

# Providing Tools for Increased Participation and Improved Sustainable Practices to the Phoenix Metropolitan Community through Environmental Education – Alexandra Votaw, Ecology Explorers

## The Need for Environmental Education

As the impact of human behavior on the planet's ecosystems becomes increasingly clear, significantly more focus is being devoted to the field of sustainability. Key to this field is the understanding of how people interact with their local environments and how those interactions can be adapted to reduce human impacts regionally, continentally, and even globally. With funding from CAP LTER, Ecology Explorers aims to educate the Phoenix community about the ecology of a desert city and the real world issues a city in the desert must face. Through afterschool curricula, outreach activities at community events, and hosting field trips for local schools, Ecology Explorers is an educational tool for the Phoenix Community starting at a young age and continuing into late adulthood. Aside from in-person learning, Ecology Explorers also provides an extensive lesson plan database and other online resources to help assist educators in classrooms across the country. Ecology Explorers has reached thousands of people through its educational resources with hopes of creating a better informed and more environmentally active generation of citizens.



## Methods in Environmental Education

**Schools:** Local schools and educational programs invite Ecology Explorers to lead educational activities for their students. The educational institutions may request specific topics or allow our team members to create a comprehensive program for their students. Generally these programs can be requested for an individual day or can be over several weeks and run for approximately 45 minutes – 90 minutes per session. School programs spanning more than a few sessions have the additional opportunity to request that the program be either progressive or sequential, creating a comprehensive educational experience customized to better align with the learning styles of various institutions. While Ecology Explorers has worked with a wide range of age groups, most programs target children ages 8 years old to 12 years old. The lessons executed by Ecology Explorers staff include interactive activities, scientific experiments, and engaging lectures covering a wide range of topics. The ultimate goal of all of our lesson plans is to provide a scientific foundation for the understanding of ecology and to inspire curiosity and thoughtfulness in children when interacting with the urban ecological landscape.

**Tabling:** Communities around the Phoenix metropolitan area have the opportunity to request that Ecology Explorers table any of their local events. Ecology Explorers will then execute a short, engaging, and relevant lesson plan to each community member that engages with the table. While many of the activities are geared toward engaging children, adults also benefit greatly from the experience. They are introduced to aspects of their community that they had never previously considered and become more engaged and curious citizens as a result.

**Internship Opportunity:** Ecology Explorers provides undergraduate students at ASU with the opportunity to execute an internship. During this internship experience, the undergraduate students are given numerous opportunities to develop a wide range of skills. Not only does this internship program help Phoenixian citizens and teachers feel more comfortable with ecology concepts, but it also creates a cohort of young environmental educators with the skills to spark curiosity and understanding in people of all ages about the environment around them.

**Online Resources:** Through the Ecology Explorers website, teachers and students across the country have access to additional resources. Teachers can access lesson plans, training tutorials, and scientific protocols while students can explore educational activities. Most of these resources focus specifically on the ecology of the Phoenix Metropolitan area with the hope that the information provided can be readily applied and enforced simply by the user observing their surroundings.

## Implications and Future Work

Ecology Explorers provides educational opportunities that are widely accessible and easy to use. Through integration of our program with field trip and afterschool programming at Title I schools, our program has the opportunity to provide supplementary education to a student demographic that is traditionally underserved. Additionally, Ecology Explorers hopes to substantially increase its opportunities for educational events through two methods; finding more venues and training more environmental educators. In the future, this program hopes to find more venues for programmatic offerings and trainings with the hopes of expanded use of our lesson plans and teaching methods.

