

POPSci: End-of-the-Year Summary

Due to complications at Nimitz Middle School, Ms. Lauren Hall was unable to participate in our proposed outreach program. We chose to continue POPSci instead at a neighboring high school whose population is made up of students who are thoroughly underrepresented in the science community. Dr. Bill Taylor, the director of the University Preparatory Program at CSULA, has put us in contact with Mr. Allen Cox, a physics and engineering teacher at Lincoln High School. We have been able to work with his students through both the Saturday morning lab sessions we host here at CSULA, and through our outreach visits to the high school during the week. This summary will discuss those weekend experiments, as well as the trips taken by the CSULA Physics and Astronomy Club (PAC) to Lincoln High School.

The high school students who participate in the Saturday morning program worked on experiments to better understand standing waves and magnetic fields. PAC members assisted in assuring all lab procedures were carried out correctly, and that all students thoroughly understood the concepts behind these experiments. These labs will continue in the 2011-2012 academic year, when we will continue to introduce new physics concepts to incoming Lincoln High School students.

Four PAC representatives participated in the Jet Propulsion Laboratory (JPL) Open House, which allows visitors to enter a prestigious research lab that is normally closed off to the public. PAC members Ariana Valdez, Tino Truong, Tzitzlaly Barajas, and Velveth Klee attended this event with Dr. Taylor, Mr. Cox, and sixteen Lincoln High School sophomores, juniors, and seniors. As we guided them to the different science exhibits on-lab, we took the opportunity to talk to them about the different career options in science, as well as explain the science behind the research and why it is important. Since two of the PAC members who attended also hold internship positions on-lab, we also took this opportunity to talk to them about our personal experience with conducting research, and what it is we do.

After the students finished their standardized testing, they began their rocketry project, in which we applied a good portion of our funds to assist. The last few weeks of May were dedicated to designing the rocket, taking into consideration the aerodynamic aspects of design, while the first week of June is scheduled for launching the rockets. (We will send additional photos of launches that week.)



Figure 1: JPL 2011 Open House



Figure 2: Tiny Rover Models



Figure 3: Ariana, Tino, Tzitaly take in a show about exploring planets.



Figure 4: Mr. Allen Cox and Dr. Bill Taylor prepare to explore the planets also.



Figure 5: Calculating all of the forces that will be applied to their rocket.



Figure 6: Ready to put together the rocket!



Figure 7: Velveth assisted with physics calculations in preparation for flight.



Figure 8: Tino is finishing inspections for the final stages before launch.

Conclusion

As the academic year draws to a close, our successes of the year have laid a solid foundation to continue physics outreach in the upcoming 2011-2012 academic year. Our program has coordinated with Mr. Cox to continue sending students to Lincoln High School throughout the year as well as host additional physics sessions at CSULA. The rocketry project will open doors for the students to work on more sophisticated projects that will develop their physics background in preparation for doing research and for college. Our chapter will submit another Marsh W. White proposal for 2012 to assist in our dedication to promoting physics to underrepresented communities in Los Angeles.

Expenditures

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| Rocketry Equipment for 4 classes | \$200 |
| Paint Supplies for 4 classes | \$ 80 |