 in rural Carbon/ Schuylkill County in NE PA. The heart of the ecosystem is SHINE (Schools and Homes in Education) a nationally recognized OST program, which has cultivated partnerships reaching every facet of the community. Administered by Lehigh Carbon Community College, the 42 week program includes kindergarten home visiting, 1st-4th grade STEM centers, 5th- 8th grade STEM Career Academy and high school mentoring opportunities. Cross-sector partnerships have created a pathway from pre-school to career, promoting STEM education, college/career ready students, the foundation for a strong workforce. The SHINE model was replicated in Luzerne County resulting in 19 STEM Centers over 800 sq. miles in 13 economically disadvantaged school districts and 5 CTC's. SHINE has been a catalyst for expanding STEM into the school curriculum. Community & business partners are committed to providing students STEM experiences.



CENTRAL MASSACHUSETTS STEM NETWORK ECOSYSTEM

We believe that engaging STEM (science, technology, engineering, and mathematics) experiences provide youth with a foundation for success, and we believe that all youth should have these opportunities. Since 2004, the Central MA STEM Network (CMSN) has provided thousands of youth with a variety of exciting experiences that include: classroom STEM experiences and science fair project support, out-of-school time STEM activities, and STEM festivals, as well as professional development for STEM educators. The CMSN Ecosystem is a partnership among businesses, government, non-profits, educational institutions, schools, teachers, families, and youth that enables collaborations for deep and wide-scale impacts in our communities. Our mission to nurture youth who experience low-income and under-representation with engaging STEM experiences throughout Central Massachusetts.



CENTRAL OKLAHOMA REGIONAL STEM ALLIANCE

The Oklahoma Engineering Foundation strives to increase Oklahoma's STEM education opportunities to every child. Those who have a gift for math, enjoy deconstructing and rebuilding old household items, analytical thinkers, and many other traits that make a great STEM professional are our priority, regardless of race or socioeconomic status. As an organization, we know that education is the greatest equalizer yet surveys conducted by the National Center for Science and Engineering Statistics (NCSES) within the National Science Foundation found Women, African Americans, Hispanics or Latinos, and American Indians or Alaska Natives—are significantly underrepresented in STEM education opportunities and employment.



CHICAGO SOUTHLAND STEM NETWORK

By collaborating with partners across sectors, Chicago Southland STEM Network takes an innovative approach to increase STEM equity, interest, and persistence throughout Chicago's culturally and economically diverse south suburbs. Chicago Southland STEM Network convenes educators, business leaders, and community enthusiasts to celebrate and strengthen STEM initiatives and workforce development for students.



CHICAGO STEM PATHWAYS COOPERATIVE

Chicago has a wealth of STEM learning opportunities for youth, in classrooms and through out-of-school time experiences. However, challenges to access and equity continue to persist for young people – particularly those from communities traditionally underrepresented in the sciences. How can we work collaboratively to provide all Chicago youth with quality STEM experiences to support their academic, civic, and career development? The Chicago STEM Pathways Cooperative is a community-driven initiative that works to address inequities in the STEM learning continuum. Our strength-based approach focuses on three critical areas: cross-sector knowledge building, collaboration, and collective action.



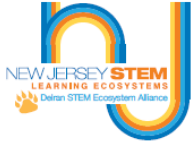
COLORADO STEM

Colorado STEM is a coalition of highly engaged business, education, and civic leaders in support of high-quality science, technology, engineering, and math (STEM) education and experiences for all students. Since its founding in 2014, Colorado STEM has successfully built a diverse coalition of stakeholders across the state to significantly expand STEM opportunities across the state. Colorado Succeeds is the backbone organization of the coalition.



DC STEM NETWORK

The DC STEM Network unites community partners to help inspire and prepare all DC youth to succeed, lead and innovate in STEM fields and beyond. The Network's partners identify common measures for high-quality STEM and map the STEM landscape to increase access, awareness, interest and engagement in STEM so that all students can graduate and enter the workforce STEM-literate.



DELTRAN STEM ECOSYSTEM ALLIANCE

Delran STEM Ecosystem Alliance became one of five New Jersey ecosystems, managed by the NJ STEM Pathways Network. In 2017, we were accepted into the national community of STEM Learning Ecosystems, and we are currently one of 84 internationally recognized groups focusing on networking and partnerships to create a strong STEM workforce.



DO STEM OF DAYTON, OHIO

To support this learning revolution, the Dayton Regional STEM Center (DRSC) coordinates an established network of regional institutions and professionals that provides rich opportunities for STEM education by training and supporting educators, designing curriculum aligned to the workforce needs, training school leaders at the district and building level, and supporting schools and program models committed to STEM teaching and learning.



EAST BAY STEM NETWORK

California calls on its State Universities to train public school teachers at all grade levels. STEM disciplines offer unique teaching challenges—and unparalleled opportunities—for a diverse population. STEM jobs are the fastest-growing economic sector in the Bay Area, and employers are eager to build a diverse local workforce. Cal State East Bay, serving the most diverse population in the state, established the Institute in 2011 to create a powerful regional center for STEM education—serving the hiring needs of employers as it provides education and opportunity to students throughout the region. The Institute accomplishes its mission with a Collective Impact approach, bringing together cross-disciplinary resources both on campus and throughout the community, united by the shared goal of STEM education equity for all, from cradle to career.



EAST SYRACUSE MINOIA CENTRAL SCHOOL DISTRICT STEM LEARNING ECOSYSTEM

The CNY Tech Sector works to bring business partners and educational opportunities together to promote STEM career opportunities across Central New York. By highlighting learning experiences, internships, apprenticeships and jobs in the STEM and manufacturing fields, we cultivate a strong workforce and keep high quality students in CNY.



ECOSISTEMA STEAM (MEXICO)

In Movimiento STEAM we generate alliances and actions that allow the strategic linkage between key actors to position STEAM Education on the country's public and social agenda. Among other initiatives, we lead the Ecosistema STEAM, which promotes and integrates EduSTEAM institutions, organizations and providers to generate the exponential growth of STEAM Education in Mexico. We have various training, visibility, linking and support programs that facilitate communication and connections between members and ensures the continuity of actions. We are the voice of the STEAM Ecosystem before the government and stakeholders.



ENGINE OF CENTRAL PA, EMPOWERING NEXT GENERATION OF INNOVATORS AND ENTREPRENEURS

ENGINE of Central PA is one of the few university-led ecosystems to bring meaningful STEM research and innovations to K-12 education. Led by Penn State Center for Science and the Schools, an executive team of Intermediate Units, business/industry, and science centers/museums, and collaborations with community partners and organizations, our network builds a community of lifelong learners that promotes equitable access to meaningful transdisciplinary experiences. We strive to empower youth living and working in our region to be innovative problem-solvers, ready to succeed in careers of tomorrow.



EVANSTEM

EvanSTEM seeks to improve access and engagement for students who have traditionally underperformed or have been underrepresented in STEM programs.



FINGER LAKES STEM HUB

The Finger Lakes STEM Hub is a catalyst for collaboration among business, education, community organizations, government agencies and passionate individuals to advance the teaching and learning of science, technology, engineering and mathematics (STEM) disciplines for sustained economic vitality.



FIRST2 NETWORK

First2 Network is an expanding group of people and organizations across West Virginia that seeks to improve STEM persistence among rural, first-generation, and other underrepresented college students so that they – in turn – can contribute to an innovation economy in our State.



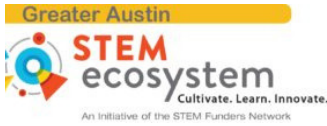
FLAGSTAFF STEM LEARNING ECOSYSTEM

The Flagstaff STEM Learning Ecosystem is the educational arm of STEM City. True to our mission, STEM City connects and collaborates with Flagstaff's entire STEM community to promote, strengthen and sustain STEM organizations, literacy and initiatives. We lead the "STEM Connects" program, linking STEM professionals with K-12 students, including through the Scientists in the Classroom initiative. We actively collaborate in partner-led STEM initiatives, promoting and leading new initiatives when opportunities arise. We engage with schools and out-of-school time partners to facilitate curricular STEM connections. We promote existing and new STEM programming to drive engagement and impact; evaluate select STEM programming to identify "best in class" programs to incorporate and expand into future programming with our partner organizations. We partner in public STEM events and work to reimagine current events and conceptualize future events with the goal of ensuring sustainability, continued community engagement and measurable impact.



GREAT LAKES BAY REGIONAL STEM ALLIANCE

The Great Lakes Bay Regional Alliance (GLBRA), a consortium of business, education, and community interests, recognized that the future vitality of its economy was dependent on developing a STEM Talent Pipeline. The STEM Impact Initiative was launched in the Spring of 2014 when GLBRA contracted with Accenture and Innovate+Educate to develop a comprehensive analysis of STEM in the region and develop a strategy with specific recommendations.



GREATER AUSTIN STEM ECOSYSTEM

The Greater Austin STEM Ecosystem fosters deeper collaboration across networks and systems to ensure STEM programming is accessible to ALL students throughout Greater Austin. The learning-centered ecosystem leverages resources supporting STEM education while reducing duplication and amplifying individual organizations and their collective impact.



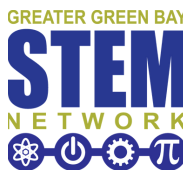
GREATER BRIDGEPORT STEM LEARNING ECOSYSTEM

The Greater Bridgeport STEM Ecosystem recognizes the importance of strong STEM competency across generations and the role STEM skills play in promoting a vibrant local economy. All of our partners are working to understand what it means to become a member of the STEM Learning Ecosystem Community of Practice and how will our community, businesses, and education systems benefit from it. Local nonprofits, universities, the science museum, the regional business council, STEM employers, and the Bridgeport School District all participate in this work and are engaged in strategizing to develop a shared vision, planning and prioritizing design principles including promoting STEM literacy for all, strengthening the local STEM workforce pipeline, and promoting intergenerational STEM learning opportunities.



GREATER CINCINNATI STEM COLLABORATIVE (GCSC)

Greater Cincinnati STEM Collaborative (GCSC) was launched in 2011 by P&G and StrivePartnership in response to the accelerating demand for STEM jobs in the Greater Cincinnati region. Fiscal agency moved to the UC Foundation in 2015. GCSC's mission is to prepare students to join the Greater Cincinnati/Northern KY workforce through connected, robust STEM learning pathways. Its overarching goals are to dramatically increase the number of students who are: 1) STEM aware; 2) STEM interested; and 3) engaged and on track for STEM college and careers.



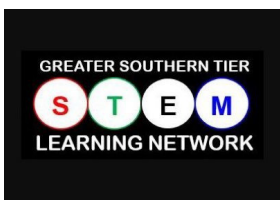
GREATER GREEN BAY STEM NETWORK

Through the Greater Green Bay STEM Network, business and educational partners collaborate to: Advocate for and increase awareness of the importance of science, technology, engineering, and math. Vet and evaluate the effectiveness of STEM opportunities. Improve community access to STEM resources.



GREATER MILWAUKEE STEM ECOSYSTEM

The Greater Milwaukee region represents a community deep in experiences and supports to advance STEM opportunities. GM-STEM unifies STEM outreach efforts across industry, K-12, higher education, and community partners throughout the seven county Greater Milwaukee region.



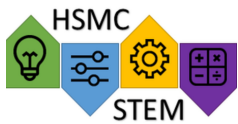
GREATER SOUTHERN TIER STEM LEARNING NETWORK

The priorities are fidelity of implementation and sustainability, regional assessment, development and/or deployment of STEM curricula at all grade levels, maintenance of R & D databases for data-driven decision making and the creation of systems solutions. Together, these priorities drive the realization of our primary objective: To significantly increase the numbers of STEM-capable GST graduates in general and, in particular, the numbers of students from GST schools who enter the workforce in the areas of science, engineering and advanced manufacturing.



HAWAI'ILOA ECOSYSTEM CABINET

Our STEM learning ecosystem focuses on seven major themes with a representative champion who serves within a system or strategic function. System partners provide direct services to learners, organizations, and communities such as community-based, culture-focused programs or wrap-around support needs. While strategic partners center energy as architects in multi-agency, cross-partnership alignment towards coordinated efforts such as policy development, data sharing, and funding strategies. We are building worlds for possibilities and promise. Our tools are formed with resurrected wisdom and traditional values of our island culture like the sea-faring voyagers of the Hokule'a who navigate using the constellations. Our sail plan will be guided by a theory of action with the ultimate vision of a thriving culture of innovation. To journey there, we are charting seven pathways in the stars and a captain for each to lead: – Educational Institutions and school community voices – Professional development and capacity-builders – Industry partners and workforce recruitment specialists -Sustainability warriors -Equity and access advocates -Funders and investors -STEM-rich institution innovators.



HSMC TRI-COUNTY STEM ECOSYSTEM CONSORTIUM

HSMC (Hunterdon County, Somerset County, and Mercer County) Tri-county STEM Ecosystem Consortium believes in the foundational principle that communities must come together for the benefit of providing opportunities for all in STEM. The Ecosystem is bringing together multiple superintendents of schools from throughout Hunterdon, Somerset, and Mercer Counties in New Jersey.



IDAHO STEM ECOSYSTEM

The Idaho STEM Ecosystem is a network of education and workforce leaders and supporters striving for a STEM-literate Idaho. Our active community of over 100 partners includes government agencies, non-profits, PreK-12 and higher education institutions, out-of-school organizations, and representatives from business and industry. Idaho STEM Action Center (Idaho STEMAC), under the Executive Office of the Governor, serves as the backbone organization and works with statewide partners to implement programs and initiatives to advance STEM education and workforce development.

INDIANA STEM ECOSYSTEM INITIATIVE

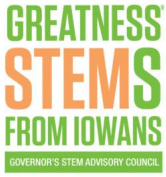
The Indiana STEM Ecosystem is a collaborative and diverse group of over 450 statewide members who believe in the importance of building the STEM education pipeline across sectors within the state of Indiana. The Indiana STEM Ecosystem's mission is to develop, support, and "stand up" regional STEM ecosystems across the state. We believe that through the "standing up" of regional STEM Ecosystems across Indiana, we will improve STEM literacy, ensure a strong workforce & global competitiveness for all Hoosiers, and support diversity, equity & inclusion in a thriving STEM workforce.



INTERDISCIPLINARY SCIENCE AND ENGINEERING PARTNERSHIP

A coalition of partners in Western New York State has received a five year, \$9.8 million grant from the National Science Foundation (NSF) to expand the Interdisciplinary Science and Engineering Partnership (ISEP). Supported with resources totaling more than \$10 million, this promising program aims to transform how science is taught in the Buffalo Public Schools. The focus of the ISEP is the critical middle school experiences of students in science and engineering, as they transition to high school. The project uses an innovative approach to teacher professional development among high-needs urban schools (including "feeder" middle schools and their corresponding high schools). This is accomplished through courses and interdisciplinary research experience, development of science and technology classroom materials aligned with state science learning standards, and inquiry-based curricula. Sample research topics include nanotechnology, molecular biology, pharmacokinetics, and response to natural and manmade emergencies— to name just a few.





IOWA GOVERNOR'S STEM ADVISORY REGIONAL STEM HUB NETWORK

The Governor's STEM Advisory Council mission is increasing interest and achievement in STEM (science, technology, engineering and mathematics) studies and careers through partnerships engaging preK-12 students, parents, educators, employers, non-profits, policy leaders and others. The Council provides opportunities that inspire Iowa's young people to become innovative, enterprising contributors to our future workforce and the quality of life in our communities.



KC STEM ALLIANCE

KC STEM Alliance is a collaborative network of educators, business partners and organizations that inspires interest in Science, Technology, Engineering and Math careers to generate a robust workforce of related professionals for our community.



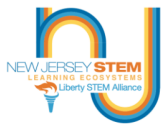
KENYA NATIONAL STEM LEARNING ECOSYSTEM

The proposed ecosystem will serve as the national STEM Learning Ecosystem and will be modeled alongside the 102 STEM schools that have been identified and equipped by the government through The Centre for Mathematics, Science and Technology Education in Africa (CEMASTEA). The Ecosystem will be used as a framework to galvanize partners from other sectors and also provide a coordinating mechanisms for STEM activities in the country. At the moment, there are different STEM initiatives by different players and there is urgent need for realignment. Young Scientist Kenya, working with CEMASTEA, a public education institution and whose mandate is to coordinate In-Service Education and Training (INSET) for practicing teachers of Mathematics and Science in Kenya will coordinate the efforts.



LANCASTER COUNTY STEM ALLIANCE

As a hub for STEM literacy and experiential learning, Lancaster County will attract and retain visionary job creators, inspire learners of all ages to achieve academic excellence, and engage all its citizenry in building a prosperous future. This vision has several key components that guide our work: Becoming a hub for STEM literacy means that we aspire to be a center for STEM innovation and leadership in Pennsylvania. As we attract and retain visionary job creators, Lancaster County will be a locale that draws visionary businesses and helps them to flourish. We will create local STEM talent by inspiring learners of all ages to embrace a culture of inquiry and achievement. By engaging all of our citizenry, we will build upon the diverse strengths of all members of our community and work toward economic and social equity for all individuals who reside in Lancaster County.



LIBERTY STEM ALLIANCE

Liberty STEM Alliance is a renowned community dedicated to enriching STEM opportunities in Hudson County by incorporating all voices, creating pathways, and serving as an information hub.



LINCOLN STEM ECOSYSTEM (LNKSE)

The Lincoln STEM Ecosystem (LNKSE) works to build a stronger Lincoln as we grow our own professionals and become more attractive to others considering our community. Lincoln has proven to be at the top of national prominence with top ranking in number of startups, funding raised, quality and availability of broadband, and workforce characteristics. Lincoln has a robust set of industry partners with STEM-based career paths focused on training the next generation workforce. LNKSE has full support of the 1,700 member Chamber of Commerce, Lincoln Partnership for Economic Development which serves as the City's economic development arm. EmployLNK, which brings together all workforce development focused agencies and nonprofits that work with youth and adults, also supports LNKSE. Schools could benefit from the development of a more integrative curriculum.



LOS ANGELES REGIONAL STEM HUB

The Los Angeles Area Chamber of Commerce has developed a regional STEM Hub for Los Angeles (L.A. STEM), which seeks to develop operational concepts for collaboration to enhance and expand the science, technology, engineering and mathematics (STEM), including critical thinking and the arts (STEAM), to explore engagement opportunities and to promote collaborative efforts to advance high quality STEM education and provide sustainable STEM models for 21st century workforce and skills development.



METROWEST STEM EDUCATION NETWORK

MSEN focuses on developing collaborations based on the sharing of resources, expertise, and common goals to support member organizations in empowering local students with the confidence and perseverance to pursue STEM-enabled career pathways, while they also recognize the value of their voice and agency in their communities. This is a critical element to address important issues in our communities, such as environmental sustainability and justice that are becoming increasingly complex and interdependent.



MICHIGAN STEM PARTNERSHIP SOUTHEAST MICHIGAN STEM ALLIANCE

The Michigan STEM Partnership's Southeast Michigan STEM Alliance was selected to join the STEM Learning Ecosystems national initiative in 2017. We were one of 17 regional ecosystems added to the international group of 54 communities. The Southeast Michigan STEM Alliance and the Michigan STEM Partnership were selected because of a demonstrated commitment to cross-sector collaborations in schools and beyond the classroom - in after-school and summer programs, at home, with local business and industry partners, and in science centers, libraries and other places both virtual and physical.



MIDAMERICA STEM ALLIANCE

A collaborative effort between cross-sectional partners who bring expertise, resources, and passion to achieve mutually beneficial goals and objectives which include increasing the awareness of, and engagement in, STEM related initiatives, create programs that provide opportunity to discover interests, aptitude, and talent while connecting to post-secondary career pathways. The alliance works to align and leverage existing resources to facilitate the development, execution and sustainment of relevant and effective STEM programs.



MISTEM NETWORK

It is the belief of the MiSTEM Network that all students impact economic growth through professional and personal fulfillment through equitable access to rich STEM experiences. Together the MiSTEM Network can collaborate to create a vibrant and equitable culture that meets future demands. The MiSTEM Network is building a sustainable and equitable cross-disciplinary STEM culture.



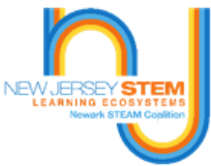
NC STEM ECOSYSTEM: DRIVING THE FUTURE

Driving the Future is a collaborative effort of STEM organizations across North Carolina committed to nurturing, enabling and encouraging STEM education in North Carolina with a special emphasis on the western piedmont (STEM West) and eastern regions (STEM East) of the state. Stakeholders in the ecosystem include formal education and extended learning organizations, business and industry, museums and science centers, libraries, STEM professionals and grant makers. The network leverages the expertise of its stakeholders including their knowledge of and relationships in the communities they represent in order to better serve students. The network is driven to ensure that young people have equitable access to STEM opportunities which prepare them to be successful as adults in a world that is defined by STEM.



NEPA STEM ECOSYSTEM

Our ecosystem consists of the Northeastern Educational Intermediate Unit 19, 20 public school districts, 2 comprehensive career and technology centers, 2 charter schools along with a variety of non-public entities. NEPA STEM Ecosystem serves public and private entities and the local sites of the Wayne Pike Workforce Alliance, Gentex Corporation, The Cooperage Project, Lockheed Martin, WVIA Public Media, a portion of the Charlie Company of the Pennsylvania Army National Guard and the Greater Scranton YMCA. Our goal is to provide rich STEM experiences and career opportunities to every youth within our collective footprint. Keystone College, Johnson College, Marywood University, the University of Scranton and Lackawanna College provide education beyond the PreK-12 setting. This region includes Lackawanna, Susquehanna, parts of Wyoming, Wayne and Pike counties covering a geographic footprint 2453 square miles and home to over 333,000 residents.



NEWARK STEAM COALITION

The Newark STEAM Coalition (Coalition) is a cross-sector collaborative established to cultivate STEAM opportunities for Newark students through the collaboration and alignment of the public (government) and private sector (businesses), the school district, institutions of higher learning, science and cultural institutions, workforce development, and youth-service providers. By capitalizing on Newark's rich resources in the arts, culture, education and research, the Coalition prepares Newark's young people for success beyond the 21st Century by building competencies across Science, Technology, Engineering, the Arts, and Math.



NEW ORLEANS STEM NETWORK (STEM NOLA)

STEM NOLA is dedicated to bringing together quality leaders in STEM to form a "Cradle to Career" alliance working to improve educational and career outcomes as part of a shared community vision. Through a network of school-time, out-of-school programs, community-based groups, parent organizations, businesses and STEM professional organizations, STEM NOLA leads the way to identify common measures for high-quality STEM programming and map the STEM landscape to increase access, awareness, interest and engagement in STEM so that all students can graduate and enter the workforce STEM-literate.



NEW JERSEY STEM PATHWAYS NETWORK (NJSPN)

The New Jersey STEM Pathways Network (NJSPN) is a strategic public-private alliance defining and guiding a STEM vision for cradle to career pathways in New Jersey. Using data to drive all objectives and achieve our mission, the NJSPN: aligns resources to scale and replicate promising practices; identifies learning opportunities by convening New Jersey's STEM experts; and promotes STEM career pathways by training state leaders and creating deeper public awareness of opportunities available in the 21st century workforce.



NJ-NEST OF BERGEN COUNTY, NJ

New Jersey North EcosySTEM, led by Bergen Community College, is dedicated to building a community of partners and collaborators to promote educational initiatives and opportunities to students pursuing STEM degrees. Through building and maintaining relationships with K-12 districts, government agencies, higher education institutions and public and private sector organizations, NJ-NEST promotes a collaborative approach to building STEM-focused pathways. Bergen Community College works closely with high schools to provide students an opportunity to earn community college credits while in high school that can then transfer to other colleges or universities.

NORTH COUNTRY STEM NETWORK

The Empire STEM Network seeks to prepare a skilled workforce to meet the growing demands of business and industry and to secure America's place as a leader in our global society. Tomorrow's workers, regardless of position or job, must be problem solvers, critical thinkers, collaborators and life-long learners. These skills must be embedded in all curricula at all grade levels from pre-school through college. Multiple opportunities must be afforded students to apply these skills to real world problems in multidisciplinary and cross-disciplinary environments that challenge them to take risks, spark creativity and reward divergent thinking.



NORTH DAKOTA STEM ECOSYSTEM

The North Dakota STEM Ecosystem is the statewide resource to improve STEM access for all North Dakotans, engaging industry, community and education systems to address workforce challenges and STEM literacy. We support initiatives that promote a lifelong learning environment to develop employability and life skills and connect passion with opportunity



NORTH LOUISIANA STEM ALLIANCE

To coordinate efforts of diverse stakeholders in North Louisiana to provide high quality STEM education (Science, Technology, Engineering and Mathematics), including the arts, to all youth PK-16 regardless of zip code.



NORTHEAST FLORIDA REGIONAL STEM2 HUB

The Northeast Florida Regional STEM2 Hub was formed in 2015 by the Jacksonville business community with a mission to convene, inspire, and invest in the STEM2 fields by providing the essential missing elements to accelerate the growth of STEM2 education and careers. Since our inception, we have opened doors to high quality STEM programs to over 100,000 local students, both within and outside of the school day. With a focus on empowering all learners, especially those underrepresented in the high-wage, high-demand tech careers, we work every day to address inequities so that we can build pathways that will lead to a diverse, equitable and inclusive workforce. Our work spans from afterschool and summer programs to developing system-changing strategies to integrate high quality STEM programs across the curriculum and in the school day.



NORTHEAST OHIO STEM LEARNING ECOSYSTEM

The NEOSTEM (Northeast Ohio) Ecosystem is a diverse coalition for science, technology, engineering, math and computational science. The Ecosystem inspires engagement and coordination in STEM+C fields and expands equitable access to high quality education for all. The intent is to create a powerful life-long continuum of STEM+C learning opportunities that promotes a more prosperous and sustainable community.



NORTHSHORE STEM COALITION

The Northshore STEM Coalition is a member of the national STEM Learning Ecosystem network and was formed out of the rapid growth of the Tangi STEM Coalition, which was launched in 2017 by a collective of stakeholders dedicated improving STEM education opportunities in the region.



NORTHWEST ARKANSAS STEM ECOSYSTEM

The Northwest Arkansas (NWA) STEM Ecosystem is increasing STEM awareness, education, and sharing of best practices among all regional stakeholders including business, education, government, and philanthropic partners. Only through our collective and intentional efforts can we establish a well-prepared pipeline of employees ready to fill STEM-related jobs and careers dependent on the latest technologies and twenty-first-century skill sets, mind-sets, and tool sets. Forbes recently ranked Northwest Arkansas at No. 3 among the nation's medium-sized cities for white-collar job growth. Fortune 500 companies including Walmart, Tyson Foods, and J.B. Hunt Transport Services are headquartered in the region and offer numerous STEM-based career opportunities, but the local workforce is not filling job openings quickly enough. STEM education at all levels – preK through adult continuing education – is where the solution to this dilemma lies.



NY CAPITAL REGION STEM HUB

The Capital Region STEM Hub is designed to cultivate the physical and financial resources needed to engage young people in STEM education and programs—preparing them for success in school, work and life, and fueling the innovation and economic vitality of our region, state and nation.

NYC|STEM EDUCATION|NETWORK

NYC STEM EDUCATION NETWORK

The NYC STEM Education Network serves as a catalyst for new ideas, partnerships, and collaborative projects. These efforts, in turn, expand, enhance, and sustain STEM learning opportunities for all learners of all ages in New York City. We strive to ensure that all learners in New York will have the essential experience and skills needed to become career-ready, STEM-literate citizens. As our learners develop proficiency in critical thinking, problem-solving, creativity, collaboration, and communication, they will be prepared to inherit and lead the future we are shaping for them. To this end, the NYC STEM Education Network promotes inclusivity, accessibility, and accountability while encouraging creativity and innovation.



NYSCI NEIGHBORS

NYSCI serves schools, families and underserved communities in the New York City area, offering informal, hands-on learning through various products and services that use the “design-make-play” method of bringing delight and play to educating science, technology, engineering and math (STEM).



OHIO VALLEY STEM COOPERATIVE

Our STEM Learning Ecosystem builds on developing or established activities and relationships with the K-12 and higher education institutions in the Saint Clairsville area. Educational institutions include Belmont College, Belmont-Harrison Career Center, Ohio University Eastern, Saint Clairsville-Richland School District and Union Local School District. Additional stakeholders in the Belmont County Community Improvement Corporation (private non-profit economic development agency) and corporate partners from the two leading industries in the region, energy and health.



OMAHA STEM ECOSYSTEM

The committees are the action working groups that move the goals of the strategic plan forward. The committees have representatives from each of the six sectors we serve. Integrating the six sectors into each of the committees, we created a forum of collaboration around solutions for STEM issues.



ORANGE COUNTY STEM INITIATIVE

OC STEM Initiative strengthens the workforce pipeline throughout Orange County by promoting competencies in science, technology, engineering and mathematics (STEM) from cradle to career through a collaborative network of public and private partnerships.



OREGON'S STATEWIDE REGIONAL STEM HUB NETWORK

Oregon's Statewide Regional STEM Hub Network is a large-scale ecosystem that embraces the notion that education is a collective responsibility and that learning takes place throughout one's life in all manner of settings and interactions. Oregon has invested in the establishment and support of a network of regional collective impact partnerships that bring together local leaders and programs from K-12, post-secondary, out-of-school programs, business & industry, workforce, economic development, civic leaders, community-based organizations, STEM-rich institutions and families.



PA STEM EXPERIENCES FOR EQUITY AND DIVERSITY (SEED) ECOSYSTEM

PA STEM Experiences for Equity and Diversity (SEED) Ecosystem is a collaborative between school districts, libraries, Intermediate Units, post-secondary institutions, and environmental education centers along with growing public/private partnerships like those forged with the United Way, Chester County Economic Development Council (CCED) or Corbett Incorporated. The STEM Learning Ecosystem spans four counties and is focused on collectively leveraging resources to ensure all students in the region have robust STEM experiences P-20. There will be 590,000 new and replacement jobs in PA through 2026, with STEM jobs growing over 9 percent. Employers are clamoring for a workforce that has problem solving, communication, and computational thinking skills. PA SEED provides opportunities for students to develop these skills.



PHILADELPHIA STEM ECOSYSTEM

The Philadelphia STEM Ecosystem encompasses the rich environment of STEM programming, education, and opportunities throughout the Greater Philadelphia area. Our backbone organization, The Philadelphia Education Fund, facilitates communication and connections among Ecosystem members, and ensures the continuance of the local Ecosystem movement. Our goal is to promote just and equitable access to STEM opportunities for children and youth. Our work is made possible by the collaboration of our steering committee, workgroups and over 400 members who believe that everyone benefits when students succeed in STEM.



PITTSBURGH REGIONAL STE(A)M ECOSYSTEM

The Pittsburgh Regional STE(A)M Ecosystem cultivates diverse and equitable high quality STEM and STEAM learning opportunities, addressing real world challenges, for all students in our region with an eye toward building a scientifically-informed citizenry, and creative, prosperous, and resilient population.



PROVIDENCE AFTER SCHOOL ALLIANCE (PASA) AFTERZONE STEM - FUSE INITIATIVE

PASA's mission is to help close persistent opportunity gaps by expanding and improving quality after school, summer and other out of school time learning opportunities for all the youth of Providence by organizing a sustainable public-private partnership that contributes to student success and serves as a national model.

California Region 5

Monterey | San Benito | Santa Clara | Santa Cruz



REGION 5 STEAM IN EXPANDED LEARNING ECOSYSTEM

The Region 5 STEAM Ecosystem is a member of the International STEM Learning Ecosystems. Locally, we are comprised of a diverse group of formal, informal science museums, non-profits, businesses and TK-16 education systems. Our ecosystem is grounded in the enlightened self interest of each collaborating entity. Collectively, we are working to achieve our vision for STEAM learning in our four county service area that includes rural, urban and suburban communities from San Jose to California's Central Coast.



SAN DIEGO STEM ECOSYSTEM

Forming cross-sector groups of STEM Champions in specific neighborhoods to set up capacity for collaborative neighborhood programs and initiatives outside of school.



SILICON VALLEY STEM ECOSYSTEM

The Silicon Valley (SV) STEM Ecosystem is committed to working as a collective impact group and has developed a common vision of STEM teacher professional development focused on how pedagogy, curriculum, and technology intersect to teach students how to use knowledge. Based on this vision, the SV STEM Ecosystem is committed to a common agenda of improving student achievement in Santa Clara and San Mateo Counties.



SOUTH CAROLINA'S STEM ECOSYSTEM COMMUNITY OF PRACTICE

Our STEM ecosystem is more than 25 years in the making with origins that date back to a National Science Foundation Statewide Systemic Initiative. Then as now, our drivers for action are access and equity. Over the years, we have expanded our understanding of access to include and engage in opportunities in the out of school time learning space. As such, our purpose is "To inspire learning and leadership everywhere that STEM matters." We have grown to understand equity as a way of thinking, valuing and acting beyond simply making resources accessible.



SOUTH JERSEY STEM & INNOVATION PARTNERSHIP

The South Jersey STEM & Innovation Partnership (SJSIP) is a community of collaborative partners to improve STEM education and career pathways across southern New Jersey. Our growing community includes collaborators representing industry, post-secondary education, K-12 schools, philanthropy, small businesses and STEM-rich organizations engaged under a common vision for STEM.



SOUTHEASTERN KENTUCKY STEM ECOSYSTEM

Southeastern Kentucky STEM Ecosystem includes 11 high needs counties that are part of a Promise Zone area. Promise Zones are extremely high poverty areas where local stakeholders collaborate and leverage resources to help address regional priorities such as improving educational outcomes, leveraging public and private resources, or increasing economic opportunity. Partners for Education at Berea College convenes the Southeastern Kentucky ecosystem using a results based and collective impact framework. The partnership integrates the work of school districts, higher education and businesses to bring awareness to STEM career pathways and to ensure that youth in the focus counties have access to high-quality supports and STEM programming. The Southeastern Kentucky STEM Ecosystem brings together a diverse group of cross-sector partners with a goal to inspire all learners to become visionary STEM creators and innovators through cross sector collaboration and partnership that identify, develop, and support real world application of inquiry based knowledge.



ST. LOUIS REGIONAL STEM LEARNING ECOSYSTEM

STEMSTL is a collaborative consortium committed to equitable access to high-quality STEM learning and employment opportunities for all learners in the St. Louis metro region. Our mission is to collectively develop and deploy quality systems-level changes that will advance STEM learning and career opportunities to empower the growth of diverse problem solvers, innovators, and critical thinkers, enabling them to thrive in a globally connected world.



STEM GUIDES DOWNEAST (MAINE)

Tucked away on the easternmost corner of the U.S, Washington County, Maine is home to just under 32,000 residents spread across an area greater than Delaware and Rhode Island combined. Working together to increase student access and engagement in afterschool STEM, three not-for-profit organizations spearheaded the development of the STEM Learning ecosystem here – Axiom Education & Training Center, UMaine Cooperative Extension: 4-H in Washington County, and the Maine Mathematics and Science Alliance. With funding from the National Science Foundation, they've reached out to local STEM education leaders to assess the opportunities and obstacles to growing a STEM learning environment for local youth. Along the way, they have engaged local individuals and institutions to launch a number of exciting out-of-school programs like 4-H STEM Ambassadors, Family Code Night, and Teen Science Cafes, which not only expand opportunities for youth, but also leverage a strong culture of collaboration among community leaders.



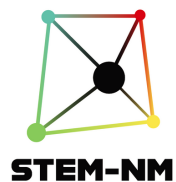
STEM SENC (SOUTHEASTERN NORTH CAROLINA)

STEM SENC is a regional effort in surrounding counties to bring together individuals, organizations, schools, institutions, and businesses for the purpose of supporting STEM learning in southeastern North Carolina. We provide access to aspirational STEM learning opportunities for all learners and those who support them regardless of geographic location, socioeconomic status, race, gender/sex, culture, or ability.



STEM WORKS EAST CENTRAL OHIO

The Central Ohio hub facilitates partnerships that amplify and accelerate existing STEM programs within the region. All programming developed and shared in the hub is open to any school, district, private sector and non-profit partnership in the region.



STEM-NM (NEW MEXICO)

STEM-NM is a dynamic network of cross-sector partners committed to making real impact on STEM education and degree attainment in the Albuquerque metropolitan area. Our vision is that all residents of central New Mexico will have access to a highly coordinated and comprehensive system of support to increase their awareness and understanding of science, technology, engineering, math, and health (STEM-H); all students in central New Mexico will engage in high-quality systematic STEM-H educational and career-oriented experiences, both in school and out of school; and all students with an interest in STEM-H fields will persist through a STEM-H course of study.

SYMBIOSIS (BRITISH COLUMBIA, CANADA)

We reached out to our staff, volunteers, board, and numerous community stakeholders. We facilitated listening sessions with groups and conducted one-on-one interviews. To date, over 1,400 individuals from across British Columbia have answered the call and generously offered their input. Through this intensive consultation process, a strong consensus has emerged around several themes. Among them, equity, ecological sustainability, community collaboration, and a focus on the future. Many have argued that Science World should address pressing issues at the intersection of science and society—in particular the growing need to scale education in the areas of Science, Technology, Engineering, Art & Design, and Math (STEAM).

SYMBIOSIS
STEAM Ecosystem



TAMPA BAY STEM

STEM Learning Ecosystems provide the architecture for cross-sector learning, offering all young people access to STEM-rich learning environments so they can develop important skills and engagement in science, technology, engineering, and math throughout Pre K-16.



TEXAS ECOSYSTEM

The Texas Education Agency is excited to announce that we were accepted into the community of practice of the national STEM Learning Ecosystems Initiative. Learning Ecosystems provide the architecture for cross-sector learning, offering all young people access to STEM-rich learning environments so they can develop important skills and engagement in science, technology, engineering and math throughout Pre-K-20. Strong STEM Learning Ecosystems feature dynamic collaborations among schools, out-of-school time programs, STEM expert institutions (such as museums, science centers, institutions of higher education and STEM professional associations), the private sector, community-based organizations, youth and families.



TULSA REGIONAL STEM ALLIANCE

TRSA is an intermediary organization that is flexible and inclusive enough to welcome all community members yet includes sufficient structure and organizational support to facilitate and coordinate the work that needs to be done.



UTAH STEM ECOSYSTEM

Our ecosystem includes the Salt Lake Education Foundation, local school districts, education foundations, business and industry partners, informal science education, institutions of higher learning, and local community members. We engage with local and rural districts throughout the state.



VENTURA COUNTY STEM NETWORK

VC STEM is a collaborative and interdisciplinary community working to foster the development of tomorrow's STEM leaders. Together we – leaders from higher education, PreK-12 education, business and industry, national parks, local and state government, the military, and non-profits – are laying down a local infrastructure extending from pre-kindergarten to post graduate studies that will encourage our students to be curious and engaged, and ensure that they are prepared, able and ready to join the STEM workforce and become the STEM leaders of tomorrow.



WASHINGTON STEM NETWORK

Washington STEM is a statewide, education nonprofit leveraging STEM for social change, removing barriers to credential attainment, and creating pathways to longterm economic security for systemically underserved students.



WNY STEM HUB

WNY STEM Hub Inc., a 501(c)(3) nonprofit organization, mobilizes schools and stakeholders to develop, nurture and maximize interest in STEM careers through hands-on, one-of-a kind experiences. WNY STEM is an initiative of the United Way of Buffalo and Erie County, the UB Center for Integrated Global Biomedical Sciences and the Empire State STEM Learning Network. Its purpose is to the WNY Community to empower students through life changing STEM experiences – such as the award-winning Hand in Hand, Girls Coding, Schools on the Move and Take Flight Space Experiments Programs – to tackle careers in science, technology, engineering and math.