



SOCIETY OF PHYSICS STUDENTS

An organization of the American Institute of Physics

Future Faces of Physics Award Proposal

Project Proposal Title	Physics Discovery Day
Name of School	University of Texas at El Paso
SPS Chapter Number	7266
Total Amount Requested	\$500.00

Abstract

SPS at the University of Texas at El Paso is hosting their annual Physics Discovery Day, in which local high school students attend an all-day event on campus, including lab tours, physics demonstrations, faculty mentoring, career development, college engagement, and fun memories!

Proposal Statement

Overview of Proposed Project/Activity/Event

Our annual Physics Discovery Day event is hosted on campus. We bring in local high school students to campus to get them excited about physics and college in general. This is a full day event in which we do events in the following order: Brief introduction to our SPS chapter and lounge, physics lab tours and the Physics Circus, which is a demonstration of various physics phenomena like kinematics, electromagnetism, and thermodynamics, simultaneously. Then we do Speed Mentoring, where faculty can speak to students and answer any questions they may have, followed by lunch, a physics activity, in which the students can work together to learn about physics in a hands-on manner. Lastly, we do a round of trivia about the things they learned during their trip to UTEP, including prizes for the winners.

This can inspire and motivate local high school students to pursue a career in Physics, or STEM, impacting their lives in a positive way, and increasing college education among an underrepresented group. This idea came to life around 4 years ago, after COVID impacted all college clubs. We wanted to find a way to connect with our community and rekindle the UTEP SPS fire. We think our chapter is well equipped to carry out this event because we have the experience needed throughout the years and with different officers.

How Proposed Activity Promotes Physics Across Cultures

We believe our project can impact our community in a constructive way because as a Hispanic serving institution at around 26,200 undergraduate students, approximately 84% of students are Hispanic and nearly half of them are the first to attend college in their family, UTEP is in a crucial position to lead efforts that inspire and support future scientists from our community. Only 110 of these students are pursuing a degree in physics, which motivates us to increase interest in our program, and physics.

We think that by nurturing curiosity in young students, we help shape the next generation of scientists in our community. As officers of our SPS chapter, we are dedicated to strengthening the presence of physics in El Paso and make it more accessible to all. We aim to create lasting impacts in the lives of underrepresented students to thrive in physics, STEM, and their professional and academic lives. We believe that diversity enriches scientific spaces, and that access to education should not be limited.

Plan for Carrying Out Proposed Project/Activity/Event

- **Personnel:** This event will be planned by our chapter's SPS officers, with help from the UTEP Physics department for various tasks, such as room fees, lab tours and the Physics Circus, Speed Mentoring, and more.
- **Marketing:** SPS Officers in charge of planning this event vote on the high schools that will be invited to participate in the event, which are then contacted directly. We aim to have around 3-4 schools in attendance, rotating which schools attend every year.
- **SPS member participation:** Our chapter members are very involved, and volunteer regularly. We aim to have most of our officers in attendance, plus a minimum of 5 volunteers, who will walk the kids back and forth between the Physics building and the UTEP Student Union, and around 7 professors, who help with Lab Tours, lunch, Speed Mentoring, and the Physics Circus.

- Expertise: We seek help and resources from former UTEP SPS Officers, professors that have participated in the event before, and we expand on this knowledge at the end of the event with a survey for the students.

Project/Activity/Event Timeline

Planning for the event starts as soon as the previous event is over, usually during the end of the Spring semester. During the Fall semester, we start contacting schools that we think might be interested in attending, planning for parking permits for the buses/vans that will be bringing the kids onto campus, planning the tentative schedule, which includes a new physics activity every year, and taking applications for volunteers. We also organize the lab tours, Speed Mentoring, and the Physics Circus with professors and staff. A couple of months before the event, we start reserving rooms needed, finalizing the schedule, and planning food, drinks, and snacks for the kids to have during lunch. We keep constant communication with the teachers and staff from every school attending to make sure that everyone is coordinated and informed on what the day will look like.

The day starts off at 8:30 am with the kids arriving on campus. We then lead them to the room in which the event will be hosted to do introductions from 9 am to 9:30 am, followed by dividing the students into two groups, Group A, which will stay in the room watching the Physics Circus, and Group B, which will be going to the Physics building for lab tours. These activities happen simultaneously from 9:45 am to 11:45 am, switching the groups halfway (Group B watches the Physics Circus, and Group A goes to the lab tours). Then, from 12 pm to 1 pm, we let the kids have lunch inside the SPS Lounge and relax for an hour, with the chance to talk to faculty that is present during this. From 1 pm to 2 pm, the professors help us with Speed Mentoring the kids, from 2 pm to 3 pm we give a quick lesson about our physics activity that year (i.e. what it is, how it relates to physics), which they can then participate in themselves, and lastly from 3 pm to 4 pm we do a fun physics trivia, in which the winners can win a prize.

Activity Evaluation Plan

After this event, we prepare two surveys, one for the kids and their teachers/chaperones, and one for the volunteers and professors that helped us out. We ask them what they thought of the event, any improvements that could be made, if they would attend again, and if this increased their interest in college and/or physics. This always gives us valuable insight for the next event.

Budget Justification

The expenses for this event are as follows: we are purchasing supplies for the goodie bags given to the winners of the trivia contest, and supplies for the physics activity. We are also purchasing t-shirts for the volunteers, professors and SPS officers, which can help the students be able to find us easily and increases volunteer engagement, colored name tags for the kids and the volunteer they're assigned to wear and markers for the name tags. Then, we are purchasing lunch for the kids, which is usually pizza, water/juice, and snacks. We have some money saved up from various fundraising events throughout the Fall semester, and Minerpalooza, a festival UTEP hosts in which student organizations can fundraise. We also get help from the Physics Department and the UTEP College of Science for purchases like lunch, and room fees. Lastly, we get help from the schools attending by transporting their students to and from campus.