Summary Report for Cascades Science Squad Science Days – July 28, 2012

Jul 14	Jul 28	Aug 11	Aug 25	Sep 8	Sep 22

Cascades Science Center Foundation is a non-profit organization with a mission to inspire enthusiasm for science, technology, engineering and mathematics through hands-on science education. Thanks to the parents for getting involved with the foundation by making their child part of the Science Squad , volunteers (activity leads and activity assistants) for donating their time to engage kids in science and Children's Home Society of Washington for providing a venue at North Seattle Family Center. Next session is on **Saturday, August 11, 2012.** If you are the activity lead or activity assistant, you can find pertinent information at Cascades Science Squad Activity Lead Guide. Overall the event went very well. William Brenes and Yasmin Gastelo, thank you for doing fabulous job as the program lead of the day. The photos from the event can be found on our Facebook page here. Bryan Benites, Arturo Lire, Ashish Harchwani – thank you for moderating the classes and helping the activity leads. Activity Leads, without you the gift of education to the kids would not have been possible – THANK YOU!

Physical Science

Density — **Lead: Guadakupe Aguayo, Alex Henry, Yina Arenas**

In this session, the kids learned about the properties of density

- In Hydrometer activity, the students built a hydrometer to measure the density of liquids and find the most dense liquid
- In Layers of Liquid activity, the students learned about the density of liquids and objects. They used flotation as a way to evaluate the density of materials.
- In Mystic Sand activity, students learned about the chemical structure of magic sand and how it affects its interactions with water and alcohol

Engineering

Intro to Electronics — **Lead: Miguel Ferrandiz, Claribel Orellana, Amy Fu, Cyrus Liu**

In this introductory session to electronics, the students learned about a Simple Electronics Circuit using a battery to light up an LED.

They then learnt about use of switches when constructing a series circuit using bulbs and batteries in a row.

The finally were divided into groups and showed how to build an Electric Circuit Using a Breadboard, they also learned basic soldering skills.

Aerodynamics

Aerodynamics — **Lead: Amy Fu, Blakeley Williams, Vincent Wong, Cyrus Liu**

In this session, the students continued the discussion of the four forces of Flight. Thrust is the motion that moves an airplane through the air and students were able to demonstrate it. They were also shown videos of different aircrafts using different types of thrust to illustrate this concept.

Drag is the force that opposes an aircraft's motion through the air and it's generated by every part of the airplane when it is flying. When designing airplanes engineers try to reduce the amount of drag on an airplane. Students were taught how geometric shape and size affect the amount of form drag on an object through measurement and analysis.