

Project Year-End Summary Report

Title of Project: Native Plant Education for 3rd and 4th Grade Students

Begin answering in the shaded box right beside or below each question and it will expand to accommodate as you type. Use up to a total of two and a half pages for questions 1-8. More detailed presentations, a final report, articles or posters are welcome separately (See final instructions at the end of this form.)*

1. Organization name or Individual who received the grant: Asombro Institute for Science Education

2. Amount of Grant: \$ 1000.00

4. Was additional outside funding obtained? (check box that applies) Yes No
Other funding source(s) if you checked "yes." Tutti Bambini; Jornada Basin LTER program (funded by the National Science Foundation)

5. Briefly, how was the grant money from the Carter Conservation Fund used?

The grant from the Carter Conservation Fund supported the delivery of Asombro's 3rd-grade lesson "Plant Traits: Learning from Herbarium Collections" and Asombro's 4th-grade lesson "Plant Structure and Function" to 10 classes of students in Las Cruces during 2023.

6. Write an abstract or summary of the activities performed and the progress that was made this year on your project. (Save any conclusions, lessons learned, and benefits achieved for the final sections, 7&8.)

With the support of the Carter Conservation Fund and other funding sources, Asombro educators delivered our two lessons on native plants to a total of 510 3rd and 4th-grade students in 22 classes in Las Cruces public schools in 2023. This included 7 classes at Sunrise Elementary School on January 12 and 13, 5 classes at Tombaugh Elementary School on May 23 and 24, 5 classes at Sonoma Elementary School on October 12 and 13, and 5 classes at Monte Vista Elementary School on November 14 and 15.

Students participated in one of the two lessons that Asombro developed in partnership with Dr. Fuentes-Soriano and Zach Rogers from the NMSU Herbarium from 2019-2021. They include:

1) Plant Traits: Learning From Herbarium Collections (3rd-grade) - Students investigate the trait of leaf size in two species of oaks found in New Mexico. They use their understanding of humidity and stomata on leaves to explain why a species from an area with lower humidity has smaller leaves than a species from an area with higher humidity. Throughout the lesson, they role-play as botanists working with specimens from a herbarium, learning the importance of natural history collections. Aligned with the Next Generation Science Standard 3-LS3-2: use evidence to support the explanation that traits can be influenced by the environment.

2) Structure and Function of Plants (4th-grade) - Students learn about the structures and functions of plants in the Chihuahuan Desert. They investigate the external structures of multiple plant species and discuss their functions in supporting the plant's survival. Students

develop arguments about a structure of the creosote bush. Then, the class discusses how the structures function together in a system to support the plant's survival. Aligned with Next Generation Science Standard NGSS 4-LS1-1: construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.

7. How does your project further a Native Plant Society mission area, namely: *plant or ecological education; conservation/restoration of native plants and/or their habitats; adds to botanical research; promotes appropriate use of native plants to conserve water, land and/or wildlife.*

These lessons educate students and teachers about native plant identification, natural history, and ecology as they participate in hands-on activities that align with Next Generation Science Standards for their grade level.

8. Any other conclusions., lessons learned, benefits to you, the community or the environment hopefully result from your work as assisted by this grant.

Following each lesson, teachers are asked to complete an anonymous evaluation which they return to Asombro. Teachers respond to five prompts on a scale from 0 (very strongly disagree) to 10 (very strongly agree), and their high scores show the value they place on the lessons. The average scores from each prompt were:

My students increased their science content knowledge. Average: 10.0

My students can better use scientific practices. Average: 10.0

My students are more excited about science. Average: 9.9

Asombro educators interacted well with students. Average: 10.0

I want to participate in future Asombro programs. 10.0

They added additional notes about the lessons, including:

"Lessons are accessible for all learning levels."

"The students were engaged the whole time! When they started spraying water into containers and made observations about humidity, they were discussing what was going on."

"The instruction was very well presented at a level where students understood and remained engaged the entire time."

"The presenters are knowledgeable and wonderful with the kids! Activities are exciting and very educational."

Final Instructions

Please send your completed form as pdf as an email attachment to cartergrantapps@gmail.com by December 1.

** To remain in good standing for any future funding from the Native Plant Society of New Mexico, we ask that you educate our membership more fully in some way. This could be an article (250 words minimum, at least 1 high resolution illustration or photo) for our newsletter, **or** a paper or electronic copy or link to a published article connected with the past year's work, **or** by making an educational and visual presentation to one of our chapters. Contact information for our 7 area chapters is found on our website at www.npsnm.org under the Chapters tab.*

What are your intentions in this regard? We will submit an article for the Native Plant Society of New Mexico newsletter by December 15, 2023.

This year end report is submitted by (Type your name) Stephanie Bestelmeyer, Executive Director

My typed name is equal to my handwritten signature in testifying to the accuracy and truth of this report to the best of my knowledge today.

eMail address stephanie@asombro.org

Date November 16, 2023

Please contact us again at cartergrantapps@gmail.com if you have any questions or alternate suggestions.