

Creighton University Sigma Pi Sigma Chapter Award Report

Physics Field Day 2013

The Creighton University Sigma Pi Sigma chapter and Physics Club hosted the 2013 Field Day on March 23, 2013. The event was attended by 51 students representing six area high schools. Students competed in six events: Rocket Building, Stairway to Heaven, Circuit Building, Death Star Laser Aiming, Quiz Bowl and Chalk Talk.

Rocket Building was a “take home” event, where each team brought their own, home-made rocket to show at Field Day. The rockets were judged based on creativity, design aesthetics, and the height the rocket reached during flight.

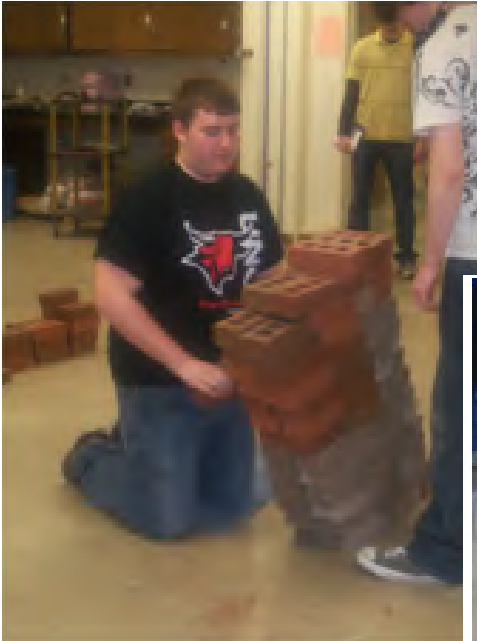


Stand clear! 3... 2... 1... Blast off!

In Stairway to Heaven, students stacked bricks to try to create the longest “stairway” (structure overhanging a reference line). Stairways were judged by both how high and how long the overhang reached.



Now that's a stairway!



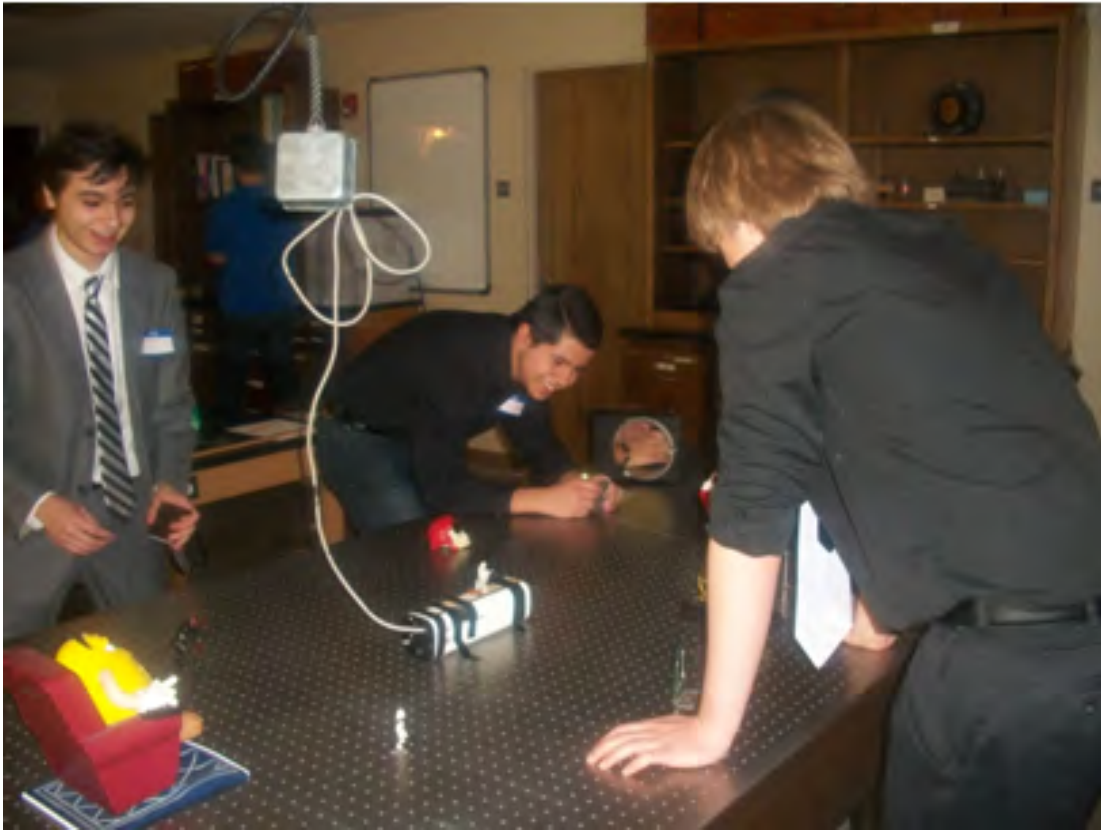
In Circuit Building, students were provided with batteries, alligator clips, and resistors and tried to build a circuit that resulted in a specific voltage when read with a voltmeter.



Students were challenged to divert a laser beam through their choice of optical elements and hit a target all the while avoiding objects placed in their path in Death Star Laser Aiming. The catch—the laser wasn't turned on! Students got points based on how many optical elements they used, how quickly they achieved their goal, and how close they were to their target. Bonus points were awarded if a team could successfully use a prism to bend the laser beam.



More pictures of Death Star Laser Aiming!



Quiz Bowl is a Jeopardy-style game that tests the students' grasp on some of the subtler points of physics. Teams of contestants raced each other to solve physics problems and answer physics trivia questions within the allotted time.



For the Chalk Talk activity, each team was assigned a scientist who had contributed significantly to their field in the last 50 years. One member of each team gave a 5 minute talk about the scientific contributions of their scientist, and used the chalk board to illustrate the basic principles of the scientist's ideas. This activity allowed students to develop public speaking skills as they had to get up in front of all participants of Field Day and talk about the scientist they have been assigned.



This year's Field Day also featured a teacher appreciation lunch and a student panel for the high school students. The student panel served as an opportunity to let the high school students ask questions about college, in particular physics at Creighton University.

While events were being scored at the end of the day, the physics club members debuted their demo show, a series of eight of the club's favorite demos, such as the Ruben's tube (where sound sent through a copper tube creates standing waves visible in flames fueled by a propane source) and the egg sheet toss (where no matter how hard you throw an egg at a sheet, it remains intact). The Physics Club plans to perform the demo show at local high schools during the next school year.



It's flying!!



At the end of the day, students were rewarded for all of their hard work and enthusiasm for physics with ribbons, certificates and trophies!



Field Day Expenses:

Demo Show	315.85
Food and Beverage	506.95
Trophies and Awards	86.5
Total	\$909.30