

Field Studies for Schools

NOSOTROS ACADEMY



**Ironwood Tree
Experience**

2021 - 2022 Program Report



Teachers from Nosotros Academy, a Title I school, collaborated with Ironwood Tree Experience (ITE) to design a place-based and experiential academic enrichment program. Nosotros teachers and ITE instructors developed this program for a diverse student population that includes Hispanic-Latino, Native American, IEP, low-socioeconomic, and English Language Learner high school students, grades 9-12. This program includes in-field lessons that connect Math, ELA, Science, Civics, Social Studies, Geography, and Arizona and Tucson History. The program reinforced Arizona's academic state standards and helped foster an appreciation for learning, school culture, and a sense of stewardship for their community and environment.

ITE Program Staff

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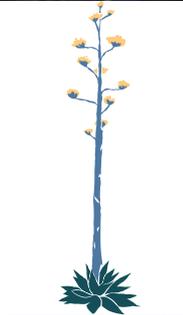
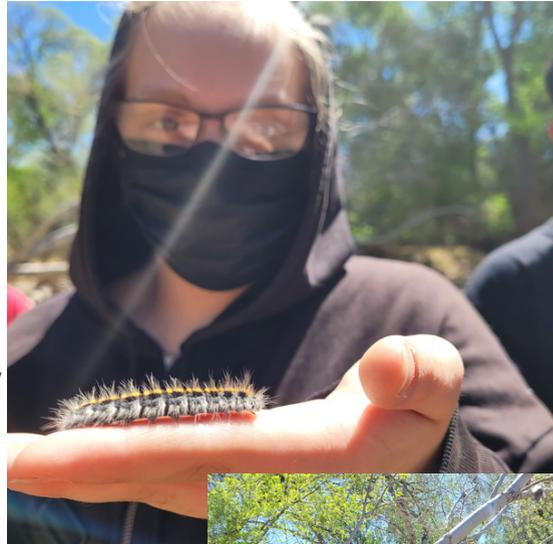
Deborah Oslik

Operations Manager

Program Objectives



- Students will demonstrate and articulate through presentations, journals, and digital media a regional scientific understanding of Tucson in the context of ecological systems, climate change, and sustainability.
- Students will articulate the relationship between local and regional histories inclusive of cultural and racial equity, justice, stewardship and economic opportunity, Students will present the civic relationships between history, environment, culture and community in the development of local, regional, national and international policies.
- Students will conduct primary and secondary research to develop and deliver interpretive presentations directly connected to their experiences in the Field Studies for Schools Program.
- Students will demonstrate improved comfort, confidence and skills in the outdoors and understand and practice ethical outdoor behaviors.
- Students will interact and be able to identify professional and academic relationships within the Tucson Community for Career Readiness in Environmental Science and Sustainable Community Development jobs.



Program Structure

ITE staff met with Nosotros Academy teachers to design and facilitate field lessons. For the 2021-22 school season high school students met for one, four-hour field class 3 Friday's per month. All field classes met at the Nosotros Academy campus for a total of 23 field classes. Students departed from school as a class, walking or traveling by van or public transportation to different locations around urban Tucson and the surrounding public lands where they would meet with 2 or more ITE field instructors. Students were expected to keep a field journal and complete occasional assigned activities related to field outing.

Program Dates

Fall Semester: August-December 2021

Spring Semester: January-May 2022

Total # of in person field experiences: 23 (Friday half days, 3-5 hours of engagement)

Dates

Site

8/13/21, 8/20/21,
8/27/21

Chukson Trail &
Santa Cruz River

9/10/21, 9/17/21,
9/24/21

Sweetwater
Wetlands Park

10/8/21, 10/22/21,
10/29/21

Sabino Canyon
Recreation Area,
Santa Catalina
Mountains

11/12/21, 11/19/21,
12/3/21

Santa Cruz River &
Mission Garden

12/10/21

Nosotros Academy

2/11/22, 2/18/22,
3/11/22

Bowen Stone
House Ruins,
Tucson Mountain
Park

3/25/22, 4/1/22,
4/8/22

Cienega Creek
Natural Preserve

4/15/22, 4/29/22,
5/6/22

Madera Canyon,
Santa Rita
Mountains

5/13/22

Bonita Park,
Nosotros Academy





Ecosystems & Climate Change



Students learned about the interconnectedness of ecosystems through explorations of Sky Island biomes and the watershed. While hiking to the Bowen Stonehouse in Tucson Mountain Park, students identified plants and discussed their connection to other parts of the ecosystem, including soil, birds, mammals, reptiles, and the waterways. Students recommended plants that they would like to see in their school garden. This activity explored the connections between different parts of an ecosystem.

Local & Regional Histories

ITE staff framed programs on the history of the Tohono O'odham, their ancestors, and the natural history of the Sonoran Desert. Through interpretive lessons, students learned about the Santa Cruz River floodplain and the history of agriculture. Staff emphasized word origins such as Chuk-son and Babad Doag and connected Tucson Mountains' geologic history, emphasizing sensory observations of the basalt rock that students can easily find on Sentinel Peak. These interpretations engaged students in local and regional histories.



Skills & Ethics Outdoors



Before heading out into the field, staff led students in risk management discussions. Staff asked the students to identify potential risks we may face in the field. Students identified sun exposure, encounters with wildlife, and dehydration as potential risks, demonstrating their capacity to manage risk in the field. Students learned how to prepare for managing risk in the field through ITE's "Gear Up & Get Ready" process, where they checked in with instructors to confirm that they were carrying water and wearing protective attire.



Program Highlights

Career Readiness



Students met professionals who work in Environmental Science and Sustainable Community Development. For example, students met Imena Ezell, Visitor Center/Partnership Coordinator for the U.S. Forest Service, while at the Sabino Dam in Sabino Canyon. Imena explained to students her pathway to working for the U.S. Forest Service and the process of applying for internships. She also shared opportunities for students to get involved with the U.S. Forest Service while attending high school. Students built relationships with professionals working in Environmental Science and Sustainable Community Development.

Learning Demonstration

During the final session of this program, staff took students on an interpretive walk along the Santa Cruz River. On this walk, the ITE team presented different props like photos of the historic Santa Cruz River or the skull of a skunk and asked students to share what they knew with the group. Students demonstrated their understanding of the Santa Cruz River watershed, ecology, culture, and history through this activity.



Conclusion

In summary, the FSS Nosotros program achieved the outcomes developed by Nosotros Academy and ITE staff in 2021. Nosotros Academy students successfully participated in place-based, experiential field programs that nurtured their connection to place, appreciation for culture and learning, and their sense of stewardship for their community and environment. In the future, the program's overall structure may be adjusted to better meet the needs of Nosotros Academy. The leadership and staff at Ironwood Tree Experience eagerly anticipate future iterations of the FSS Nosostros Academy program.