Leveraging Statewide Partnerships for Scalable Outreach

Sunday, September 30, 2018: 3:15 PM-4:30 PM
The National Girls Collaborative Project brings together organizations committed to informing and encouraging girls to pursue careers in science, technology, engineering, and mathematics (STEM).
1. Maximize access to shared resources within organizations interested in engaging girls in STEM.
Network Projects: Scaling High Quality Curriculum

Collaborative Site Selection

- Site #1: Example: New York Girls Collaborative Project
- Site #2: Example: Alabama Girls Collaborative Project
- Site #3: Example: Texas Girls Collaborative Project

Collaborative Network (40 States)
Collaborative Coming Soon

National Leadership Team
Train the Trainers and Dissemination of Resources to Collaborative Pilot Sites

Collaborative Leadership Team Members Trained by Content Specialists
NGCP Network Projects
Training for educators and professionals working in local youth-serving STEM programs.

IMPACT
Community of Trained Educators Directly Impacting Youth in their Communities
Big Idea

Transform environmental science learning in OST at scale. Ignite curiosity, build skills, foster STEM identity among
Staff training, hands-on citizen science activities, teaching kits
Successes

- 42,000 youth and adults have participated since 2011
- 1,730 clubs in 22

Challenges

- Readiness factors
- Implementation timelines
- Communication
### Impacts and Outcomes

<table>
<thead>
<tr>
<th>Increased youth interest, engagement, value of STEM</th>
<th>Pre-SAC</th>
<th>Post-SAC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Science is fun.</td>
<td>78%</td>
<td>84%</td>
</tr>
<tr>
<td>I’m interested in the natural world.</td>
<td>73%</td>
<td>83%</td>
</tr>
<tr>
<td>I feel like a scientist.</td>
<td>54%</td>
<td>72%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Being in SAC makes me want to learn more about science</th>
<th>81%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Since joining SAC I am more confident in my science skills.</td>
<td>75%</td>
</tr>
</tbody>
</table>
Impacts and Outcomes

<table>
<thead>
<tr>
<th>I was prepared to lead SAC with youth.</th>
<th>Pre-SAC</th>
<th>Post-SAC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>58%</td>
<td>94%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Help youth connect with the natural world.</th>
<th>Pre-SAC</th>
<th>Post-SAC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>62%</td>
<td>94%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Help youth build their STEM identities.</th>
<th>Pre-SAC</th>
<th>Post-SAC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>61%</td>
<td>93%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>This training increased my interest in teaching science.</th>
<th>Pre-SAC</th>
<th>Post-SAC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>94%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>I learned useful skills and strategies.</th>
<th>Pre-SAC</th>
<th>Post-SAC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>96%</td>
</tr>
</tbody>
</table>
Thank you!

Laura Herszenhorn
California Academy of Sciences

www.calacademy.org/sac
lherszenhorn@calacademy.org
Sarah Carter
Manager, STEM Media & Education
Twin Cities Public Television
SciGirls Overview

• The Big Idea:
  – Media and education that change how girls see STEM and how the world sees girls.

• Our Approach
  – On TV, Online, On the Ground

• History
  – Began as an outreach program of DragonflyTV

This material is based upon work supported by the National Science Foundation under Grant No. HRD-1103016. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.
SciGirls CONNECT Goals

• To foster a greater interest in science and engineering among girls ages 8-13, making a dedicated effort to reach girls of color;

• To provide informal STEM educators with training, video resources and complementary print materials modeling authentic explorations that all girls can do; and

• To increase both the quantity and quality of girls’ STEM encouragement programs nationwide, through partnerships with diverse girl-serving organizations.


**SciGirls CONNECT**

- **Content**: *SciGirls* Seven Strategies, hands-on STEM activities, *SciGirls* media

- **Target Audience**: informal STEM organizations and their educators

- **Participants**: science centers/museums, libraries, CBOs, Girl Scout councils, Girls, Inc., universities, and other non-profit STEM organizations
**SciGirls CONNECT Model**

- Girl-serving organizations nationwide apply to become a *SciGirls* Partner Organization.

- *SciGirls* staff, or a Certified *SciGirls* Trainer provide the new Partner a face-to-face training in gender equitable teaching strategies at their program site.

- Trained staff and educators develop *SciGirls* programs. Programs have access to *SciGirls* resources (research, videos, activity guides, webinars, and ongoing program support).

- Trained educators then apply to the *SciGirls* Train-the-Trainer program to become certified to empower other educators with gender equitable strategies.
Challenges and Successes

• **Successes:**
  • Train the trainer model increased the reach (200 -> 3,000+)
  • Trainers were extremely dedicated, believed in the mission
  • Large number of trainers allowed for more trainings
  • Partnerships with organizations like NGCP have helped extend reach

• **Challenges:**
  • Lack of control of individual *SciGirls* programs
  • Difficult to track widespread use of strategies and materials
  • Wanted to target small or high needs programs but they lacked infrastructure
A National Network for Informal Science and Literacy

Julia Skolnik, MSEd
The Franklin Institute
What is Leap into Science?
Goals for Children and Caregivers

- Not content mastery
- Caregivers are both learners and facilitators

Have fun learning together

Think scientifically

Build positive attitudes towards science
How did we get here?

2007-2011: Philadelphia
Developed and piloted science and literacy resources with The Free Library of Philadelphia and early literacy partners

2011-2017: Pilot Cities
Added new resources, and piloted with museum, library, and OST partners in 12 cities
Scaling Nationally through State Systems

- Empower state leader teams of museums, libraries, and out-of-school time organizations
- Train educators who serve rural and urban communities
- Aim to reach over 500,000 people across 15 states by 2021
Goals for State Leaders and Educators

**Knowledge**
**Skills**
**Confidence**
**Collaboration**

For State Leaders:
To effectively **train and support educators** to lead science and literacy programs

For Educators:
To lead engaging science and literacy programs for children and families
Core Four Strategies
For Building Science and Literacy Skills

Watch the video at leap.fi.edu
Fidelity & Flexibility

Fidelity

Maintaining essential elements across network (activities, core four, inclusivity)

Flexibility

Adapting components that reflect their audience (materials, timing, workshops, books)

High-Quality Ownership Sustainability Scale

Effective network at all levels and overtime
Successes and Challenges

**Successes**
- High interest in STEM for young children
- Committed partners
- Small stipend drew sustainable partners

**Challenges**
- Flexibility of books
- Content needs in afterschool
- Tracking programs
Building a National Network

2017-2018
- 25 states applied
- Six states were selected
- Led 15 trainings for 200 educators
- Led 7 workshops for 150 children and families

2019-2021
- Two new cohorts (9 states total)
- Annual National Leap into Science Week (last week of Feb)
Learn more at leap.fi.edu

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ATSC 2018: Leveraging Statewide Partnerships for Scalable Outreach

The Franklin Institute - http://www.fi.edu
Leap into Science - http://leap.fi.edu
Leap into Science is a national program that integrates open-ended science activities with children’s books, designed for children ages 3-10 and their families. We empower educators to offer programs in community settings like libraries, museums, and out-of-school time programs to engage underserved audiences in accessible and familiar settings. In partnership with NGCP and the Institute for Learning Innovation, and with support from NSF, Leap into Science is scaling across 15 states by 2021. We are assembling state leadership teams of representatives from museums, libraries, and out-of-school time organizations to train informal educators who serve urban or rural communities across their states.

Contact Julia Skolnik, Assistant Director of Professional Development, jskolnik@fi.edu

California Academy of Sciences – https://calacademy.org
Science Action Club makes it easy and fun to lead hands-on STEM in out-of-school time—no experience necessary! Through games, projects, and exciting investigations, Science Action Club inspires youth to explore nature, contribute to authentic citizen science research, and design strategies to protect the planet. From rural Alaska to midtown Manhattan, over 42,000 youth and educators in more than 200 cities and towns have participated in Science Action Club since 2011.

Contact Laura Herszenhorn, Director of Expanded Learning and Youth Engagement, lherszenhorn@calacademy.org

Twin Cities Public Television - https://www.tpt.org
SciGirls (pbskids.org/scigirls) is an Emmy award-winning PBS Kids television show, website, and educational outreach program that draws on cutting-edge research about what engages girls in science, technology, engineering and math (STEM) learning and careers. The transmedia effort has reached over 14 million girls, educators, and families, making it the most widely accessed girls’ STEM program available nationally. SciGirls’ videos, interactive website, and hands-on activities work together to address a singular but powerful goal: to inspire, enable, and maximize STEM learning and participation for all girls, with an eye toward future STEM careers. The goal of SciGirls is to change how millions of girls think about STEM.

Contact Sarah Carter, Manager, STEM Media and Education, scarter@tpt.org

National Girls Collaborative Project – https://ngcproject.org
The NGCP brings together organizations throughout the United States that are committed to informing and encouraging girls to pursue careers in science, technology, engineering, and mathematics (STEM).

Contact Casi Herrera, Educational Programs Manager, cherrera@ngcproject.org