

## Summer 2011 Chair Report

The summer of IYC 2011 was very eventful for the Mid Hudson section. Activities included 8 eventful days at Camp Hayden Marks (part of Sharpe Reservation for the Fresh Air Fund), IYC inspired events at the Plattekill Library courtesy of the YCC Chair, a Girl Scout day at Camp Wendy for 50 scouts, a joint event with the Northeast ACS section and the Greater Boston Mass Spec Discussion Group, and of course Renegades Baseball! Plus a National meeting in Denver, CO as Hurricane Irene approached the East Coast.

The main highlight of the summer was the work of your section's Councilor at Sharpe Reservation. This is the summer camp for the Fresh Air Fund, whose mission is to bring the outdoors to thousands of New York City children every summer. Camp Hayden Marks is one of five camps on the property. For the last few years they had a Mad Science program. This year the program was run by Mark Clayten. On eight days throughout the summer, roughly once per week, an IYC inspired theme was infused into the program by George Ruger. Nearly 200 children and camp staff were able to see a little bit of Chemistry added into their program. Each session had an overview of IYC 2011 and the Global Water Experiment. Some basic pH testing was done with red cabbage indicator on some common household materials, bleach, vinegar, and ammonia. Water samples were also tested for pH from several lakes on the property as well as the tap water. The data will be added to the Global Water Experiment database, and will also be presented as a poster at Pittcon 2012 in the Analytical Chemistry Division.

However, the Chemistry did not stop there. Other activities were added into the program as well. Many of the sessions were exposed to OOBLECK, which is a fascinating material. It is made up of corn starch and water, with some food coloring added. A lab manual comes with this activity, and the young researchers are exposed to the scientific method. They have to determine whether the substance is a solid or a liquid, and design experiments to test their hypothesis. They also get quite messy in the process. They also were able to see a chemical volcano of baking soda and vinegar, with various colors made during the course of the summer. The most popular color was purple. This activity was even conducted while a reporter for the NY Times was present.

The campers at Mad Science were also exposed to the 12 Principles of Green Chemistry, although in minor ways. The campers are only seven to ten after all. One of the activities was creating a "green" glue using some basic materials found in an average kitchen. During the summer the glue was compared to a standard store bought variety, and did quite well in it's ability to stick cut out shapes of paper onto a posterboard. The arts and crafts department was also shown this wonderful activity, and hopefully they used it as well. Another activity was making polymers using simple household materials such as salt, sugar, baking powder, Borax, Elmer's glue, and water. Don't tell the boys this activity was taken out of a Girl Scout requirement.

A large amount of glassware and materials for these activities was provided for by a donation from the NYS DEC. Other money for materials came from the section's IPG. Among the items purchased were lab coats, which were tye-dyed and presented to the camp director and

Mad Science director at the end of camp. One item still being worked on is a fume hood, which will hopefully be donated by Labconco in the near future. How many summer camps do you know of that have a working fume hood? That's what I thought!

The Cool Science program at the Plattekill Library had three dates in July and August, with a fourth date coming up this fall. The activities were included in the August 24th edition of the Southern Ulster Times. The first session on July 9 featured Oobleck, pH experiments, and of course water testing. The pH of nearby Lembo Lake was 8.9, compared to the tap water of the Library with a value of 7.0. I guess those water softeners do work. The July 23rd session involved making "green" glue and polymers. The August 6th event was dedicated to Energy. The attendees made batteries out of potatoes, lemons, and limes using Zn and Cu electrodes. Then the YCC Chair Jessica made a solar cell using blackberry juice and a kit provided by Beyond Benign. Raspberry juice was tried as well, but due to technical difficulties it did not work as well.

Girl Scout camp had a lot of Chemistry this year. On Thursday morning, July 14th the opening skit was a demonstration by a mad scientist using lots of dry ice and potions of various color changing indicators. This was capped off with a glycerine solution where dry ice was added and the bubbling created lots of foam, which was tossed around quite a bit. During the day, five sessions of about a dozen kids rotated throughout the program. The Chemistry session led by your Chair had the scouts working on one of two badges, either Making it Matter, or Science in Action, depending on the age group. Over 50 attendees received a small dose of Chemistry. Activities included filling up a balloon with gas using baking soda and vinegar, making polymers, acid-base chemistry, identifying things at camp which use technology, and talking to an Engineer. We used the phone-in method, and talked to Tammy at Tectonic Engineering.

The joint event with the Northeast section of the ACS and the GBMSDG is summed up quite well in the attached article. And 13 pictures with captions were published on the Chelmsford Patch website.

Would summer be complete without our annual trip to Dutchess Stadium? This summer three events were held. The first was a day game on Monday July 18th, which was camp day. Kids from summer camps filled the stadium. The Mid Hudson Councilor gave a short interview before the game (which can be seen on Youtube) and threw out the first pitch, then staffed a table with literature about ACS and IYC and the Chemistry Ambassadors program. 2500 baseball cards were handed out with the Mid Hudson section website and the ACS IYC website included with the other player information. A second game was added on August 19th, but this time there was a long rain delay and no interview. However, more cards were handed out. The third game was our 3rd Annual Welcome Back to School Night. The student population was a little bit busy, so the tickets were used by attendees of some of the other summer IYC events.