



SOCIETY OF PHYSICS STUDENTS

An organization of the American Institute of Physics

Future Faces of Physics Award Proposal

Project Proposal Title	Future Faces of Physics with CSM SPS
Name of School	Colorado School of Mines
SPS Chapter Number	Chapter 1287
Total Amount Requested	\$500 (I have heard the amount was increased from \$300)

Abstract

To promote future generations to pursue science Colorado School of Mines travels to a diverse and underprivileged school in Colorado to teach science for a day. The chapter creates a day for the students to work through a set of worksheets on topics presented by the chapter's demonstrations.

Proposal Statement

The entire Proposal Statement should be no more than 2 pages, and organized as follows.

Overview of Proposed Project/Activity/Event

This project is a repeat of what we performed last year. The guiding principle is that many schools in the area ask for the chapter to come and show science to the children. We choose the school with the most need for our huge FFOP event. We rent a bus to take normally 20+ chapter members and demonstrations to the school. We then set up for a full day of teaching the children science in a fun and engaging way. We make worksheets to guide the students through the demonstrations as we show them off. This shows the children in the school that science is not just a boring subject taught in school. We also have the ability to show more interesting phenomena since the school usually has a very small budget and cannot buy science equipment. The school is usually a middle school so that the children are old enough to take our message to heart and still young enough to choose science as a career path.

How Proposed Activity Promotes Physics Across Cultures

This activity will help diversify physics since we choose an underprivileged school. The students we teach are generally minorities in physics and need a push to show them they can become a physicist. We also know that the community is strengthened by our event since we are requested to come and fill a gap in science. The last few events we have performed like this have also been greatly praised by the teachers of the children.

Plan for Carrying Out Proposed Project/Activity/Event

- The event is planned by the VP of Outreach of the Chapter and the corresponding school that will host the event.
- We don't need to market for the event since the school children will already be at the school since we perform the event during school hours.
- We tend to have 20-30 CSM SPS members as volunteers to host various "booths" at the school.
- These "booths" are stations with demonstrations on topics throughout physics such as optics and electricity.
- Most of the SPS members are juniors and seniors in physics and can explain simple topics to the middle school children.
- Each "booth" has a corresponding worksheet for the student to interact and ask questions about the science of the demonstration.

Project/Activity/Event Timeline

While the actual date of the project has not yet been planned we choose a time around April. This is because we host a large event called Haunted Physics Lab in late October. This event draws hundreds of people and leads to many requests from schools for our FFOP event. In January or February, the school is chosen and a date in April planned for the event. March is the chapter's prep time to make new demonstrations, repair old ones, and make the worksheets. When the date of the event arrives the SPS members meet on campus early and travel to the school. We host the event throughout the school day and then travel home.

Activity Evaluation Plan

We evaluate our success based upon the school's evaluation of our event. We ask that the school hosting the event tells us of anything we could have done better or different. By doing this we get evaluations from the science teachers of the school. This last year we also received some emails from parents telling us that their child loved the event. By having this kind of feedback from the teachers watching the event we get to know the areas where the club can improve the event and what the teachers thought was effective. We take all the feedback into account when planning a new event or the next year's FFOP event.

Budget Justification

The money from SPS will mostly go towards a few categories. The first is some money will go towards member ideas of new physics demonstrations. A section of the money will go towards replacing the safety glass on our Jacob's Ladder demonstration and the casing on the Laminar flow Demonstration. These are two demos we use on a regular basis and need to be fixed from repeated use. A section will go towards feeding the volunteers a small breakfast and lunch at the event. Any left over funds will need to be allocated to the bus transportation. This is by far the largest cost to the event coming in at around \$1500 to bus all the volunteers and demos to the school we choose. A small amount of funding will come from the physics department, but most of the funds have to come from fundraising efforts. A small amount of money will also be needed from fundraising to buy materials for our make and take experiments. These are fun little projects such as silly putty and a wire motor that we required things like batteries, corn starch, and glue in large quantities for.