

Little Shop of Physics

January 2026 Newsletter



Curiosity Unites Us: 30 Years of Shirts!

Little Shop of Physics began in the fall of 1991. Our first official shirt appeared in 1994, featuring a list of schools on the back to help us stand out during school visits. Every year since, we've had a shirt—most listing the places we've visited, even when our travel plans were still taking shape.

In the fall of 1997, Chris Nichols and Roger Felch taught us how to tie-dye, and the shirts were an instant hit. Now, in our 27th year of tie-dyed shirts, we've chosen a unique color combination—turquoise, lavender, and emerald green—that lets us shine like gemstones. This year's theme, *Curiosity Unites Us: Infinite Questions, Unlimited Wonder*, celebrates the sense of shared discovery that brings us together.

We extend our heartfelt thanks to our sponsors—the College of Natural Sciences, the McCausland Foundation, and Jim Sites and Elaine Regelson—whose generous support makes it possible for us to bring hands-on science to thousands of learners each year.



LSOP Welcomes New Rams at Amplify Welcome 2025



Little Shop of Physics was excited to take part in Amplify Welcome, the CSU College of Natural Sciences (CNS) orientation event for incoming freshmen students. The event brought together new Rams from across CNS to kick off the academic year with community, curiosity, and hands-on discovery.

The highlight of the day was a giant fog-filled balloon dramatically popped using a laser, drawing a crowd and setting the tone for an afternoon of science fun. Students also jumped in to try hands-on activities, including paper rockets, where they could experiment, iterate, and compete for maximum height and distance.

The Little Shop of Physics has a longstanding partnership with Amplify, a program that provides community, support, and enrichment for CNS students. Events like Amplify Welcome reflect a shared commitment to helping students feel connected, confident, and curious as they begin their CSU journey.

We love welcoming a new class and look forward to seeing many of these students throughout their tenure at CSU.

CSU Chem Club Halloween Show



Many thanks to Chem Club for inviting us to be a part of their annual Halloween Spooktacular Show on Saturday, October 25, 2025! This is a fantastic event for all ages, particularly elementary age students, with demo shows and many rooms of activities. If you missed it this year, check it out next year on a Saturday in late October.

If you have a hankering for some liquid nitrogen ice cream, join the Chem Club for the liquid nitrogen ice cream demo at our 32nd Annual Open House on Sunday, March 1 at 4:00pm in the Lory Student Center on main CSU campus.

Little Shop of Physics in South Dakota!

This July, Little Shop of Physics spent a week in South Dakota sharing science with teachers, students, and the community.

On July 9, we hosted a 2-day teacher workshop at Oglala Lakota College in Kyle, South Dakota — a tradition we've proudly continued since 2008. This year, 20 K–12 teachers from across the state joined us to dive into the theme *Waves and Energy*. Together, we explored hands-on activities and the teachers got to take all the materials needed to bring every activity back to their classrooms! We also shared the *Get Energized* kit from the Education and Outreach Center (EOC) at CSU — creating a partnership between Pine Ridge teachers and the EOC! Patrese Atine, the Assistant Vice President for Indigenous and Native American Affairs at CSU, also joined us for the workshop!

When the workshop wrapped up, many of the teachers joined us on the road to Lead, South Dakota, for Neutrino Day — a science festival we've been part of for three years running. We set up over 100 interactive science experiments for the public to enjoy and we were thrilled to share science with more than 2,300 visitors in a single day! For many of the teachers, it was their very first Neutrino Day experience.

A huge thank-you to our host, Misty Brave, a true partner-in-science and “troublemaker” in the very best sense. Misty has been a close friend and collaborator for over 20 years, helping us bring science to teachers, students, and communities throughout the region. We're deeply grateful for her support and our ongoing partnership.

Check out [this video of Neutrino Day](#) that Patrick put together.



Wellington Build-It Days: Over 100 New Experiments!

This fall marked the second year of our Wellington Build-It Days, and we were thrilled to return; last year's success made it an easy decision! Our friend and colleague, Debbie Holman, an 8th grade science teacher at Wellington Middle-High School, once again invited us to collaborate with her students to create LSOP-style hands-on science experiments for display at our annual Open House.

Over the course of just two days, we worked with more than 180 students, who collectively designed and built over 100 science projects. Many students arrived with an idea in mind, so our team sourced the parts in advance and brought all the needed materials right to the school. This was made possible thanks to the generous support of the McCausland Family, whose contributions ensured students had everything they needed to bring their ideas to life.

The creativity these students showed was extraordinary; projects took off in all kinds of directions, each reflecting curiosity, ingenuity, and experimentation. We were amazed by the thoughtful designs, clever builds, and excitement that spread throughout the room as ideas became real, working hands-on science experiments!



In honor of Matthew A. McCausland, a gifted tinkerer who embodied the spirit of LSOP, many students included a small “MAM” somewhere on their project—a touching tribute that make these *Build-It Days* even more meaningful.

Science for All at CSU Spur

An integral part of our mission at Little Shop of Physics is **Science for All**, meeting people where they are and creating meaningful, hands-on science experiences for everyone. One of the ways we bring that mission to life is through our ongoing partnership with **CSU Spur** in Denver, where LSOP leads interactive science activities during community events such as **2nd Saturdays**.

In the fall of 2025, LSOP strengthened its presence at CSU Spur by expanding our role in these public programs. We presented our unique, hands-on science experiences at three themed 2nd Saturday events: **Going Global**, **Día de los Muertos**, and **Made in Colorado**. At each event, teams of LSOP student interns led interactive activities connected to the themes, inviting learners to explore scientific ideas, ask questions, and be scientists.

Across these events in fall 2025, LSOP engaged **approximately 2,000 community members** and supported the professional growth of **dozens of CSU students**, who gained valuable experience in science communication, teamwork, and public engagement. These programs deepen LSOP's impact in Denver while advancing our commitment to **inclusive, culturally relevant science experiences** that are free, fun, and open to all.

We're excited to continue growing this partnership and sharing science with the vibrant communities that gather at CSU Spur for all of their public events. You can catch us at CSU Spur on the following days in 2026!

- January 17 (CSU Day at the National Western Stock Show)
- April 11 (2nd Saturday)
- June 13 (2nd Saturday)



Pine Ridge Fall Break Trip



Each year during the fourth week of November, the Little Shop of Physics travels to the Pine Ridge Reservation, home of the Oglala Lakota Nation, to share hands-on science with K–12 students at local schools. This year, for the first time in our 14-year partnership, we also visited the Rosebud Reservation, bringing science to St. Francis Indian School in Mission, South Dakota. Across these visits, we engaged more than 500 students. LSOP alumnus Tim Arvizo (who was an intern in the late '90s) and his son Hudson happened to be passing through and stopped in to help facilitate activities. Tim was delighted to see that about a dozen of the original hands-on experiments are still on the road, inspiring a new generation of scientists.

Our second stop was Oelrichs Public School in Oelrichs, SD, which we last visited in 2015. Oelrichs is a small school of fewer than 100 students and was excited to host visiting groups from Red Shirt School and Porcupine School. We were especially proud of the Oelrichs high school students who joined the Little Shop team, helping share science with younger students. All students received a Halliburton Science at Home Kit, including color-changing pencils, UV beads, and rainbow glasses.



Our visits to the Oglala Lakota Nation hold a special place in our hearts. What began as a promise in 2008 to visit a single school on the Pine Ridge Reservation has grown into a commitment to visit many schools and has blossomed into a long-term partnership with Oglala Lakota College (OLC). We are deeply grateful to Misty Brave of OLC for coordinating school visits, and to our partners at Generations Indigenous Ways and many friends in South Dakota who take time each year to be part of Team LSOP. We also extend a special thanks to Curt Gabrielson of the Global Alliance of Community Science Workshops, who traveled from California to join us.

In total, our journey covered more than 800 miles, and for many CSU undergraduate students, this was their first visit to South Dakota. The entire team cherished the experience of traveling together and sharing science with students. We are grateful to the Halliburton Foundation for making this trip possible and for supporting our shared belief that curiosity unites us.

A Day of Science and Connection at Wind River



On October 15, the Little Shop of Physics team hit the road for Fort Washakie, Wyoming, on the Wind River Indian Reservation. Home to the Eastern Shoshone and Northern Arapaho tribes, the reservation is part of our long tradition of bringing hands-on science to rural communities. Our small but mighty crew—Patrick (videographer), Guin and Alexi (undergraduate interns), and Cherie—made the trip, with an overnight stay at the Wind River Casino. A big thank-you to Corrine, cousin of our colleague Patrese Atine, for helping us coordinate our stay!

The next morning, we set up our interactive science program in the Fort Washakie Schools gym, where students from pre-K through 12th grade joined us throughout the day. Longtime Fort Washakie teacher Mark Roy was instrumental in organizing the visit!

Many of the experiments we shared were brand new, taking their first trip out on the road. The students at Fort Washakie were the first to explore and test them—and they did so with great curiosity and enthusiasm. It was a day full of discovery, creativity, and connection, and we're grateful to the Fort Washakie community for welcoming us once again.

Check out [this awesome video](#) that Patrick made which highlight the student experience!



My Journey with LSOP by Daniel Berning



I first experienced the Little Shop of Physics when I was four years old at NCAR's Super Science Saturday. Being able to try new things and do hands-on science was incredibly fun, and it sparked a love of science and learning that has stayed with me ever since. I was always excited whenever I had the chance to attend a Little Shop of Physics event because I knew it would be a welcoming space to explore, ask questions, and grow my understanding of how the world works.

When I came to college, I had the opportunity to join the Little Shop of Physics at the beginning of my sophomore year. I felt both nervous and excited. I wanted to inspire and ignite a love of learning in others, just as the Little Shop had done for me so many years earlier. Through my work with the Little Shop of Physics, I believe I've been able to do that for some of the people we bring science to, and that has been incredibly meaningful. Along the way, I've also grown in my ability to communicate complex ideas to a wide range of audiences and become more confident in public speaking.

I believe that everyone has the ability to do science, and that sometimes we are our own biggest obstacle by telling ourselves we are "not smart" or "incapable." Because of this, the ideas that "Everybody is a scientist" and "Curiosity unites us" have become guiding themes for both me and my work with the Little Shop of Physics. I am deeply grateful to the staff, interns, and volunteers who make this program possible and who continue to create opportunities to inspire curiosity through science.

60th Anniversary of the Madison Macdonald Observatory

This year, the Madison Macdonald Observatory (MMO) celebrated 60 years of sharing the wonders of astronomy. On October 17, 2025, LSOP joined the public celebration and a ceremony honoring Dr. Roger Culver for his 50 years of leadership at the observatory. You can learn more about MMO's rich history in *CNS Elements* and in the forthcoming book *The Madison-MacDonald Observatory: The 60th Anniversary Backstory*.

MMO public nights will resume in the spring—[visit the CSU Physics website](#) for dates and details.

Learning to Think by Nisse Ramser



Since studying physics for my bachelor's degree and working with the Little Shop of Physics (LSOP), I've realized the most valuable currency I gained wasn't just a degree—it was a truly robust way of thinking. Studying physics is, at its core, training to be a professional problem-solver. It taught me how to synthesize complex information, extrapolate meaningful conclusions from a messy dataset, and perhaps most crucially, to think critically and vet my sources before acting. These skills are absolutely essential for my current role as an HR department of one at an engineering company focused on satellite communications, a position that demands both creative problem-solving and rapid, critical decision-making every single day.

What truly amplified this foundation was the hands-on experience with LSOP. My time on the road, sharing the wonder of science with people from every imaginable background, was an unparalleled education in human connection. We weren't just demonstrating concepts; we were building rapport, finding common ground, and communicating complex ideas in a way that resonated with a diverse audience, often in a matter of minutes. This background allows me to do more than just process applications; it lets me surprise our engineer candidates by genuinely keeping up with some of the technical jargon. That ability to quickly connect, establish trust, and find shared professional ground—which began at LSOP—has been invaluable to my career success. The combination of physics' rigorous approach to problem-solving and LSOP's masterclass in communication is, in my view, the ultimate preparation for professional life in any field.

—Nisse Ramser, Human Resources Business Partner & SHRM-CP



APS DCMP Grant

The Little Shop of Physics has teamed up with CSU **Assistant Professor of Physics Yulia Maximenko** on a **Public Engagement Mini-Grant** from the American Physical Society's **Division of Condensed Matter Physics (APS DCMP)**. This competitive national program supports innovative efforts to bring condensed matter physics to broader audiences.

The funded project, *Quantum Matter You Can Touch: Making Condensed Matter Physics Tangible Through Outreach*, builds on Dr. Maximenko's research expertise alongside LSOP's 30+ years of hands-on science engagement. We have begun and will continue to develop new condensed matter experiments that can be shared through LSOP's programs and featured at our **Annual Open House** on March 1, 2026.

These new activities will make condensed matter physics concepts accessible through interactive, hands-on experiences, while also engaging CSU students in the design and presentation of the demonstrations.

Only **five proposals nationwide** were selected for funding this year, and we're thrilled that **CSU and the Little Shop of Physics** are among the recipients!

Fall School Visits

For three decades, some things change—experiments get redesigned, interns come and go—but one thing has remained constant: we're still a team fueled by the same spark that inspired us when we were students. Sharing that excitement with the next generation is at the heart of everything we do.

So far this year, our travels have taken us to Stove Prairie Elementary, Frontier Academy in Greeley, Wellington Middle–High School (twice!), Traut Elementary, Fort Washakie Schools in Wyoming, Grandview Elementary in Windsor, and St. Francis Schools and Oelrichs in South Dakota. Each visit has been filled with big questions, bright smiles, and students diving headfirst into discovery.

Our work is supported by grants, including OtterCares, and by the generosity of individual donors. If you'd like to [support our mission](#), any amount helps ensure we can continue bringing hands-on science to schools.

Science@Home Update

Since releasing our **Science@Home** videos, we've continued to expand the series with **new videos featuring a growing group of LSOP interns**. The collection now includes a wider range of hands-on experiments, all designed to be done at home with everyday materials. And all of these videos are available in **both English and Spanish** as part of our commitment to our *Science For All* mission.

These videos wouldn't be possible without the creativity, technical expertise, and steady vision of our videographer, **Patrick**, whose work is essential to bring each experiment to life. From filming and editing to helping interns feel confident on camera, Patrick plays a critical role in making Science@Home engaging, accessible, and fun.

We're excited to keep growing the series—stay tuned for more experiments, more voices, and more Science@Home!

Please [visit our website](#) to check out the latest videos.

LSOP Annual Open House – Sunday, March 1, 2026

Join us at the 32nd Annual Open House! As always, it is free, open to the public, and will be packed with hundreds of hands-on experiments, dynamic presentations, and partners from across CSU. Alumni, join us for a reunion the night before—contact Adam for details.

Find more [information at our website](#).

Support and Follow Us

If you're able, please consider [donating](#) to help us continue bringing hands-on science experiences to learners of all ages. You can donate anytime at our website, but donations in March 2026 will be matched through a CSU Ramfunder campaign.

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