

Asombro Insights

A QUARTERLY NEWSLETTER



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Local Examples Bring Science to Life in Middle Schools

Lizards of White Sands National Park, kangaroo rat energy transfers, creosote bush genetics, migrating sandhill cranes, and rooftop rainwater harvesting – these are definitely not typical topics in most middle school science classrooms.

Yet thanks to Asombro's 13-year-old Stepping Out for Science Inquiry Program, every middle school student in the Las Cruces Public School district learns these fascinating topics from Asombro's talented educators.

All lessons align with middle school science standards, include hands-on investigations, and feature a fascinating local example.

For example, this quarter, every 7th grader is learning about "blanched" (light-colored) lizards at White Sands National Park.

Asombro used current research to create hands-on activity stations modeling the development of this blanched coloration:

- Students model ribosomes to assemble proteins that determine color. Just one mutation in the genetic code leads to blanched lizards!
- Students pretend to be roadrunners hunting blanched and non-blanched lizards. The more camouflaged lizards survive and reproduce, passing along the genes for blanched coloration.
- Finally, students track the increase in the population of blanched lizards (represented by beads) over 10,000 years.

To conclude the lesson, students apply their new knowledge to rock pocket mice at Valley of Fires near Carrizozo, New Mexico. These mice have darker fur to match the lava rock at this site.

While middle school students can be reticent about showing their enthusiasm, we know they enjoy and learn from the lessons. For example, after a recent lesson, a student told us, **'It was fire.'** Another student told us, **"I remember seeing you in 6th grade, and in 7th grade when we**



Several species of lizards at White Sands National Park have "blanched" coloration to better match the white sand. Every Las Cruces 7th grader learns about and receives a trading card from Endless Forms featuring this fascinating example of natural selection.



8th graders use models to help them understand how migrating birds that travel through New Mexico might sense the Earth's magnetic field using special proteins in their eyes called cryptochromes.

smelled the desert plant [creosote bush]. I'm going to remember that forever."

Teachers also love the lessons, giving them an average rating of 9.7 out of 10 for increasing students' science knowledge and exciting them about science. As a teacher told us recently: **"[That student] almost never participates in class, so to see him so engaged was very impressive."**

NEW INTERPRETIVE SIGNS ON THE DESERT EXPERIENCE MINI TRAIL

Many of the signs on the paved Desert Experience Mini Trail in the heart of the Chihuahuan Desert Nature Park were installed more than 10 years ago. In the desert's intense UV radiation, that's a long time!

In the last few months, we began the process of updating these signs, giving them a much-needed design update at the same time. The design matches the newest signs along the Gateway to the Desert Trail. You can see these updated signs on the Desert Experience Mini Trail. Look for lots of great information on:

- Desert Animal Adaptations
- Desert Plant Adaptations
- Geology of the Chihuahuan Desert



Education Director Kelly Sayanagi and Nature Park Manager William Lukefahr install one of the refreshed signs



A new sign about butterflies educates visitors on the Arroyo Trail at the Nature Park.

NEW BUTTERFLY SIGN HIGHLIGHTS PARK BUTTERFLY SURVEYS

Thanks to a grant to Asombro from the Carroll Petrie Foundation, we have a brand new sign along the Arroyo Trail. The sign highlights the importance of butterflies as pollinators. It also features our monitoring project at the Chihuahuan Desert Nature Park that contributes to the New Mexico Butterfly Monitoring Network. The easiest way to view the sign is by parking at the Arroyo Trail parking lot and following the trail for less than a quarter mile. Keep your eyes out for butterflies along the way!

- COMING IN 2025 -

Expect to see some big improvements at the Chihuahuan Desert Nature Park in 2025. A few highlights include:

75-seat Amphitheater - Thanks to a grant from the NM Outdoor Recreation Division's Trails+ program, we are building a new, wheelchair-accessible amphitheater near the upper parking lot. We'll use the amphitheater for school field trips and more public events.



Staff and Board members map out the site of the new, 75-seat amphitheater just south of the upper parking lot at the Chihuahuan Desert Nature Park.

Expanded Parking - The popularity of Asombro's public events and the new amphitheater mean that we need more parking at the site. We'll be transplanting many plants and carefully planning the new parking to minimize disturbance.

Refreshed Xeriscape Memorial Garden - This 20-year-old garden will get some attention in 2025. Look forward to new plants (some transplanted from the expanded parking area), new signs, and more.

More Refreshed Signs on the Desert Experience Mini-Trail - The sign update project on the Mini-Trail will continue with new entrance, West Vista, and East Vista signs in 2025.

New Interpretive Sign on the Yucca Trail - We're adding a sign featuring the fascinating mutualism between the yucca and yucca moth. This is the central story of our 3rd-grade Desert Stories lessons. Now visitors to the Nature Park will learn about it too.

JOIN THE FRIENDS OF THE CHIHUAHUAN DESERT NATURE PARK!

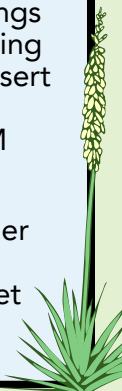
Join a group of friendly, hard-working volunteers who are passionate about the Chihuahuan Desert Nature Park.

Friends of the Chihuahuan Desert Nature Park meet every other month for a morning of learning and labor to keep the Nature Park looking great. We especially need help with our Xeriscape Memorial Garden in upcoming months.

The next two Friends meetings will take place on the following dates at the Chihuahuan Desert Nature Park:

February 8 from 8-11 AM
April 12 from 8-11 AM

Contact Nature Park Manager William Lukefahr (william@asombro.org) to get on the email list or for more information.



The Best of 2024

What a year! Before we get too far into 2025, we have been having a good time reflecting on the many successes from 2024. This includes providing science education for 22,288 K-12 students and 968 teachers. A few other highlights include:

New Staff Members - We were delighted to welcome two experienced, talented Science Educators to our team. LuAnn and Bonnie have jumped right in and been integral to our successes.

Wildlife Wonders at the Park - We hosted seven public events for this series, each featuring a different group of animals. Nearly 400 visitors came to the events; Radical Reptiles, Butterfly Flutterby, and Going Batty were the most well attended.

Teacher Workshops Across Three States - Asombro staff hosted 10 teacher workshops in 2024. We traveled to Mesa, Arizona, Amariillo, Texas, Santa Ana Pueblo, and Albuquerque to provide training and resources to teachers in support of quality science education.

Ecosystem Pen Pals - Las Cruces 5th graders became pen pals with students from Alaska, Colorado, and Virginia in the debut of our Ecosystem Pen Pals, which is based on former Asombro staff member Anna Keener Kimtis's book One Day in the Desert. The project is continuing this year with new 5th graders, and we've also added students from Puerto Rico to the postcard exchange.

New partnerships made this all possible, and we are looking forward to continuing these partnerships and creating even more great highlights in the year ahead.

"You guys had some great stuff at your tables. This was an awesome event. I hope you can do it again."

- Butterfly Flutterby participant

Meeting Celebrates Volunteers

On January 20, Asombro donors, volunteers, and interested community members joined the Board of Directors and staff for our Annual Meeting and Volunteer Celebration.

All seven staff members shared highlights from 2024 and a few things we're excited about for the year to come. A short business meeting included approval of new, three-year Board terms for Carrie Hernandez and Mark Sechrist as well as the approval of a new slate of Board officers (shown on page 1).

Our favorite part of the meeting was celebrating our wonderful volunteers, who make everything we do at Asombro possible. They each received a gift made by Asombro staff members along with our heartfelt gratitude.



THANK YOU! We are grateful to our generous donors since October 2024.

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means

W O N D E R

VOLUNTEER WITH ASOMBRO

Are you looking for a way to give back in 2025? Volunteer with Asombro! We have diverse volunteer opportunities, so there's something for everyone.

- **Monthly volunteer gatherings** - Join a group of friendly folks at the Asombro office on the second Tuesday of every month from 9:30 to 10:30 AM. We prepare materials for upcoming education programs in a lively one-hour session.
- **Assist Asombro staff in classrooms and/or on field trips** - Our lessons are so hands-on that we always need a second person to help hand out and collect materials and answer questions. No previous experience is necessary.
- **Friends of the Chihuahuan Desert Nature Park** - See page two for more on this incredible group of volunteers who help keep the Nature Park looking great.

For more information, please call the office (575-524-3334) or email info@asombro.org

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Have you considered putting Asombro in your estate plan? Please contact Steph Bestelmeyer (575-524-3334) if you are interested in learning more.

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