



Summary Report for Cascades Science Squad Science Days – July 14, 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, July 28, 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, even though there were some hurdles with the supplies and organizations. We are making attempts to make sure that we have all supplies at hand for the future events. 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, Yina Arenas, Arturo Lire, Damarcus and others ... thank you for assisting with the activities and keeping kids focused.

Physical Science



Household Chemistry

Lead: Marcia Walker, Aaron Miller, Yina Arenas

In this session, the kids learned about chemical reactions using the household products such as baking soda, baking powder and lemon juice.

- In [It's a Gas Lemon Fizz](#) activity, the students learnt how the sodium bicarbonate of the baking soda reacts with the citric acid in lemon juice to form carbon dioxide gas.
- In [It's a Gas Fizz Inflater](#) activity, the students inflate a balloon without having to blow it up with mouth or a pump.
- Key learnings from the [Kitchen Mystery](#) activity
 - When Baking Powder is mixed with water, there are small bubbles and sound of a soft fizzing noise. When baking powder is used in cooking, it is mixed in with wet ingredients. This makes the chemicals in the baking powder dissolve and they produce carbon dioxide bubbles, which makes the mixture rise.
 - If Cream of Tartar (acidic substance) is mixed with baking powder or baking soda, there is chemical reaction.
 - Did you know that Baking Powder contains Baking Soda and Cream of Tartar?

Engineering



Machines in our lives

Lead: Kacie Long, Alaina Kinnon

In this session machines, the students learnt about the [simple machines](#) (wheel & axle, screw, pulley, wedge) and how simple machines can be combined together to make compound machines. The students were divided into teams and given an assignment to design and [build their own catapult](#) to launch jelly beans. The simple machines found in the catapult: arm is a lever and the straw around the dowel forms a wheel-and-axle. It was really exciting to see each team to come up with their own designs of the catapult. After all that's what engineering is all about!

Aerodynamics



Airplane Parts & Movements

Lead: Jose Narvaez, Cyrus Liu, Francisco Franco

In this session, the students learnt about [Airplane Parts & Movements](#), [Four Forces of Motion](#) and learnt how to make effective [paper airplanes](#). Engineers often create small-size models of a new product to test the design. This is especially true with airplanes. Model testing tells engineers how a design responds to different air conditions and aircraft shapes, and lets her/him experiment with the control surfaces that are used to steer the aircraft. Using small models allows engineers to throw away a model that does not work, which makes much more sense than throwing away a full-size (large and expensive to build) aircraft that does not work. Kids learnt to create two different designs of paper planes: one that goes the furthest and another one that is more steadier in the air.