

JENNIFER MINNICK



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BILL CRAWFORD



## A COLORFUL CELEBRATION

This year's **NATIONAL CHEMISTRY WEEK** festivities showcased how colorful chemistry can be

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**A RAINBOW OF CHEMISTRY** activities and demonstrations blanketed the country this year as chemistry enthusiasts around the U.S. and Puerto Rico came out in force on Oct. 18–24 to celebrate National Chemistry Week (NCW). The festivities were particularly colorful this year—the activities focused on the chemistry of color.

NCW is the American Chemical Society's largest outreach event. Volunteers from nearly all of ACS's 185 local sections led hands-on activities and demonstrations at elementary schools, museums, shopping malls, and other public venues.

"National Chemistry Week is when we connect with the community," says George Heard, chair of the ACS Committee on Community Activities, which organizes NCW with the help of the ACS Office of Volunteer Support. "The goal is to have a good time, bring chemistry to the community, improve people's understanding and perception of chemistry, and do it in a safe and fun manner."

This year's theme, "Chemistry Colors Our World," resonated particularly well with the general public, Heard says. "No matter how much you remember about your original chemistry experience, something about it was colorful," he notes.

Heard says he loves seeing the public

embrace chemistry. "This year, I put almost 250 miles on my car driving to various NCW activities, and I saw some really cool stuff," Heard says. "The number of times I heard 'That's so cool,' you can't feel any better than that."

Thomas Connelly, ACS executive director and chief executive officer, notes that passionate volunteers are at the heart of NCW. "We salute the ACS members across the country who have come out during NCW to share their enthusiasm for chemistry with their communities," he says. "Without their efforts, NCW could not reach the millions of people that it does."

This passion and commitment from volunteers dates back to 1987, when ACS launched National Chemistry Day. By 1989, many local sections were doing a full week of chemistry activities, and in 1993, the event was renamed National Chemistry Week.

This year, more than 155,000 copies of the NCW publication *Celebrating Chemistry* were distributed, including 15,000 copies in Spanish. The community event this year was an art supply collection drive for children in need. In addition, students in grades K–12 were invited to participate in the NCW 2015 Illustrated Poem Contest (see box on page 49 for the winners).

Safety is a top priority during NCW ac-

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tivities, Heard says. "As a committee, every activity that we place online has been vetted for safety," he says. "We conduct safety reviews of all of our activities, and we include safety tips in *Celebrating Chemistry*."

Heard also points out that although NCW is a great time to celebrate chemistry, he encourages chemists to celebrate chemistry all year round. "Continue celebrating," he says. "If there's an opportunity to bring chemistry to the public, you should do it."

**THE FOLLOWING** are highlights from this year's colorful celebration.

In New England, members of the **Green Mountain Local Section** in Vermont and students from the Saint Michael's College student chapter hosted a day of hands-on activities at the Burlington Town Center Mall. Among the activities were using shaving cream and food coloring to make marbled art.



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(1) As part of the Middle Georgia Section's NCW activities, a student from Georgia College entertains kids at the Learning Safari child care center in Milledgeville, Ga., with a chemistry show. (2) A child holds a glowing condenser during a Cincinnati Section event at MidPointe Library West Chester. (3) A group of girls learn how leaves change color during the Northeast Tennessee Section's activities at Eastman Chemical. (4) In the Kalamazoo Section, a child makes green slime at the Kalamazoo Valley Museum. (5) The Princeton Section hosted a packed NCW Color Activities Night event at Frick Chemistry Laboratory.

In Boston, volunteers from the **Northeastern Section** wore tie-dyed shirts to celebrate the chemistry of color. Activities took place in classrooms, as well as at the Museum of Science in Boston and the Boston Children's Museum. Meanwhile, the Cambridge Science Festival's Science on the Street program put on a performance at the Cape Cod Science Café hosted by the Cape Cod & Islands Council of the Boy Scouts of America.

The **Princeton Section** hosted NCW Color Activities Night at Princeton University's Frick Chemistry Laboratory. More than 480 people were treated to a chemistry show and hands-on activities led by 140 volunteers. Activities included making marbled paper, filtering light to get different colors, and performing chromatography with berry and leaf extracts.

In the **Northern New York Section**, Clarkson University research professor Dana Barry presented a workshop titled "Exciting Activities Using Colorful Chemicals" to fifth- and sixth-graders at St. Mary's School in Canton. Students mixed dyes to

create new colors, and they painted pictures using extracts of fruits and vegetables. Meanwhile, a Chemtoberfest celebration at SUNY Potsdam attracted more than 1,000 people.

Around 300 volunteers pitched in to help the **New York Section** celebrate NCW at the New York Hall of Science in Queens. This year, the section set a record for having its highest number of sponsoring organizations and largest number of activity tables. The event attracted more than 1,000 visitors with activities such as face painting, building a spectroscope, and creating a rainbow in a glass.

In the mid-Atlantic region, more than 4,300 people attended the **Pittsburgh Section's** NCW activities, which were held over two days at Carnegie Science Center. More than 330 volunteers from 49 organizations participated in the event. In addition, five organizations participated in a ChemFest Career Café activity for high school students.

In northeastern Pennsylvania, the **Susquehanna Valley Section** and the ACS student group at Bucknell University hosted a Halloween chemistry show for the community, featuring Halloween-themed chemistry demonstrations such as puking pumpkins, fire-breathing pumpkins, and stoichiometry balloon races.

In the nation's capital, the **Chemical Society of Washington** participated in the Crystal City Family Festival during the Marine Corps Marathon. Volunteers performed hands-on activities such as dissolving the color off M&M's and Skittles candies.

Farther south, the **Georgia Section** hosted Chemistry Day at Fernbank Science Center in Atlanta. Visitors made glow-in-the-dark worms, tested the pH of mystery solutions, and watched a chemistry magic show. The event drew 600 visitors from the surrounding communities. The section also sent out care packages containing chemistry tchotchkes to 21 elementary school teachers, 16 middle school teachers, and nine high school teachers. The care packages enabled the teachers to celebrate NCW with their students.

The **Middle Georgia Section** hosted its Saturday Math & Science Festival at Brewton-Parker College in Mount Vernon. In addition, the Wesleyan College ACS student chapter organized two events at the university's Munroe Science Center. And ACS student members at Georgia College & State University hosted several events, including an NCW Kickoff Cookout, its annual Chemistry Mall Show, a Chemistry on the Lawn event, and NCW Family Fun Night.

In the **Wilson Dam Section**, ACS student members from Northwest-Shoals Community College in Muscle Shoals, Ala., gave presentations to third-, fourth-, and fifth-graders at local elementary schools. The children used simple spectrosopes to observe the spectra of the sun. They also observed the iridescent colors of soap bubbles and made slime containing fluorescent dye.

In Texas, volunteers from the **Pernian**



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**Basin Section** performed hands-on activities at the Midland Park Mall in Midland. Activities included making Play-Doh using household items. In addition, a group of students from Midland College Chemistry Club held an event at a local elementary school.

On Oct. 24, the chemistry department at Texas A&M University hosted its Chemistry Open House & Science Exploration event as part of the **Texas A&M Section's** NCW activities. The event featured the popular Chemistry Road Show, guided lab tours, hands-on and computer activities, door prizes, and science goody bags.

In the Midwest, the **Western Michigan Local Section** celebrated NCW at Woodland Mall in Grand Rapids. Chemists from industry and academia came together with students from chemistry clubs to perform hands-on activities and demonstrations for families rotating through 22 tables.

Cold weather arrived just in time for the **Kalamazoo Section's** Chemistry Day at the Kalamazoo Valley Museum, making it even more enticing to stay indoors and do hands-on chemistry activities. Among the more than 1,000 visitors were Girl Scout groups, homeschool families, and teachers. Volunteers included high school students,

PITTSBURGH SECTION



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(6) Girls learn how to make slime at the California Section's NCW event at Lovonya DeJean Middle School. (7) The Richland Section hosted colorful activities at Treasure Valley Community College in Ontario, Ore. (8) One of the New York Section's youngest chemists enjoys the festivities at the New York Hall of Science. (9) Students from the Puerto Rico Section display their periodic table of cupcakes. (10) Visitors to Carnegie Science Center enjoy activities hosted by the Pittsburgh Section. (11) Students at Bucknell University in Lewisburg, Pa., put on a Halloween chemistry show as part of the Susquehanna Valley Section's activities.

undergrad and grad students, industry representatives, and college and university faculty.

The **Huron Valley Section** hosted activities at Eastern Michigan University. Kids were invited to participate in a "CSI"-like activity, including decoding secret messages using acid-base indicators. They also combusted gummy bears and blew up hydrogen balloons.

The **Cincinnati Section** put on chemistry demonstrations at 40 libraries in the area, as well as at Wilmington College and the Cincinnati Museum Center. Activities included acid-base chemistry with household chemicals, thermal-responsive paper and phosphorescent sheet experiments,

paper chromatography, glow stick demos, and making ultraviolet bead bracelets. More than 70 volunteers came from industry, academia, and government.

Elsewhere in Ohio, the **Toledo Section** hosted several events at local libraries, as well as at the Imagination Station. The section also gave out its Salutes to Excellence awards.

In Kentucky, volunteers from the **Lexington Section** held an event at the Scott County Public Library in Georgetown. Tying in the color theme, kids painted rocks for a local butterfly garden. The section also held its annual Booseum event at the Explorium of Lexington. Georgetown College held its fourth annual "Moles on



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PUERTO RICO SECTION



the Loose” event where stuffed mole dolls were hidden around the science building and participants who found the moles could exchange them for a prize.

Roughly 300 people were treated to University of Tennessee, Knoxville, chemistry professor Al Hazari’s 25th annual Magic of Chemistry Show at the university, as part of the **East Tennessee Section’s** NCW activities. Hazari also presented his magic show to 700 fourth-graders. Elsewhere in the state, students from Pellissippi State Community College, in Knoxville, tie-dyed lab coats.

Fourth-grade students from 25 schools in northeastern Tennessee and southwestern Virginia were invited to Eastman Chemical’s Toy F. Reid Employee Center for the **Northeast Tennessee Section’s** 25th annual Celebration of Chemistry for Fourth-Graders event. More than 1,300 students participated in the event, facilitated by more than 200 volunteers.

The West Coast was as active as the rest of the country. The **California Section’s** Family Math & Science Night at Thornton Junior High School attracted more than 1,000 visitors. Other NCW celebrations took place at the Bioneers Family Fair in San Rafael; Family Science Night at Lovonya DeJean Middle School in Richmond; and Discovery Day at AT&T Park in San Francisco. At Lovonya DeJean Middle School, visitors enjoyed making and eating color-changing blueberry liquid nitrogen ice cream.

As in previous years, the **Orange County Section** held its activities at the Santa Ana Zoo. Despite near-record-high temperatures in Southern California in mid-October, more than 1,000 people participated in the activities facilitated by students, retired chemists, and local section members.

In Oregon, the **Richland Section** organized two big outreach events. Girls in Science was held at Eastern Oregon University, attracting more than 100 girls in grades 6–8. The girls solved a mystery of what is killing fish by testing for heavy metals and pollutants using reactions that produce color. They also synthesized silver nanoparticles and observed the different colors based on particle size. A second event was held at Treasure Valley Community College in Ontario. The section joined forces with the **Snake River Section** to bring hands-on activities to more than 100 boys and girls in grades 5–9. The event also celebrated the International Year of Light.

Finally, the **Puerto Rico Section** celebrated the 10th anniversary of its Festival de Química at Paseo de la Princesa in San Juan. More than 500 volunteers performed demonstrations and hands-on activities for more than 3,500 people. For the first time, the section joined efforts with two science museums to present activities to children.

Planning for next year’s NCW celebra-

tion has already begun, and the theme is no longer a mystery. The celebration will take place in October 2016 and focus on “Chemists Solving Mysteries.” ■

## NCW ILLUSTRATED POEM CONTEST WINNERS

The ACS Committee on Community Activities and the ACS Office of Volunteer Support have announced the winners of the 2015 National Chemistry Week Illustrated Poem Contest, in which K–12 students were invited to share their interpretation of this year’s theme, “Chemistry Colors Our World,” in the form of illustrated poems. First-place winners in each grade category received \$300. Second-place winners received \$150. View the illustrations online at <http://cenm.ag/ncw2015>.

### K–2nd Grade

1st Place: **Shriya Arunkumar**, Eastern New York Section

2nd Place: **Hannah Fox**, Savannah River Local Section

### 3rd–5th Grade

1st Place: **Sebastian Catro**, Mid-Hudson Section

2nd Place: **Manasa Nerganti**, Princeton Section

### 6th–8th Grade

1st Place: **Branden Pagurayan**, Hawaii Local Section

2nd Place: **Shakiba Malek**, Connecticut Valley Section

### 9th–12th Grade

1st Place: **Skyler Lance**, Cincinnati Section

2nd Place: **Nicole Neely**, Connecticut Valley Section