

## Illinois Sections Cooperative State Fair Project Annual Report for 2006

The Illinois ACS Sections' tent at the Illinois State Fair was even more successful in 2006 than in 2005! In 2006, our cooperative project promoting the positive aspects of chemistry drew more than 13,000 visitors to our tent in Conservation World at the Illinois State Fair August 11-20. **Our visitor's attendance was up 15% from last year and has increased significantly each year since we started this project in 2004! We used a larger tent (20' by 30') in 2006 to accommodate the number of visitors and to spread out the activity stations.**

Ten Illinois ACS Sections (**Chicago, Decatur-Springfield, East Central Illinois, Heartland, Illinois-Iowa, Joliet, Mark Twain, Rock River, Southern Illinois, and St. Louis**) involving 44 enthusiastic volunteers participated in the activities. **Appendix A** lists the members of the organizational planning committee and the number of tent volunteers from each Illinois section. **Appendix B** gives information on how we obtained volunteers from our various Illinois local sections and the types of volunteer activities performed within the tent.

We conducted the following activities within the tent:

- the "jelly bean test" at the entrance of the tent (this activity shows the relationship of taste and smell and was a good way to draw people to and into the tent)
- the new SuperBubbler activity at the entrance of the tent (making huge soap bubbles that the kids found fascinating and could run a "catch"; this was another good way to draw people to the into the tent);
- fourteen continuous demonstrations (four new ones this year) and five hands-on activities (**Appendix C**)
- an interactive chemistry quiz (winners received prizes); this year, we added more questions and expanded the questions to two levels (standard and expert) (**Appendix D**);
- display tables with literature for children and adults to take home on fun chemistry-related activities and on commonly-used products; including "What's That Stuff?" articles from *C&EN*, *ChemMatters*, NCW's *Celebrating Chemistry*, JCE journals, Project SEED brochures, safety brochures, periodic tables

- display boards with a variety of posters on topics such as chemical safety in the home, food science, inventions, a variety of periodic charts, and biographies of women and minority chemists
- ACS "Hooray for Chemistry" bags, engraved pencils with our project's website, JCE's pencils, and UV-sensitive sunburn cards we handed out
- for teachers, specially-prepared bags containing a variety of resource materials (a CD containing 150 experiments suitable for young students, CPDUs sign-up sheets, pencils, rain gauge, literature) that were handed out to the 375 teachers that visited the tent and signed-in. Information on the CD is in **Appendix E**.
- a daily raffle of an ACS mole (to the first teacher that visited)
- **a new activity, water bottles engraved with "Got Slime?" and the project's website**, were given out to visitors
- **another new activity was the offering of a NCW activity patch for youth groups that visited the tent and signed up**. Information on this patch is in **Appendix F**.

The activities within the tent impacted a large number of visitors ranging from young children to adults representing a wide range of education and occupations. This project allowed Illinois chemists the opportunity to interact with the public to improve its perception of chemistry and chemists by communicating the value and fun of chemistry.

Visitors again had the opportunity to complete a survey sheet to give us their opinion of the tent. The majority of visitors gave high marks for the tent activities and indicated they would like for us to return in 2007.

The website initially established for the 2004 cooperative ACS Illinois Sections State Fair project was updated and maintained for the 2006 activity. The website is at **<http://membership.acs.org/C/Chicago/statefair/index.html>** (**Appendix G**). The website includes information regarding planning committee meetings, a listing of all of the Illinois ACS Sections with links to each section's home page, online sign-up for volunteers to work the tent, the chemistry quiz, the link to the full listing of educational resources on the CD, descriptions of the experiments done in the tent, a list of our sponsors, and photos.

Keys to the success of this project were: the collaborative work of our Illinois sections; financial support from local businesses, sections, and individuals; ACS and other organizations that donated display materials, give-aways, lab supplies, rain gauges, and/or services; volunteers' time and talents (**Appendix H**); and the positive and enthusiastic attitude we brought to this project that was reflected in the types of activities and literature that we made available, and our personal interactions with the public at the Fair. This year, the Chicago Section also did a fund-raiser, selling Carson's Community Day coupon books to augment our income.

The Illinois State Fair's Conservation World program guide is **Appendix I** and lists our tent at site 17.

Photos are in **Appendix J**.

ACS Strategic Thrusts supported: #3, 4, & 10

## **Appendix A**

### **Organizational Planning Committee**

#### **Chicago Section**

Cherlyn Bradley  
Chantel Kamm  
Fran Kravitz  
Milt Levenberg  
Avrom Litin  
Woonkie Paik  
Marsha Phillips

#### **Decatur-Springfield**

Harsh Bapat

#### **Illinois-Iowa Section**

Jerod Corbin

#### **Heartland Section**

Steve Hughes  
Craig McLauchlan

#### **East Central Illinois Section**

Mary LeFaivre

**Mark Twain Section**

Frank Salter  
Jackie Stewart

**Rock River Section**

Chong Zheng

**Tent Volunteers**

Chicago Section: 21  
Decatur-Springfield Section: 2  
East Central Section: 1  
Heartland Section: 2  
Illinois-Iowa Section: 2  
Joliet Section: 2  
Mark Twain Section: 2  
Rock River Section: 2  
Southern Illinois Section: 9  
St. Louis Section: 1

## **Appendix B**

### **Volunteers**

Volunteers were the life-blood of this project. The members of the planning committee had six conference call meetings prior to the opening of the State Fair. The volunteer staff set up tent operations the day prior to the opening of the Fair, manned the tent throughout the 10 days of the Fair, and closed down tent operations late the night of the last day of the Fair.

The volunteers were solicited from each Illinois ACS local section via email, local section newsletter ads and word-of-mouth.

The e-mail addresses of volunteers were collected and passed along to the volunteer coordinator of the planning committee, who e-mailed the people directly to ask them to use the online volunteer sign-up form to schedule their hours for the tent. This online sign-up form is on the group web page

**<http://membership.acs.org/C/Chicago/statefair/index.html>**.

Each online entry was sent to the webmaster and the volunteer coordinator. The coordinator then sent an e-mail to the person confirming their signing up and confirming the dates and times.

On arrival at the tent, volunteers were given on-the-spot training and provided with an "Illinois Local Sections of the American Chemical Society" T-shirt and nametag to wear while volunteering.

Volunteers worked one or more of three 4-hour shifts in the tent. The shifts were arranged to have at least one half hour of overlap between shifts to allow sufficient time to watch the previous person in action and learn the spiel. The shift overlaps also prevented a late arrival from preventing a finishing worker from leaving. The overlaps worked out well. In an ideal case, we had more than six people per shift, which allowed breaks and rotation around the different duties. In some shifts, we had few volunteers and breaks were not possible.

In the tent, volunteers were given one of 6 jobs. One person was responsible for greeting people as they came into the tent and directing them to the hands-on experiments, demonstrations, the chemistry quiz, posters, and literature. This person also kept a tally of the number of visitors using a mechanical tally counter device. A second person did continuous chemistry demonstrations for their shift and periodically handed out the water bottles. Another person was responsible for helping kids do the hands-on experiments. The list of demonstrations performed and hands-on activities are given in Appendix C. A fourth person pointed out to the people various literature available on the tables. This person also offered visitors the opportunity to fill out an opinion survey and also handed out water bottles. A fifth person helped out in a variety of ways. This person often was in front of the tent conducting a "jelly bean test" or creating huge soap bubbles, and acting as a midway carnival barker and having people "step right in" and witness the wonders and fun of chemistry. A sixth shift member assisted the greeter in having teachers sign in and receive their teacher's bag. This shift member was also available to allow breaks and rotation for the entire shift team.

## **Appendix C**

### **2006 Illinois State Fair Demonstrations**

The 2006 Illinois Sections' ACS tent at the Illinois State Fair had many demonstrations and hands-on activities for fair goers again this year. The majority of the demonstrations were set up and performed by Frank Salter and Jackie Stewart, Mark Twain Section.

New demonstrations this year included super bubbles, magic pitcher, traffic light, and where did the water go?

The "hands-on" computerized chemistry quiz, set up and maintained by Milt Levenberg, Chicago Section, with input by the planning committee, was expanded to include two levels of questions: standard/simple and expert/harder. Again, the quiz was quite a success.

The demonstrations and hands-on activities ran continuously throughout the day. A list of the demonstrations is given here; their detailed descriptions is given on the website <http://membership.acs.org/C/Chicago/statefair/CD-2006/experiments/experiments.html>.

### **Tent Demonstrations**

**Fluorescent Slime**

**Super bubbles**

**Where did the Water Go?**

**Stop!! -- Go!!  
(The traffic light demonstration)**

**The Magic Pitcher**

**Liquid Density Demonstration**

**The Wicked Witch**

**Cartesian Divers**

**Magic Skin Writing**

**Filter Paper Chromatography**

**White Vinegar, Ammonia and Indicator**

**Air Pressure in Inverted Flask**

**Magic Writing**

**Floating Bubbles**

### **Tent Hands-On Activities**

-- Chemistry quiz (is found at  
<http://membership.acs.org/C/Chicago/statefair/CD-2006/Quiz/index.html>)

-- Invisible message

-- Marker Butterflies

-- Hook the loop (a Cartesian Diver activity)

-- Balance the bottle

## **Appendix D**

### **Interactive Science Quiz for the Illinois State Fair Project**

We again had as one of our tent exhibits an interactive science quiz. For 2006, we purchased a 19" flat-screen monitor to use with the PC. As in 2005, the design criteria were:

1. The quiz had to operate totally from the computer in our tent, as we had no Internet access.
2. The questions had to relate easily to the world around us.

3. The questions and answers had to be understandable and appreciated by people from all walks of life, many with no science or chemistry background.
4. An element of humor should be included in the questions and answers.
5. The system had to be simple to maintain, modify, and extend.
6. The system had to be easily transportable to other computers without special software.

The obvious solution to creating an easily transportable system was to write it in HTML, which could be read on any computer with a web browser. JavaScript code was included in the web pages to incorporate an element of interactivity. Cookies were written to the local computer to track the progress of the visitor through the quiz. A running total of correct and incorrect answers was maintained until the quiz was completed and/or the visitor started over, at which point the tally was reset to zero. Code was added to play a random selection of sounds appropriate to the success or failure of the visitor's answer to the question.

Each question has its own web page, and there are unique pages for the start of the quiz, the finish of the quiz, for a right answer and for a wrong answer. A template was written for quiz questions, and with cookies keeping track of the progress of the visitor through the quiz, new questions can be easily created and added to the sequence. For 2006, questions were created for two quiz levels, "standard" and "expert". The presentation of question pages was randomized so that each visitor experienced ten questions in random order out of a larger pool of questions.

It was observed that this activity was relatively popular, and there was often one or more people sitting at the computer monitor working their way through the quiz.

The quiz can be found at:

**<http://membership.acs.org/C/Chicago/statefair/CD-2006/Quiz/index.html>**

## **Appendix E**

### **CD for Teachers**

We updated the CD and handed it out to teachers that visited the tent. This CD contains materials and resources of interest to science and elementary school teachers. A series of simple science experiments for young children, to help increase their science literacy serves as a splendid nucleus for the CD. The author of these 150 articles, Dr. Kathleen Carrado, gave us permission to reproduce this series on a CD for distribution to educators at the State Fair. Each article describes a simple experiment, usually performed with household ingredients, illustrating some point of chemistry or general science for generally grade school-aged children.

The experiments performed in the ACS tent, and some similar experiments, are also described on the CD, with sufficient information to allow the reader to perform them at home.

We also included on the CD a list of Illinois local sections of the ACS with contact information so that the teachers can contact the closest section to them for further interaction. A list of our sponsors is on a web page on the CD and on the CD label. We included a list of links of other resources available to educators in the sciences and to the State Fair web page itself.

The CD materials were compiled, designed, and burned by Milt Levenberg and Avrom Litin from the master files.

## **Appendix F**

### **NATIONAL CHEMISTRY WEEK ACTIVITY PATCH** **AT THE ILLINOIS STATE FAIR**

#### **Introduction:**

The purpose of National Chemistry Week Activity Patch program is to encourage the participation of youth groups such as the Cub Scouts, Boy Scouts, Girl Scouts, 4-H Clubs,

Campfire USA, YMCA and others in ACS National Chemistry Week (NCW) activities.

To qualify for a patch, youth group members should complete any four of the six activities described below. You must be a registered scout or registered in other youth groups prior to completing the activities. After completing activities, contact Fran Kravitz at the Illinois Sections of the American Chemical Society to receive the patch. All activities are free to complete including the badge. There are three types of badges shown below that can be requested. A youth may enter every year, but only one patch will be sent out after all of the requirements are met. Please mail the youth's name, contact information on where the youth's parents can be contacted, completed activities, the name and scouting unit with its location, and the type of patch requested to: Fran Kravitz, Chicago Section American Chemical Society, 7173 N. Austin Avenue, Niles, IL 60714 or by e-mail: [chicagoacs@ameritech.net](mailto:chicagoacs@ameritech.net)

ALL ACTIVITIES MUST BE COMPLETED BY NOVEMBER 1, 2006.

**Activities:**

1. Attend the Illinois Sections of the American Chemical Society Tent at the Illinois State Fair between August 11 - 20, 2006. Make sure to sign up on the list at the front of the tent.
2. Explore the ACS/NCW website <http://chemistry.org/ncw> and write a short essay about a topic you find interesting.
3. Learn about a career in chemistry and write an essay or draw a poster that tells about, or depicts a famous chemist.
4. Conduct hands-on activities for younger children.
5. Clean up a local stream or roadway.
6. Conduct a food drive for a local food bank or charity.

## **Appendix G**

### **Website for the Illinois State Fair Project**

The separate web site originally set up in 2004 (the first year of the project) was again utilized in 2006. The website is set up in a subdirectory of the Chicago Section

website, which is supported by the ACS National membership server. It is located at:  
**<http://membership.acs.org/C/Chicago/statefair/index.html>**.

Among the many things posted, the website lists contact information and assignments for each planning committee member, the date and time of the committee conference calls, and the meetings' minutes. In 2006, all of the meetings of the planning committee were held by conference calls.

A second section was created on the website listing all of the ACS Local Sections in Illinois, along with contact information for representatives of those sections serving on the planning committee. Links were provided to each section's home page.

As sponsors signed up to help with the State Fair project, their names were added to a Sponsors Page. As the Fair approached, an "I would like to help" page was utilized to help communicate to our volunteers the nature of the help that is needed, from soliciting potential sponsors to manning the booth during the Fair.

An "Information for Volunteers" page guides volunteers through an on-line sign up process, whereby they can submit their contact information, tell us the booth activities they can cover, and volunteer to cover one or more timeslots at the Fair. They can also log back in at a later date to change the data in their submission. Behind the scenes, some PHP scripts were written to manage these submissions and to enter each volunteer's data in a MySQL database for retrieval and processing by our committee.

Once the Fair got under way, daily updates of attendance and topics of interest were added to the website. Some photos taken at our booth were posted mid-week, and more after the Fair was over.

A copy of the information on the resource CD handed out to teachers was placed on the website as well as links to other resource sites for access by any interested parties.

## **Appendix H**

### **Donors/Sponsors\***

The Abbott Fund  
American Chemistry Council  
American Chemical Society  
BP  
BP Volunteers (Naperville IL Chapter)  
Carus Corporation  
Chemical Heritage Foundation  
Chicago Section  
Continental Cement  
Dan Edelman and Fran Kravitz  
East Central Illinois Section  
Flinn Scientific  
Heartland Section  
Illinois Dept. of Natural Resources  
Ingredient Source Corporation  
NorthStar Credit Union  
Northup RTS  
Richard Cornell  
Robert Banzuly  
Rock River Section  
Unilever Home & Personal Care  
Wizardcraft

\*in cash, goods, or services

## **Appendix I**

The Illinois State Fair's Conservation World program guide with our tent listed (#17).

## **Appendix J**

Links to photos are on the home page of our website:  
**<http://membership.acs.org/C/Chicago/statefair/>**