CASCADES SCIENCE SQUAD
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Summary Report for Science Squad Sunday Playday – Apr 29, 2012

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. Thank you for getting involved with the foundation by making your child part of the Science Squad. We were back to StudentRND center for fourth session in our program. Next session is on **Sunday, May 13, 2012 (Happy Mother's Day)**! You can find the photos from the event at the Facebook page. While you are there, don't forget to like Cascades Science Center Foundation to support our cause.

Hands-on Experience

Physical Science – Environmental Chemistry
Lead: John Hormaechea, Erol Balevi

Children wonder where water comes from. We typically tell them that it comes from precipitation, and that it's stored in natural reservoirs such as ponds, lakes and streams. But any child who has examined pond water can clearly see that it's often dirty, green and yucky, and not at all like what comes out of the faucets at home. We did a fun experiment to help explain how we convert natural stores of water into clean, safe supplies for human consumption. The demonstration of how dirty water can be cleaned by filtering it through rocks, sand, grass and charcoal in a drinking bottle wasn't always successful, but we had fun building the filter and learning how filtering works. Learn more here.

Chemistry activities provided courtesy of Oregon Museum of Science and Industry (OMSI) Chemistry Cookbook

Kodu – Character Actions
Lead: Julian Boss

We missed having an individual computer for each kid this time (Microsoft Store was kind to provide all the computers in our last session). We hope one day we will have generous donors that can enable us to have a computer for each child in our hands-on labs.
In this session, the kids enhanced their Kodu knowledge by reviewing creatables and working on timers and pages. The pages can be used in Kodu to change character behavior, for example, eating an apple may allow a character who is typically chased by another character to suddenly be the chaser. Timers can be used in different ways – beating the clock game scenarios to code of behaviors for a character bound within the time limit. The Kodu Curriculum: Keyboard and Mouse further talks about creatables and timers.

Learn

e-Textiles – Wearable electronics
Presenter: Sara Beckwith

Have you wondered how those illuminated costumes work? This is done via soft circuits. Soft Circuits, also known as electronic textiles, are electrical circuits created using flexible conductive material (such as conductive thread and fabric) in conjunction with electrical components (lights, batteries, switches and sensors). In this workshop, the students learnt about sewing an electric circuit onto a fabric using a conductive thread . Sara used Lilypad Arduino, a sewable microcontroller toolkit for this experiment. A coin cell battery is used to power the circuit. The students were fascinated to see the power flow from the positive terminal of the battery, through circuit components, and back to the negative terminal of the battery. There are tons of cool wearable computing projects kids can create from a flashing backpack to a heart monitor tied to a vest.

Apply

SCIENTIFIC METHOD REVIEW

0. Observation
1. Question
2. Hypothesis
3. Experiment
4. Record & Analyze Data
5. Conclusion
6. Share Results

Imaginative Playground
Lead: N/A

We ran out of time this time and will proceed with team projects in our next session.

#	Team Name	Science Question
1	**Bob** Daniel Lu, Daniel Hong, James Lai	Why does a door bell ring?
2	**The Eaters of Pi** Patrick, Lucas, Daniel Pogrebinsky, Ton	How does electric current flow through an electric circuit?
3	**The Idiots** Subarno, Dev, Joseph Li, Daniel Li, Jacob	Why does the Lego robot change direction when it hits an obstacle?
4	**Science People** Eric, Nicholas, Angelina	How do rollercoasters work?