In March of 2018 the Little Shop of Physics (LSOP) teamed up with the Colorado State University Native American Cultural Center (NACC) and the College of Natural Sciences Learning Community (CNSLC) for a spring break trip to Ignacio, CO, the largest community of the Southern Ute Indian Tribe. LSOP has a decades-long relationship with the Southern Ute Education Center, and we visit every 2-3 years.

The LSOP Traveling Science Experience worked with elementary and middle school students who walked from their schools to the Southern Ute Education Center. During the four days of our visit, 500 students had the opportunity to explore our 100+ hands-on science experiments. While exploring, these children had the opportunity to interact with college students affiliated with LSOP, NACC, and CNSLC, including those of Native American descent and first-generation college students. Many students on the Southern Ute Reservation have little experience with science and postsecondary education; seeing students with backgrounds similar to their own who are studying science at college can have a profound impact.

The learning didn’t stop when we left. Each student we worked with at the Education Center received a Halliburton Science-at-Home Kit including a pair of branded 3D glasses, a UV color change bracelet, and a field microscope. The microscopes were partially funded by a donation from the CNSLC students, who raised money for this purpose. Students were referred to our website (lsop.colostate.edu) for additional resources about doing science at home, as well as furthering their science education at the college level.

After school let out, we conducted two teacher workshops with a focus on electricity. The teachers worked in small groups with 2-3 facilitators from LSOP, NACC, and CNSLC. Teachers learned activities developed by LSOP to facilitate hands-on lessons on electricity in their own classrooms using materials which can be readily obtained. In addition they were also given electricity kits, including the human-powered clock, a plasma ball, static sensors, circuit tubes, and static electric levitating wands. More importantly, we modeled inquiry-based education in the workshop, following the 5-E model (engage, explore, explain, extend, evaluate). Education research has shown that this type of inquiry-based teaching is correlated with significant learning gains.

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