



Engaging future conservation leaders: Audubon's Outdoor Field Science Program

*New Mexico Department of Game and Fish: Share with Wildlife Final Report
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Description of Work

Over the past two decades, thousands of Santa Fe youth have benefitted from exposure to natural environments, hands-on science curricula, and experiential learning opportunities as part of the *Outdoor Field Science* program through Audubon Southwest (ASW, formerly Audubon New Mexico) and the Randall Davey Audubon Center (RDAC). Our goal is to engage low-income 3rd, 4th, and 5th graders with standards-aligned, inquiry-driven science field trips and in-class programs, spanning 9 hours of contact time. The program's objectives include providing targeted classes with engaging, hands-on, standards-aligned activities and high-quality outdoor experiential education programs focused on topics such as New Mexico wildlife, habitat, conservation, and inquiry.

Studies indicate that effective programming relies on repeated engagement over an extended period of time. By providing multiple contact points with students, including school visits, on-site field trips, and virtual/distance learning opportunities, RDAC staff are employing innovative education techniques that develop deeper understandings and personal relationships with Audubon and our conservation initiatives. The fourth grade Outdoor Field Science program is also one part of a three-year partnership between ASW, the Santa Fe Botanical Garden, and the Santa Fe Watershed Association. Also known as the Santa Fe Outdoor Education Collaborative, this partnership ensures that low-income students in the Santa Fe Public School (SFPS) district receive three consecutive years of high-quality, standards-aligned, outdoor education programming. The curriculum is shared across the three organizations and strategically designed to build on concepts from the previous year, providing students with a greater understanding of our local flora, fauna, and ecosystems.

The Outdoor Field Science program also provides teachers with additional materials to help extend their learning into classroom lessons. Currently, elementary teachers lack a life science curriculum that is both aligned to the recently-adopted NM STEM Ready! Science Standards and locally relevant to the ecology of Northern New Mexico. While NGSS-aligned lessons are available online, few if any of these curricula address New Mexico-specific ecosystems, wildlife, or the unique challenges facing the state. Audubon SW is uniquely positioned to leverage its knowledge and understanding of the new science standards with our expertise of local conservation issues and access to natural spaces.

Success in the 2021-2022 School Year

Audubon SW's Outdoor Field Science Program has continued to be a memorable and successful method of engaging SFPS students in hands-on, outdoor education.

Despite the ongoing challenges of the COVID-19 pandemic, Audubon educators were able to successfully engage students, teachers, and family members throughout the school year. As an inherently outdoor learning experience, our RDAC field trips were well-suited to implementing the school district COVID-19 protocols, and we were able to receive approval with relatively minor changes. During the 2021-22 school year, a total of 29 Title 1 classrooms participated in an RDAC field trip with an Audubon educator. In total, Audubon educators had direct contacts with 790 SFPS students through scholarship-funded programs. **The New Mexico Department of Game and Fish (NMDGF) Share with Wildlife funds supported the hiring of a spring intern and facilitated educational experiences for 17 classes and 411 SFPS Title 1 students** (see Appendix I for program details).

Of the 2021-22 Outdoor Field Studies participants, 100% of students attended Title 1 schools (50-100% of the school's student households are considered low or very-low income), with an extrapolated 88% of students qualifying for free/reduced lunch. Audubon SW continues to prioritize these students and schools due to their under-served populations and to address the systemic exclusion of people of color from the outdoor and conservation movement. Although Santa Fe boasts incredible outdoor recreation opportunities, an overwhelming number of students comment that the trip to RDAC is their first time in a forest. In 2016, 49% of Americans participated in outdoor recreation, but less than 30% were participants of color, and only 12% of those were Hispanic (Outdoor Foundation). Audubon has made a commitment to expanding access and using intentionality to address these historic inequities and ensure equitable access to the outdoors and science.

Program Assessment and Student Evaluation

Before attending their first program in the fall, students usually complete a pre-program assessment with their classroom teachers. Students are assessed on content knowledge; perceptions of science; and personal connections to nature, wildlife, and conservation. Typically, students would complete the same assessment as a post-program evaluation, following the final field trip in the Spring. Due to the COVID-19 disruption and teachers' overwhelming workload, comparative student assessments could not be completed for the 2021-2022 school year.

Following each in-person or field trip program, teachers are asked to complete an evaluation to assess the effectiveness of the program's activities, educator's teaching abilities, and other components. Some of these comments from SFPS teachers included:

"This is such a great field trip, and more important than ever! It gave my students a chance to connect learning to the outside and connect with each other."

"I always love working with you and learning from you... I now have even more respect for you and what you do!"

"So glad we are back this year! This is our favorite field trip!"

Share with Wildlife Funds: Hiring of a Spring Education Intern

The funds received from the NMDGF Share with Wildlife program supported a spring intern to assist with field trips to RDAC. Audubon's internship program targets young professionals looking to gain more experience in teaching and working for a conservation non-profit. It combines on-the-job training, shadowing, and scaffold teaching practice in order to provide interns with safe and effective ways of developing their style and teaching skills.

This spring, we hired Lily Ellenberger, a young professional with experience working in both traditional classrooms and forest school environments. Lily wanted to explore other ways of engaging students in the outdoors and bridging non-traditional learning environments with classrooms. Lily's support allowed students to have more individualized attention and interactions while on their field trip, as well as work in small groups throughout the day. It also allowed for additional behavior management, as some field trips had minimal to no parent chaperone support. Lastly, hiring extra seasonal staff helped with continuity of program offerings as Audubon staff navigated sick days and another COVID-19 case surge. Without the additional staff, more programs would have been cancelled this spring.

In conclusion, Audubon is grateful for the support and flexibility of the Share with Wildlife funds and staff. We are very proud that we were able to still engage a large population of Santa Fe students, despite the ongoing challenges of the pandemic, and look forward to continuing to serve the community.

**Appendix I. Randall Davey Audubon Center, Outdoor Field Studies Program Data,
Spring 2022**

Date	School Name	Grade	No. of Students	Program Name/Topic
3/7/2022	Amy Biehl Community School	4 th Grade	25	Nature's Interconnections
3/25/2022	Chaparral Elementary	3 rd Grade	40	All About Birds
4/6/2022	Amy Biehl Community School	4 th Grade	25	Nature's Interconnections
4/21/2022	Amy Biehl Community School	4 th Grade	25	Nature's Interconnections
4/25/2022	Ramirez Thomas Elementary	2 nd Grade	20	Pollinator Planet
4/26/2022	Ramirez Thomas Elementary	2 nd Grade	20	Pollinator Planet
4/27/2022	Ramirez Thomas Elementary	2 nd Grade	20	Pollinator Planet
4/28/2022	Ramirez Thomas Elementary	2 nd Grade	20	Pollinator Planet
5/2/2022	El Camino Real Academy	4 th Grade	25	Nature's Interconnections
5/3/2022	El Camino Real Academy	4 th Grade	25	Nature's Interconnections
5/4/2022	El Camino Real Academy	4 th Grade	25	Nature's Interconnections
5/4/2022	Nina Otero Community School	4 th Grade	25	Birds of a Feather
5/5/2022	El Camino Real Academy	4 th Grade	25	Nature's Interconnections
5/9/2022	Nina Otero Community School	2 nd Grade	23	Pollinator Planet
5/10/2022	Nina Otero Community School	2 nd Grade	24	Pollinator Planet
5/11/2022	Nina Otero Community School	2 nd Grade	22	Pollinator Planet
5/19/2022	Salazar Elementary	5 th & 6 th Grade	22	Birds of a Feather
		Total Students:	411	