AGENDA

Welcome

Overview of the STEM Learning Ecosystems
Community of Practice

History

Questions and Answers
Speakers

Gerald Solomon, Executive Director, Samueli Foundation
Alyssa Briggs, Director, SLECoP
Julie Stolzer, Director, SLECoP Global
Tim Sisson, Director, NEOSTEM Ecosystem
LaTrenda Leonard Sherrill, STEAM Director & CS Lead, Remake Learning (Pittsburgh)
Veronica Gonzales, Associate Director, SLECoP
Jeremy Shorr, Director of Digital Innovation and Early Learning

www.stemecosystems.org  @STEMecosystems
Engage in the conversation #stemecosystems
Questions at info@stemecosystems.org
WELCOME

Gerald Solomon, Executive Director, Samueli Foundation
REMINDER:
WHY ARE WE HERE

Alyssa Briggs, Director, SLECoP

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Engage in the conversation #STEMecosystems
Questions at info@stemecosystems.org
WHO ARE WE?
UNDERLYING PREMISE
WHEN DOES LEARNING OCCUR?

LIFELONG AND LIFEWIDE LEARNING

0-5 K  GR 1-12  UG GRAD  WORK  RETIREMENT

FORMAL LEARNING ENVIRONMENTS
INFORMAL LEARNING ENVIRONMENTS

16 WAKING HOURS

9.25%
18.5%
7.7%
5.1%

Attribution: Life Center, Univ. of Washington
RESEARCH & EVIDENCE BEHIND STEM LEARNING ECOSYSTEMS

1990s

1990s-2009

2010

2011-13

STEM Learning Ecosystem

BRIEF HISTORY OF INITIATIVE
TIMELINE AND ACTIVITIES

2015
- 6/15 Launch at Clinton Global Initiative
- 7/15 Solicitation for Cohort 1
- 8/15 Selection of 27 STEM ecosystems
- 11/15 CoP Kick-off at the White House

2016
- 3/16 2nd CoP Chicago, IL
- 4/16 Solicitation for Cohort 2
- 5/19 Announce at U.S. News STEM Solutions
- 7/13 Leadership Institute Newport Beach, CA
- 10/17 3rd CoP Denver, CO

2017
- 1/3 Solicitation for Cohort 3
- 4/24 4th CoP Tampa, FL
- 5/24 Announce at U.S. News STEM Solutions
- Summer LEAD STEM
- 10/3 5th CoP Kansas City

2018
- 3/1 Solicitation for Cohort 4
- 4/4 6th CoP Washington DC w/ US News
- 6/1 Announce Cohort 4
- Summer LEAD STEM Cohort 3
- 11/13 7th CoP Orange County, CA

2019
- 1/7 Solicitation for Cohort 5
- 4/3 8th CoP New Orleans, LA
- Spring Solicitation for Cohort 6
- Summer LEAD STEM Cohort 3
- Fall 9th CoP To be Announced

*Summer LEAD STEM*
STEM LEARNING ECOSYSTEMS
MILESTONES & ACCOMPLISHMENTS
LESSONS LEARNED
WHAT IT TAKES- CHECKLIST

1st Stage: (Threshold)
- Anchor/project leader
- Do they have capacity...Admin support/funding
- It’s all about the Architecture/System!!

2nd Stage: (Demonstrate Success)
- Start Small
- Identify defined area/region to start
- Enlist the right Key Partners onto the bus
- Engage in “community design”...build buy-in, consensus & commitment
- Create Logic Model/Implementation Plan

3rd Stage: (The Work)
- Launch the ecosystem work (demonstration)
- Have a SMART Focus
- Recognize it’s a “slog”
- Share successes and challenges, internally & externally

4th Stage: Replicate/Expand
## 1ST: “THE SLOG”

**THE EVOLUTION OF A STEM LEARNING ECOSYSTEM**

<table>
<thead>
<tr>
<th>Networking</th>
<th>Cooperation</th>
<th>Coordination</th>
<th>Collaboration</th>
<th>Synergy</th>
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</thead>
<tbody>
<tr>
<td>Coalesce like-minded partners</td>
<td>Share vision and goals</td>
<td>Increase number of effective STEM programs</td>
<td>Develop network infrastructure</td>
<td>Agreed upon goals and objectives</td>
</tr>
<tr>
<td>Exchange funding information</td>
<td>Discuss common strategies and objectives</td>
<td>Provide more opportunities for program support and PD</td>
<td>Shared funding</td>
<td>Respect for all enlightened self-interests</td>
</tr>
<tr>
<td>Share grant-making information</td>
<td>Begin to build trust among partners</td>
<td>Begin to think about network infrastructure</td>
<td>Shared goals and objectives</td>
<td>Established and sustainable network infrastructure</td>
</tr>
<tr>
<td>Identifying resources</td>
<td>Provide opportunities for program support and professional development</td>
<td>Commit to some common goals and objectives</td>
<td>Increase number of effective STEM programs</td>
<td>Funding done with conscious impact on others and the system itself</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Provide more opportunities for program support and PD</td>
<td>Communities of Practice operate independently</td>
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<td></td>
<td>Begin linkages between in &amp; out of school learning platforms</td>
<td>Established linkages between in &amp; out of school</td>
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</table>
2ND: “THE FOCUS”
STEM ECOSYSTEM ELEMENTS

Key Partners
1. PreK-12 school system receptive to external partnerships
2. High-quality out-of-school time/youth development system and programs
3. STEM-expert museums, science centers, professional associations, and businesses
4. Institutions of higher education
5. Private sector STEM-focused businesses
6. Parent and community-based organizations

Critical Attributes
1. Anchored by a passionate leader(s) with a collaborative vision and practice
2. Attentive to the enlightened self-interest of all partners
3. Philanthropic and public sector support and in-kind resources

Focus Areas
1. Building the capacity of educators in all sectors.
2. Equipping educators with tools and structures to enable sustained collaboration.
4. Creating learning progressions that connect and deepen STEM experiences over time.
5. Focusing instruction on inquiry, project-based learning and real-world connections to increase relevance.
7. Exposing young people to potential STEM careers.
3RD: THE ECOSYSTEM LOGIC MODEL

**Resources**
- Local Initiative (Members, community partners, network connections and infrastructure)
- Implementation Partners
- Steering Committee (Members, network, expertise)
- Formal Ed
- Science Centers
- Youth Development Entities
- Afterschool and Summer STEM Programs
- Leveraging Existing networks
- State STEM Network
- State Afterschool Network
- Higher Ed
- Business
- Community

**Activities**
- Develop Technical Support (PL/PD) (infrastructure, capacity, key partners, communication, project management)
- Develop and implement program support and professional development (program support and professional development delivery model based on three levels of technical assistance)
- Develop and implement Communities of Practice
- Develop STEM resource menu
- Assist in defining effective STEM programs for program implementation/improvement and evaluation purposes

**Outputs**
- Number of partners in network
- Number of STEM learning opportunities across counties
- Number of educators engaged in professional development
- Number of members in each Communities of Practice
- Types of STEM resources introduced to counties
- Number of effective STEM programs
- Evaluation findings

**Short-Term and Intermediate Outcomes**
- Program outcomes: An increase in the intensity, duration and quality of STEM learning opportunities.
- Staff outcomes: An increase in the confidence, competence, and motivation in offering STEM learning opportunities.
- Student outcomes: An increase in engagement, interest, and applied knowledge of STEM content and processes.
- Initiative outcomes: The documentation of promising practices, linking of results to specific STEM in OST models, and the sharing of this information with the field in ways that can effectively guide program improvement and expansion efforts.

**Impact**
- All students possess the requisite STEM skills to be competitive for 21st century jobs
- All educators and teachers are provided the tools and support to ensure their students are STEM competent and STEM literate
- Community is a leader in STEM workforce competitiveness in State and the United States
PARTICIPATION BENEFITS

- Join the Community of Practice
  - Nearly 70 communities in the United States and Globally
- Convenings
- Community Website
- Collaboration Opportunities
- Webinars
- Support
- Coaching
- Peer Mentoring
- Tools & Assessments
- Resources

STEM ecosystems | LEADSTEM
WHY JOIN THE SLECoP
A PERSPECTIVE FROM ECOSYSTEM LEADS

Tim Sisson, Director, NEOSTEM Ecosystem
LaTrenda Leonard Sherrill, STEAM/CS Lead, Remake Learning (Pittsburgh)

<table>
<thead>
<tr>
<th>BACKGROUND</th>
<th>Why did your ecosystem join the SLECoP and when?</th>
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<tbody>
<tr>
<td></td>
<td>Please offer a little background about your ecosystem.</td>
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<th>VALUE</th>
<th>What are the benefits of the SLECoP?</th>
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<td>What advice do you have for new SLECoP members?</td>
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APPLICATION TIMELINE

- January 7, 2019: Launch online interest form and application process
- January 24, 2019: Webinar #1: Overview of the STEM Learning Ecosystems Community of Practice
- February 13, 2019: Webinar #2: Supporting your Community through the Application Process
- February 28, 2019: Applications due via the online portal
- April 3, 2019: Announce selection at the spring Community of Practice Convening
# UPDATED APPLICATION PROCESS IN 2019

## COHORT 5 & 6

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
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<tbody>
<tr>
<td>January 8</td>
<td>Open C5 Application</td>
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<tr>
<td>January 24</td>
<td>Webinar 1</td>
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<tr>
<td>February 13</td>
<td>Webinar 2</td>
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<tr>
<td>February 28</td>
<td>Application Closes</td>
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<tr>
<td><strong>EARLY MARCH</strong></td>
<td>Announce Selected Communities (Cohort 5)</td>
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<td>April 3-5</td>
<td>Cohort 5 Orientation; EIT Pre-Assessment</td>
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<tr>
<td>May 1</td>
<td>Open C6 Application</td>
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<tr>
<td>May 21</td>
<td>Webinar 1</td>
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<tr>
<td>July 23</td>
<td>Webinar 2</td>
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<tr>
<td><strong>Fall 2019 SLECoP Convening</strong></td>
<td>Cohort 6 Orientation; EIT Pre-Assessment</td>
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APPLICATION PROCESS

• Complete the brief Online Interest Form at www.stemecosystems.org.

• Participate in two webinars about Initiative: (All webinars will be posted at www.stemecosystems.org.)
  
  – Webinar #1: Overview of the STEM Learning Ecosystems Community of Practice
    Thursday, January 24, 2019
    10:00am PT | 11:00am MT | 12:00pm CT | 1:00pm ET
  
  – Webinar #2: Supporting your Community through the Application Process
    Wednesday, February 13, 2019
    10:00am PT | 11:00am MT | 12:00pm CT | 1:00pm ET

• Complete and submit application, including all supplemental materials via the online form by 5:00pm PT on Thursday, February 28, 2019.
APPLICATION

• The application process is designed to:
  – (1) be collaborative in nature and
  – (2) provide an opportunity for you and your partners to understand your community’s level of readiness for potential inclusion into STEM Funders Network STEM Learning Ecosystems Initiative

• The STEM Learning Ecosystems Community of Practice is seeking to understand your community’s interest and honest assessment regarding your level of readiness in cultivating a STEM Learning Ecosystem.
  – We encourage communities in all stages of ecosystem development to apply.
FREQUENTLY ASKED QUESTIONS

Who Can Apply?
– A Community (view criteria at www.stemecosystems.org)

Who is eligible to apply on behalf of the Community?
– “The lead applicant shall be determined by the community-based ecosystem, and there shall be only one application per community” (view eligibility at www.stemecosystems.org)

What is a “Community”?
– “At a minimum, Formal PreK-12, Out of school, stem based organizations, business, higher ed, local or reg’l funder, and community/family” (view criteria at www.stemecosystems.org)

Is this a grant program?
– This is not a grant program but an opportunity for communities to join nearly 70 other STEM Learning Ecosystems in a Global Community of Practice and two years of individualized technical assistance and coaching.

Who can I contact if I have a question?
– Questions? Email info@stemecosystems.org. We will return your email within 24 hours.
PARTICIPATION REQUIREMENTS

Administration:
• Provide and maintain contact information for all identified leads.
• Send out information to Ecosystem members, when necessary

Coaching:
• Actively engage with the assigned coach and the technical assistance team throughout the course of the initiative period.

Active Participation:
• Attend Community of Practice convenings.
• Participate on the Community of Practice Webinars.
• Sign-up on the internal online community website and actively engage including participating in online Community of Practice discussions and practice groups as relevant to your work.

Deliverables:
• Administration of the STEM Learning Ecosystems Indicators Tool virtually within the first 60 days and again in month 10 of the reporting period.
THE WHY?
STEM DRIVES COMMUNITY & ECONOMIC DEVELOPMENT

Tech's New Hotbeds: Cities With Fastest Growth In STEM Jobs Are Far From Silicon Valley

By NICK WINGFIELD and PATRICIA COHEN

SEATTLE — Wanted: A place with a million people, a diverse population, good schools and malleable lawmakers.

Canadian provinces also welcomed.

Amazon took the unusual step of showing interest in Seattle, starting — and the thousands of high-paying tech jobs that come with it.

By the end of the day, cities in states like Michigan, were expected to consider submitting

- 1

The Unlikely Cities That Will Power the U.S. Economy

By Christopher Carbone, Patrick Clarke, Jenny Scott Diamond, and Louis Molinari

September 1, 2015

A decade ago, Richard Myers was the director of the Department of Genetics at the Stanford University School of Medicine, where he enjoyed the fruits of a rich academic environment and the pick of faculty members and graduate students. So he left behind some beloved institutions when, in 2006, he left Palo Alto, Calif., for Huntsville, Ala., to launch an independent research lab, the Helios Alpha Institute.
Charting A Course for Success: America’s Strategy for STEM Education

Based on the work of the 2018 Federal STEM Summit

Prioritizes Ecosystems as the pathway for improving STEM literacy, ensuring a strong workforce and global competitiveness