



SOCIETY OF PHYSICS STUDENTS

An organization of the American Institute of Physics

Marsh White Award Report Template

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| Project Proposal Title | Bringing Physics to the Community for People of All Ages |
| Name of School | The University of Southern Mississippi |
| SPS Chapter Number | 6626 |
| Project Lead (name then email address) | Robert McGrath robert.mcgrath@eagles.usm.edu |
| Total Amount Received from SPS | \$500.00 |
| Total Amount Expended from SPS | \$500.00 |

Summary of Award Activities

The University of Southern Mississippi has participated in a community festival called Hubfest for several years now with the assistance of the Marsh White Award. Hubfest is an excellent outreach opportunity as it offers us the chance to interact with the general public. We see both a broader spectrum and a much larger number of people than we do in our normal outreach events.

Statement of Activity

Overview of Award Activity

Brief description – Our chapter has done demonstrations at Hubfest for the past few years with the assistance of the Marsh White award. This event is great for outreach because it is a street festival that attracts a true cross-section of the population of the area surrounding our school, and it enables us to show physics in a really fun and interactive way. In 2015, the festival attracted tens of thousands of people. This past April, we had a booth in a higher traffic area, and had hundreds of people stop and talk to us.

- Outcomes – We had the opportunity to reach out and talk to the community about physics and science in general, all the while having a fun time doing so. We met with a vast spectrum of people from toddlers to senior citizens.
- Audience – Our target audience was anyone and everyone in our surrounding community. We also wanted to expand from our usual target audience of high schools, and reach out to elementary, middle, or even home-schooled children.
- Context of the Project – Our department chair really supports outreach, so this fits nicely in our efforts to reach more people. He wants us to expand out to anyone and everyone we can possibly get to learn a little more about physics, and help promote our small department. Hubfest is also good for this because of our ability to pitch physics to elementary and middle school age children as well as their parents. This year we had the Department of Physics and Astronomy help support us with the cost of the liquid nitrogen.
- Story from the event – We were performing our demonstration as usual, freezing marshmallows and the like, when some “biker” guys came up to our booth. We performed the demo for the gruff looking crowd, and were a little hesitant to continue when we saw the stern expressions. They began to step back from our booth and talk amongst themselves, while we were watching hesitantly. The main “biker” guy came up to me and handed me a flyer. It turns out they loved our demo and invited us to a Crusin' for St. Jude Children's Hospital event the following week. After that we smashed some bananas and a racquetball with them and drew even more people to our booth.

Impact Assessment: How the Project/Activity/Event Promoted Interest in Physics

Our main goal was to reach out to as many people as possible about physics and hopefully develop relationships with members of the community that we can use to gain further outreach opportunities. We had a few bumps along the road. We didn't anticipate an increase in the cost for liquid nitrogen or the registration fee, so we had to adjust our initial budget accordingly. Ultimately, we decided to ask our department for some support, and they decided to cover the entire liquid nitrogen fee. We were able to meet and talk with several hundred people that stopped by and see our demonstrations. We hope to use the relationships we created to do more outreach events at local schools in the next year. With all said and done, I would say that our event was a successful one.

Key Metrics and Reflection

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| Who was the target audience of your project? | Our Community and Surrounding Area |
| How many attendees/participants were directly impacted by your project? Please describe them (for example “50 third grade students” or “25 families”). | Several hundred, perhaps close to a thousand people, who stopped by our booth to see and interact with our demos. |
| How many students from your SPS chapter were involved in the activity, and in what capacity? | 12 SPS Members and our Advisor Dr. Vera |
| Was the amount of money you received from SPS sufficient to carry out the activities outlined in your proposal? Could you have used additional funding? If yes, how much would you have liked and how would the additional funding have augmented your activity? | Yes the amount of money was enough to complete the project and goals. While additional funding would always be welcome, I believe we had enough for this event with the help of our department. |
| Do you anticipate repeating this project/activity/event in the future, or having a follow-up project/activity/event? If yes, please describe. | Yes we plan to continue this event every year for as long as we are able to. |
| What new relationships did you build through this project? | Many new relationships not only with students, but with people from all walks of life. |
| If you were to do your project again, what would you do differently? | I would try to include more demonstrations not just related to liquid nitrogen and lasers. |

Expenditures

Expenditure Table

| Item | Please explain how this expense relates to your project as outlined in your proposal. | Cost |
|--------------------------|---|--------------|
| Hubfest Registration | The cost of registration for the event | 200 |
| T-shirts | Given to volunteers at the event | 150 |
| Balloons | We freeze them in Liquid Nitrogen and make Balloon Animals | 15 |
| Racquetballs | We freeze them in Liquid Nitrogen and smash them | 20 |
| Marshmallows | To freeze and distribute at the event | 15 |
| Flowers | To freeze in Liquid Nitrogen | 10 |
| Produce | To freeze and smash | 15 |
| Granola Bars | For volunteers to eat | 10 |
| Water | For volunteers to drink | 20 |
| Paper towels | To clean the station | 6 |
| Paper Plates | To hand out marshmallows | 4 |
| Wet Wipes | To clean the station and utensils | 5 |
| Air Pump | To help make balloon animals | 15 |
| Laser | Small hand-held laser | 10 |
| Batteries | For the laser | 5 |
| Total of Expenses | | \$500 |

Activity Photos

Note that you will be encouraged to upload high resolution copies of your best photos directly to SPS via the FluidReview site when you submit your report.



Taken by a SPS Member: Some SPS Members(Sunita, Bharath, Kapil, Dil, Durga, Myer, and Robert) who volunteered for one of the shifts.



Taken by SPS Member: SPS members Kevin and Andrew freezing a racquet ball



Taken by SPS member: SPS members(Abigail, Bryan, and Robert) freezing marshmallows to hand out.



If you have any questions, please contact the SPS National Office Staff
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