Utilizing the Collective Impact Framework: How Universities and Informal Science Institutions Can Partner to Diversify the STEM Workforce

Karen Tingley
Director of Zoos & Aquarium Programs & Business Development,
Education Department
Wildlife Conservation Society

This work is supported by the National Science Foundation, Division of Research on Learning in Formal and Informal Settings, 1421017/1421019 COLLABORATIVE RESEARCH: Project TRUE (Teens Researching Urban Ecology); 1138685 Bridging the Gap: The Effects of A School-To-Career Approach To Promoting Wildlife Science Careers Among Minority Students.
A Need for Diversity in the STEM Workforce

African Americans, Latinos, American Indians, and Alaska Natives account for just 10% of U.S. workers in STEM fields.

In the 2004 Diversity Trends Report, AZA issued a directive to all member institutions addressing the lack of diversity in zoo and aquarium science staff.

Diverse perspectives are needed to solve complex conservation issues.
Lessons Learned from STEM Career Development Programs

- Recruit people with a high interest in STEM or conservation
- Foster strong internal and external partnerships to support participants
- Provide College Prep and Internship Support
- Active, self-directed learning
- Mentoring Component
- School, Caregiver, and Community Connection
Project TRUE - Teens Researching Urban Ecology
Collective Impact Framework

- Common Agenda
- Shared Measurement
- Mutually Reinforcing Activities
- Continuous Communication
- Backbone Organization Support
Common Agenda

Project TRUE
Tiered Mentorship Conceptual Model

Principal Investigators

BZ  CPZ  QZ  PPZ

Project Leaders

Field Research Leaders

Field Research Assistants

(2) Fordham Professors  (4) Graduate Students  (4) WCS Instructors  (16) Undergraduate Students  (59) High School Students
Shared Measurement

- Adjust Program as Needed
- Research and Evaluation Plan
- Process Feedback
Mutually Reinforcing Activities
Continuous Communication

<table>
<thead>
<tr>
<th>Leadership Meetings</th>
<th>Site Visits</th>
<th>Social Media</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Scheduled and As Needed&lt;br&gt;• In Person/ Phone&lt;br&gt;• With PI’s, staff, research/ evaluation teams, &amp; students</td>
<td>• Regular Informal and In-person Communication with Program Participants, Schools, and Caregivers</td>
<td>• @TRUEcologyNYC (Instagram &amp; Twitter)&lt;br&gt;• <a href="https://wcsurbanecology.wordpress.com">https://wcsurbanecology.wordpress.com</a></td>
</tr>
</tbody>
</table>
Backbone Organization
Strong Partnerships Can Yield Positive Results
We Stand for Wildlife™

WCS