



# SOCIETY OF PHYSICS STUDENTS

An organization of the American Institute of Physics

## Future Faces of Physics Award Proposal

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Project Proposal Title	<b><u>Lab for Kids</u></b>
Name of School	Adelphi University
SPS Chapter Number	SPS Chapter # 0020 Sigma Pi Sigma Chapter # 124
Total Amount Requested	\$265

### Abstract

We propose to demonstrate and discuss a homemade simple electric motor as part of our “Lab for Kids” outreach program. We plan to purchase the components necessary to construct such a motor, and develop a modular kit that the children could assist us in assembling, resulting in a working electric motor that they can take home.

# Proposal Statement

## **Overview of Proposed Activity**

For the past few years at Adelphi University, the Physics Club has hosted an outreach program called “Lab for Kids”. We invite a group of minority students from a local high school come to campus and they spend the day with professors and members of the Physics Club. They take a tour of campus and have the opportunity to ask us any questions they have about college, from applying to classes, physics, and careers in physics. Afterwards, we break them up into groups and introduce them to several different physics topics through lab experiments. We have some stations that are just demonstrations, and others that are interactive, where the students work together to complete an experiment. Finally, we eat lunch and discuss the day together.

With the money from this Award, we plan to buy the parts to build several electric motors and use it as our primary project during “Lab for Kids”. We will explain to the students what an electric motor is, how it works, and show them how to build one. We then plan to assist the students in constructing the generator from prepared components and allow them to take their small motor home.

## **How Proposed Activity Promotes Physics Across Cultures**

Our outreach program is related to the purposes of The Future Faces of Physics Award because we are introducing the field of physics to a group of minority students. These students have not been shown the various opportunities that they have available to them, and so we hope to show them that we can be a resource to them. We can guide them to go after those opportunities, especially in the various fields of physics, and assist them along the way to success.

Usually we hold this activity towards the end of the spring semester of each academic year, around the middle of April. We are planning to do the same this year, and host the outreach program in the middle of April 2014. The outreach program is a one-day event in which students arrive in the morning, between the hours of 9-10am and stay until about 2-3pm in the afternoon.

We plan to request money from Adelphi’s Center for Student Involvement for the lunch. We already have much of the equipment on hand to carry out many of the demonstrations. With the money from the Award, we plan to buy the parts necessary to build a simple electric motor.

## Plan for Carrying Out Proposed Project/Activity/Event

### Physics Club Officers

Jessica Scheff, President, [jessicascheff@mail.adelphi.edu](mailto:jessicascheff@mail.adelphi.edu)

Michael Trietsch, Vice President, [michaeltrietsch@mail.adelphi.edu](mailto:michaeltrietsch@mail.adelphi.edu)

John Dellatto, Vice President, [johndellatto@mail.adelphi.edu](mailto:johndellatto@mail.adelphi.edu)

Brian Kaufman, Treasurer, [briankaufman@mail.adelphi.edu](mailto:briankaufman@mail.adelphi.edu)

Dennis Mars, Secretary, [dennismars@mail.adelphi.edu](mailto:dennismars@mail.adelphi.edu)

### Faculty Advisor

Professor Sean Bentley, [bentley@adelphi.edu](mailto:bentley@adelphi.edu)

- This is an event the Physics Club tries to hold every year. Our faculty advisor Professor Sean Bentley will organize the students coming while the rest of the officers organize the projects and demonstrations. The officers will also be responsible for the placing of the orders.
- Every Physics club officer and most of the Physics club members are also SPS members.

## Project/Activity/Event Timeline

Set a date for Lab for Kids –  Contact Westbury High School and coordinate when the students will come (probably middle of April)	By: Friday, February 10
Order the materials for the motor	By: Friday, February 24
Discuss Logistics –  Put together the project, get volunteers from Physics Club, and discuss a schedule for Lab for Kids	By: Friday, March 9
Lab for Kids Event Day	middle of April

## Activity Evaluation Plan

To evaluate the activity we would start with tracking the attendance. The majority of the physics club will be present as well as the students from highschool. We record attendance for every physics club event we hold. Afterwards we could conduct a small survey for the students to tell us how they liked the projects and demonstrations and if they learned a lot. We would also discuss their plans for the future about science and if projects like ours helps in deciding what they would like to do. These evaluations will also help us to choose future projects.

## Budget Justification

We would be using the money given to us specifically to purchase the items for assembling several electrical motors so each student can make one and take it home with them.

D- Batteries	\$15
Insulated 22G wire	\$20
Large-eyed, long, metal sewing needles:	\$6
Modeling clay	\$10
Electrical Tape	\$5
Small circular magnets	\$15
Hardware	\$10
Hobby knives	\$15

Total: \$295

Thank you for your time and consideration.



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## Future Faces of Physics Award: Budget Proposal

Name of School: Adelphi University

Project Proposal Title: Lab for Kids

Name of Primary Student Contact: Jessica Scheff

Item Number	Item Description	Cost per Item	Number of items	Total Cost
1	D- Batteries	\$15	7	<b>105.00</b>
2	Insulated 22G wire	\$20	2	<b>40.00</b>
3	Large-eyed, long, metal sewing needles:	\$6	15	<b>90.00</b>
4	Modeling clay	\$10	1	10.00
5	Electrical Tape	\$5	2	10.00
6	Small circular magnets	\$15	1	15.00
7	Hardware	\$10	1	10.00
8	Hobby knives	\$15	1	15.00
9				-
10				-
11				-
12				
13				
14				
15				
16				
17				-
18				-
19				-
20				-
Total Proposed Cost				<b>295.00</b>

Please note that the total proposed cost should be no more than \$300.00.