The Bio/Diversity Project

Our Mission:

The Bio/Diversity Project is an environmental science outreach program housed within the Women in Science and Engineering (WISE) program at the University of Arizona. The Bio/Diversity Project aims to increase the diversity of voices included in discussions of environmental problems and the development of their solutions. By increasing access to innovative environmental science opportunities and training, mentoring, and work experience, we aim to get students excited about environmental science and support them along their journeys into the workforce.

The WISE program is housed in the Southwest Institute for Research on Women (SIROW), a regional research and resource center dedicated to improving the lives of women and girls and addressing group-based disparities.
WISE's Bio/Diversity Project aims to increase access to innovative environmental science education opportunities and training, mentoring, and work experience along the K-16+ educational pipeline.

2023-2024 Program Summary
In the 2023-2024 academic year, The Bio/Diversity Project hosted 30 undergraduate students from 14 different majors across 7 colleges. UArizona students dedicated 10 hours per week each semester, totaling 5,120 hours to serving our local Tucson community!

Outreach during the Fall semester focused on essential environmental science topics, including species diversity, adaptations of desert plants and animals, causes and consequences of biodiversity decline. In the Spring semester, youth applied these concepts to develop pollinator conservation projects at their schools. Projects included building bird feeders, planting pollinator-friendly plants and seeds, installing wildlife cameras, and conducting data analysis and data visualizations.

The Bio/Diversity Project launched a new data science track of our environmental science outreach internship program. Led by PI Dr. Katy Prudic and coordinated by Dr. Ellen Bledsoe and Elena Greenberg, the new data science outreach is an NSF-funded collaborative research opportunity. "Building Capacity in Data Science through Biodiversity, Conservation, and General Education" provides outreach interns robust training and mentorship from local experts and pairs interns with high school teachers to facilitate data science curriculum through the lens of biodiversity conservation.

Visit https://biodiversityproject.arizona.edu/ to learn more!
IN THE 2023-2024 ACADEMIC YEAR:

- **700+** 6th-9th grade participants
- **30** UArizona student interns
- **7** TUSD & FWUSD partner teachers
- **400+** hours of classroom instruction

More than half (57%) of partner teachers had 2 or more **years of experience as a mentor with the program**.

All 6th-9th grade participants attended **Title 1 schools in metro Tucson**.

More than 2/3 (70%) of the 6th-9th grade participants were **BIPOC youth**.

Through hands-on, place-based, culturally responsive science activities, youth developed a **sense of belonging in environmental science**.

2023-2024 PROGRAM EXPANSIONS:

1. **Spanish language curriculum development and instruction for bilingual classrooms:** This year we **doubled** the number of participating bilingual students from 100 to 200.

2. **Data science modules and introductory coding lessons:** More than 1/4 of all 6th-9th grade students participated in the data science modules. High school students engaged with **3 introductory coding lessons** while middle school students developed **foundational data literacy skills**.

**PARTICIPATING CLASSROOMS BY GRADE LEVEL**

- 9th Grade: 18%
- 8th Grade: 36%
- 7th Grade: 23%
- 6th Grade: 23%

**SCHOOL-BASED CONSERVATION PROJECTS**

- **Installing Wildlife Cameras & Data Analysis**: 40%
- **Planting Pollinator Plants or Seeds**: 44%
- **Building Bird Feeders**: 16%
This year, the Bio/Diversity Project supported 30 UArizona student interns across the Fall 2023 and Spring 2024 semesters. Students were selected from a competitive application process and were paid for their time in the program.

### 2023-2024 Intern Cohort (n=30)*

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cisgender Women</td>
<td>96%</td>
</tr>
<tr>
<td>BIPOC</td>
<td>45%</td>
</tr>
<tr>
<td>First-Generation</td>
<td>14%</td>
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The Bio/Diversity Project student interns represent a variety of academic disciplines. This past year, students received academic credit through 14 different departments at UArizona. The top 6 majors were Environmental Science (23%), Natural Resources and the Environment (20%), Environmental Studies (10%), Biology (7%), Ecology and Evolutionary Biology (7%), and Animal Science (7%).

The Bio/Diversity Project provides weekly professional development opportunities for UArizona student interns in the form of weekly seminars. This year, we expanded our curriculum topics, nearly doubled the number of guest speakers and coordinated 2 new intern cohort field trips.

- 87% Would recommend the program to their peers
- 93% Felt more connected to the Tucson community
- 79% Felt more connected to others on campus
- 97% Felt that the program helped them achieve academic or professional goals this year

*Other includes Colleges of Nursing, Education, Architecture, & the iSchool

*Two UArizona students participated in both Fall and Spring semesters.
We surveyed UArizona student interns immediately before and after participating to learn more about the overall impact of the experience. Results shown below indicate the experience helped build confidence in their academic and professional development abilities, knowledge and skills related to environmental science communication, and motivation to participate in future environmental advocacy efforts.

After the internship, UArizona student interns reported that they feel:

- **Likely to pursue a career in education or educational outreach**: 73%
- **Likely to participate in local environmental and sustainability efforts**: 97%
- **Confident in applying for jobs or internships**: 93%
- **Confident in their leadership ability**: 93%
- **More motivated to participate in diversity, equity, and inclusion efforts**: 90%
- **More confident in their academic abilities**: 83%
- **Likely to participate in local environmental and sustainability efforts**: 97%
- **Confident in their leadership ability**: 93%
- **More confident in their academic abilities**: 83%

Survey results demonstrate notable increases in knowledge, particularly on DEI issues, the Tucson community, and curriculum development.

Survey results:
- **“I feel extremely or very knowledgeable about issues of diversity, equity, and inclusion in environmental orgs”**:
  - Pre-participation (n=32): 10%
  - Post-participation (n=30): 79%
  - Increase: +69%
- **“I feel extremely or very knowledgeable about the Tucson community”**:
  - Pre-participation (n=32): 10%
  - Post-participation (n=30): 54%
  - Increase: +44%
- **“I feel extremely or very knowledgeable about curriculum development”**:
  - Pre-participation (n=32): 13%
  - Post-participation (n=30): 66%
  - Increase: +53%
"I think that this experience has given me outstanding opportunities to improve upon my science communication skills which will be vital in achieving my science related career goals to be an environmental scientist or wildlife biologist."

"The Bio/Diversity project has allowed me to see growth and wonder in the eyes of young scientists here in Tucson."

"After teaching with the Bio/Diversity project, I feel so much more connected to Tucson, to the youth community, to the Sonoran Desert, and to educators around me. Teaching has felt so community-oriented where I have not made the same connections in research. I want to continue exploring where this passion takes me, away from seemingly "sterile" research life to one filled with enriching relationships."

"I think the most important thing that this internship helped with was bridging the gap between taking classes and getting real-world experience. It was amazing to have the opportunity to see what teaching is really like, and I am even more confident that I want teaching to be a part of my career."
THANK YOU TO OUR 2023-2024 SPONSORS!
AND THE 15 INDIVIDUALS & FAMILIES WHO DONATED DURING OUR CROWDFUNDING CAMPAIGN!

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