SOCIETY OF PHYSICS STUDENTS
An organization of the American Institute of Physics

Marsh W. White Award Proposal

Project Proposal Title	Rhodes College Rites To Play
Name of School	Rhodes College
SPS Chapter Number	5940
Total Amount Requested	$421.63

Abstract

Rhodes College SPS will host hands-on physics demonstrations at the annual Rites to Play community event. Designed to inspire curiosity in science among children and families in Midtown Memphis, the event uses fun, interactive experiments to make physics approachable and engaging for all ages while strengthening community connections.

Proposal Statement

Overview of Proposed Project/Activity/Event

Rites to Play is an annual event at Rhodes College, designed to engage the greater Memphis community with the college and provide Midtown Memphis families with a day of fun. Although the Rhodes College Kinney Program is the primary organizer of the event, various Rhodes College student organizations and departments host booths at the event. The Rhodes SPS, specifically, aims to provide these families with engaging activities related to physics.

This year, Rhodes SPS plans to host the following demonstrations at Rites To Play: elephant toothpaste, barrel crush, melted pennies, and a "Trash-cano" (a volcanic explosion of rubber ducks, usually contained in a trash can). It is also planned to include other interactive activities, such as freezing candy with liquid nitrogen, an oobleck pit where children can run, and a leaf-blower-powered hovercraft. Children will be free to wander and explore with their families/chaperones to see and have these physics demonstrations explained to them, making this a fun and educational opportunity!

The target audience for the Rites to Play event is parents and kids from the local Memphis community, specifically Midtown Memphis, where Rhodes College is located. Additionally, the event encourages attendance from the families of Rhodes' faculty and alumni. Rhodes SPS will partner with the Rhodes College Kinney Program for most planning and marketing, as well as keeping our social media updated with news of the event. We will also be marketing to organizations such as the Refugee Empowerment Program and the KROC Center, with which we participate in other outreach events. The event will be primarily advertised to local elementary and middle schools, with approximately 150 children expected to attend. The Rhodes College SPS chapter is a regular participant in Rites to Play and is excited to participate again this year! All the Rhodes SPS officers are excited to plan and attend this event and look forward to physics being shown to local kids in such a fun environment!

How Proposed Activity Promotes Interest in Physics

The annual Rhodes College “Rites to Play” inspires students and the local community to develop an interest in and understanding of physics through fun, interactive, and engaging demonstrations. By displaying physics concepts in an exciting and enthusiastic environment, this event promotes curiosity in science and physics, displaying how the world works. This event is a very memorable experience for all those involved, especially for children, by creating positive associations with physics. “Rites to Play” reaches a broad audience with support from Rhodes College, maintaining the positive reputation for this event. Rhodes SPS aspires to create an environment that encourages children and those from all generations to be enthusiastic and interested in physics.

Plan for Carrying Out Proposed Project/Activity/Event

Personnel:
The Rhodes College SPS President, Katherine Hazelwood, will oversee all event planning and communication with the Rhodes College Kinney Program. Progress will be monitored through weekly executive board meetings leading up to the event. Emily Bingham, the chapter's Outreach Officer, will coordinate demonstration planning, materials, and volunteer training. Faculty Advisor Dr. Hoffmeister will provide safety oversight and final approval of all demonstrations and setup plans.

Marketing:
Marketing for Rites to Play will be conducted in collaboration with the Rhodes College Kinney Program, which promotes the event throughout the Memphis community. SPS will share event details through Rhodes' student email newsletters, flyers on campus, and social media accounts. Outreach will also extend to community partners such as the Refugee Empowerment Program, where Rhodes SPS participates in STEM engagement activities.

SPS Member Participation:
Approximately 6-10 SPS members will assist with planning, setup, and running demonstrations during the event. Volunteers will help prepare materials, explain the physics concepts behind each demonstration, and maintain a safe, engaging environment. Additional volunteers from the Chemistry Club and other STEM organizations may assist with crowd management and setup. Pre-event training sessions will be held to ensure volunteers are confident in explaining each demonstration and understand all safety guidelines.

Expertise:
The Rhodes College SPS chapter has extensive experience conducting physics demonstrations for public outreach, including Rites to Play in previous years and events such as Overton Park's STEM Day. Members experienced in handling liquid nitrogen and pressurized containers will lead the more advanced demonstrations, such as "trash-cano," "barrel crush," and "elephant toothpaste," under faculty supervision. With trained volunteers and tested experiments, the chapter is well-prepared to ensure a fun, safe, and educational experience for all attendees.

This structured approach of dividing responsibilities, organizing training, and collaborating with experienced campus partners ensures the event will run smoothly while effectively promoting enthusiasm for physics in the Memphis community.

Project/Activity/Event Timeline

By end of Febuary	Organize volunteers for event, both from inside and outside our SPS chapter and order necessary materials for demos.
First week of March	Collect/organize necessary materials
Mid-March	Allow time for ordered parts to arrive
By March 20	Receive all ordered parts and materials, thouroughly test all demos

By April 1	Map out location of demos and tables at event, finalize olunteers
Week of Event	Perform necessary volunteer training and organize all necessary items for event
Early April	Rites to Play
Mid-April - Early May	Construct Final Report

Activity Evaluation Plan

To quantify the event's success, we will count the number of attendees with a check-in table at the entrance of the event. Having a great number of attendees will exhibit community interest in the event as well as display the success of our efforts. We will use Rhodes College's attendance tracking method through Presence to count the number of students and faculty attending the event, as well as noting the number of children with adults. We will also ensure that these children are supervised by an adult. To quantify whether the event promotes an interest in physics in the community, we will request that participants engage in a brief survey about the event, providing their answers to qualitative questions, like whether they would attend the event again, as well as whether they would attend the event again in the future. The feedback from the survey will help us assess the participants' enjoyment, suggestions, and likelihood to participate next year. It will also help us understand how well the event encourages curiosity in physics and encourages strong relationships within the Memphis community. Volunteers running demonstrations will observe and monitor participant reactions and engagement. This will help us determine the accessibility and approval of our demonstrations. After the event, we will discuss the survey responses, as well as the demonstration volunteers' assessments and our own opinions on the event in the next officer meeting after the event. This will help us to consider the event's implementations and evaluate what went well and what could be improved for next year.

Budget Justification

We're asking for funding to buy the consumable supplies for one of our most exciting and hands-on demos at the Rites to Play event we host each year. Our whole goal is to create a fun, memorable day that helps kids and their families get genuinely excited about physics and STEM.
Here's what the money can help fund:

- Corn Starch: We want to create a giant oobleck pit! Kids have always loved playing with oobleck at our past events, so we want to take it to the next level. Building a pit large enough for them to walk (or even run) across is a new, exciting experience that will create a lasting memory and enrich their scientific understanding.
- Wet Wipes: This is a simple and practical need. An oobleck pit is messy, and we need wipes so the kids can easily clean up afterward and enjoy the rest of the event.
- Candy (like Skittles, Starbursts, etc.): This is for our liquid nitrogen-frozen candy demonstration. This demo has been a "big hit" with kids in the past. It's a fun, edible, and safe way for them to see thermodynamics in action.

We also receive help from Rhodes College, which helps this grant go even further. The Rhodes Chemistry Department will be providing all the liquid nitrogen for us, and our own Physics Department is lending us all the other equipment we need, like barrels and safety gear.
In the context of the Rites to Play event, both these demos will help in connecting our SPS chapter with the local Memphis community and help children develop a genuine love for science.