

NATIONAL CHEMISTRY WEEK

The outreach program that put chemistry in front of the public in the U.S. is now taking root around the world

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In brief

In 1986, then-ACS-president George Pimentel had an idea to better educate the public about the crucial role of chemistry in everyday life. Despite early opposition from some people within ACS, support for National Chemistry Day grew, and in 1993, it was renamed National Chemistry Week. Today, longtime NCW volunteers reflect on the impact the outreach program has had not only on the general public but also on the chemistry community itself. Looking forward, ACS has begun planting the seeds of chemistry outreach around the world in the form of its Chemistry Festivals.

In 1986, George Pimentel, then the president of the American Chemical Society, had an idea to better educate the public about the crucial role of chemistry in everyday life: Introduce a National Chemistry Day. "His overall vision was for an educated and enlightened citizenry," says Jeanne Pimentel, George's widow. "Unless people understood things like science, they wouldn't have the judgment to vote for the right things in politics."

But as George Pimentel quickly discovered, not everyone at ACS shared his vision. Some argued that the outreach initiative would take resources away from established programs. Others wondered whether the increased attention toward chemistry, which had a negative reputation, would bring bad rather than good publicity to the society.

"He had a terrible time getting it through the ACS and the powers that be," Jeanne Pimentel recalls of George's efforts to get National Chemistry Day approved by the ACS Board. Nevertheless, George Pimentel continued to champion the program, and support for it grew.

"We thought that chemistry needed a boost," remembers Mary Good, who in 1986 was ACS president-elect and a strong supporter of National Chemistry Day. "It was the era of the environmental disasters, so in some ways it was something to get kids reinterested in science and also to get the public to understand why chemistry was such an important piece of everyday life and also a big piece of what makes the world work."

To test the waters for National Chemistry Day, in the fall of 1986, ACS hosted Chemistry Day activities at several local sections around the country. The Chicago Local Section, for example, held events at the Museum of Science & Industry, and the Cincinnati Section held events at local schools.

"The idea of getting the local sections to be the main vehicle for National Chemistry Day, I think in his mind was that ACS shouldn't be up there being a Washington organization that was just for very learned chemists and chemistry students; it should be getting to the public, and the sections were the people who reached the public and the students in different parts of the country," Jeanne Pimentel says.

Chemistry Day was so successful that ACS organized its first official National Chemistry Day on Nov. 6, 1987. Nearly three-quarters of ACS's 184 local sections participated in the celebration. "By turning it over to the local sections and not giving them exact prescriptions on what they should be doing, it ended up unleash-

ing quite a bit of creativity," says Randy Wedin, who was the first National Chemistry Day coordinator for ACS. "We gave the local sections free rein on how they wanted to organize their events."

In Washington, D.C., ACS staff held a parade. "That was an example of us doing something outlandish, to get some attention and really stretch everyone's comfort level," Wedin says.

The following year, ACS didn't have a National Chemistry Day to give the board time to review the program, but some local sections continued to host Chemistry Day activities. By 1989, the ACS Board had approved National Chemistry Day, and it became an annual celebration thereafter, held every year in late October.

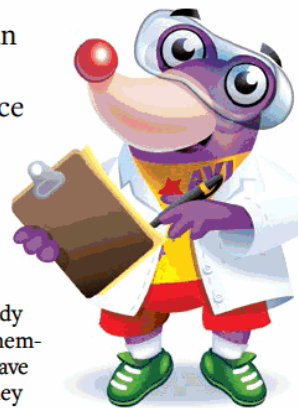
In 1993, National Chemistry Day was renamed National Chemistry Week (NCW). And in 1997, yearly themes were added to keep the celebration fresh and to connect the activities with chemistry in local communities; in 2017, the theme is "Chemistry Rocks!" to celebrate geochemistry's impact on everyday life.

Today, at 30 years old, NCW is the society's longest-running and most beloved outreach program, reaching tens of thousands of people each fall. It has spawned several other ACS outreach efforts, including Chemists Celebrate Earth Day (which will become Chemists Celebrate Earth Week in 2018), Kids & Chemistry, and more recently, the Chemistry Festivals that have cropped up around the world. It's difficult to imagine where chemistry outreach or ACS would be today without NCW's annual celebration of the central science.

Getting the word out

Despite NCW's success, Jeanne Pimentel says George "would have been disappointed that it's not better known. What he wanted was for NCW to reach enough of the citizens and the voters so that they would be able to make good decisions when they voted both on issues and people. And I'm afraid that hasn't happened as much as we would like. But without National Chemistry Week, [the public's perception of chemistry] could have been worse."

"Personally, I wish it was more well-



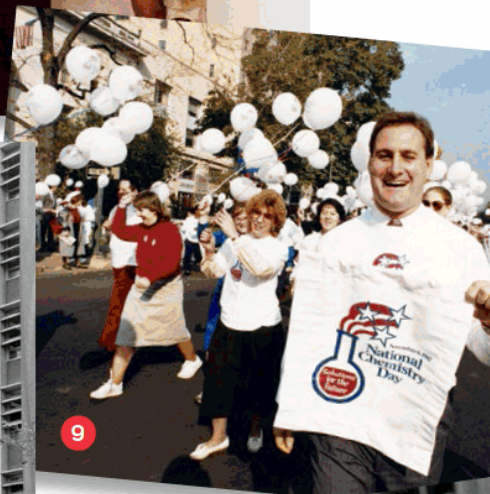
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1. Former ACS staffer Ronald G. Dunn helps publicize the National Chemistry Day parade in Washington, D.C., in 1987.



2. Poster contest winners at McCullough High School in The Woodlands, Texas, in 1987. From left, Rose Wu, Keri Kimler, and Jenie Altman. **3.** Marvin Lang (right) leads outreach activities in Cincinnati during National Chemistry Day in 1987.



4. Balloons are released during the National Chemistry Day parade. **5.** The Chicago Museum of Science & Industry hosts a Battle of the Burettes contest for high school chemistry students in 1987. **6.** A program for the "Chem Trek to the White House" in Washington, D.C., in 1987. **7.** George Pimentel in 1988. **8.** A marching band plays during the first National Chemistry Day in 1987. **9.** ACS staff and chemistry enthusiasts march during the National Chemistry Day parade.



known, too," says Michael McGinnis, chair of the ACS Committee on Community Activities, which helps organize NCW. "That would be awesome if everybody could recognize National Chemistry Week, but if we're getting the word out about science in general and encouraging people—whether it be kids or adults alike—to look more critically at some of the articles you see in the news and online and not just take everything for granted, then I hope National Chemistry Week, even though it's not a household name, is contributing to the success of getting more citizens to critically think about science and support science."

McGinnis says measuring the impact of NCW is difficult because there is no fol-

low-up with participants, but the committee does collect information from NCW coordinators in annual surveys. "Over the years, we have seen where there's been additional corporate support, there's been additional local support, and also communication on social media," he says.

But the event isn't all about engaging the public. It's also about the chemists. "It's getting them excited again," McGinnis says. "We have folks from industry, from academia, from government, many times stuck in the classroom or the laboratory, and to be able to get out into the community to communicate their science and their excitement for science is priceless."

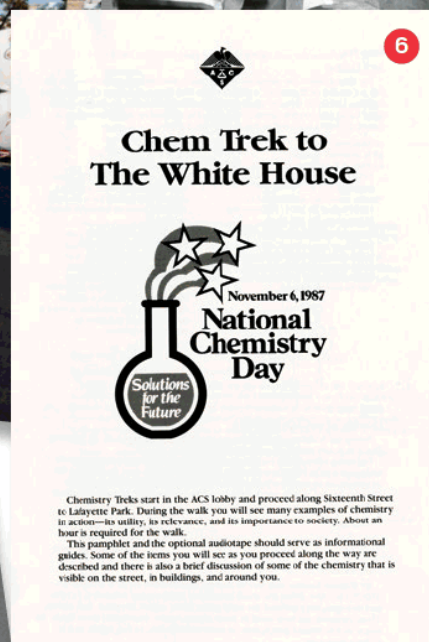
"If you're excited about something,

you want to share it," says longtime NCW volunteer Al Hazari of the University of Tennessee, Knoxville. "We owe it to the public, we owe it to our neighbors, we owe it to our future generation to educate them, to work with them, to enjoy doing activities with them and show them that chemistry is important for everyday life and beyond and their careers. We are working with our future. I'm doing something for the next generation."

Inspiring chemists, too

Robert de Groot of the U.S. Geological Survey Earthquake Science Center in Pasadena, Calif., says, "NCW was that spark

CREDIT: ERNIE CARPENTER (DUNN, MARCHING BAND); RUDY BAUM (PIMENTEL); ACS (ALL OTHERS)



that led me to a life in chemistry outreach and chemistry education.”

He recalls that when he was an undergraduate at Occidental College in 1987, his ACS student affiliate chapter visited California Institute of Technology during National Chemistry Day. De Groot was enthralled to see Caltech chemist Harry Gray lecture on artificial photosynthesis. “For me, it was a way of making a connection with the chemistry I was learning in my classes to the real world, to real research, to connecting with real researchers,” he says.

As a graduate student at Northern Arizona University, de Groot got involved in NCW as the event’s coordinator for the ACS Central Arizona Section. He went

on to earn a Ph.D. in chemistry education and continued his involvement with NCW through the NCW Task Force and later with the Committee on Community Activities.

“NCW has always captured the imagination for me of how chemistry can impact the world,” he says. “The level of commitment and passion and how much people give of themselves, members and nonmembers alike, to the enterprise has always been for me a great source of my commitment because I see that it just keeps going and going and going, and it’s a movement that won’t stop.”

De Groot points out that the measure of NCW’s success shouldn’t be judged solely on its impact on the general public. “How

has it transformed the way ACS interacts with the world, or how members interact with the world?” de Groot asks. “It gives us that outlet to not only celebrate chemistry and to share it with other people but also celebrate ourselves and what we do as a community.”

Lorri Reilly of the Upper Peninsula Local Section says NCW activities provide students with another outlet for communicating their science. “It’s a wonderful opportunity for our students to get involved in a professional activity, especially being in a smaller area where we don’t have a lot of industry,” she says. Also important is “getting out there and doing outreach events and realizing it’s part of their pro-

fessional responsibilities.” She notes that “many of them probably wouldn’t have joined ACS if it wasn’t for their involvement in these kinds of activities.”

Those involved in NCW celebrations say it is their responsibility to help develop a more science-literate public. George Fisher, a long-time NCW coordinator for the Miami Local Section and chemistry professor at Barry University, says that despite the damage that Hurricane Irma caused recently in Miami, the section’s plans for NCW at the Museum of Discovery & Science in Fort Lauderdale and the Phillip & Patricia Frost Museum of Science in Miami will go on.

“It’s a very positive experience for the students to interact with the kids and the parents and seeing the expressions on the children’s faces. Some of the university students are as amazed by the chemistry as the kids we have at the museums,” Fisher says. “I think there would be much more fear about chemistry if we didn’t have this event.”

Growing NCW’s impact

McGinnis says that although it’s difficult to quantify NCW’s impact, the committee is dedicated to growing the celebration. The committee is looking at ways to better use social media to extend NCW’s reach. Last year, the committee launched a video project inviting undergraduate student chapters to develop a video on the NCW theme.

The committee has also begun putting activity ideas from its NCW publication, “Celebrating Chemistry,” on the web, where they can gain a broader audience. “There’s more of a push to put resources online,” McGinnis says. “Although we continue to promote National Chemistry Week around the third week of October, it allows the flexibility of the local sections and other groups that are organizing National Chemistry Week celebrations to do it anytime they want anytime of the year.”

The committee is also developing strategies for offering more support. “How do we help the NCW coordinators? How do we help citizens that don’t have any connections to local sections be able to become more connected to NCW?” McGinnis asks. “The committee is going to be looking very closely at that in the future.”



Kids show off their certificates of participation during a Chemistry Festival in Peru.

In addition, the committee wants to partner more closely with other ACS offices and divisions. For example, it works with the Committee on Chemists with Disabilities to incorporate accommodations for people with disabilities. It also works with the Committee on Chemical Safety to review all its activities for safety and adapts those activities so that many of the required materials can be found around the home. And it aims to translate the “Celebrating Chemistry” publication into additional languages beyond Spanish and Chinese.

Hazari says he hopes NCW will become more integrated and connected with other disciplines—not just science, technology, engineering, and mathematics, but all learning.

Former ACS president Good agrees, saying that NCW needs to continue to improve to keep its sparkle. “It’s got to evolve, because what’s important in chemistry today is not what was important 30 years ago,” she says. “Spend some time talking about the new areas in chemistry. Some of the interactions with biology where we now understand the chemistry of the brain, for example, really excite people. Emphasize more problem solving and those areas where chemistry today has a real impact.”

The movement goes global

As NCW continues to grow in the U.S., ACS is expanding its outreach efforts around the world. “With more active in-

ternational chapters, we’re launching more International Chemistry Festivals, which is in line with the goals and objectives of NCW,” McGinnis says.

ACS held its first International Chemistry Festival in Puerto Rico in 2005. To help promote these festivals, ACS launched the Festival Training Institute in 2016. During the two- to three-day event, participants learn how to organize outreach events in their local communities. The first Festival Training Institute took place in Dalian, China. Other Festival Training Institutes were in Panama City, Panama; Kuala Lumpur, Malaysia; and Szeged, Hungary.

The next Festival Training Institute will take place in April 2018 at Sharjah, United Arab Emirates.

More than 50 Chemistry Festivals will have occurred by the end of this year. “We need to spread the message that chemistry is everywhere,” says University of Puerto Rico, Río Piedras, chemistry professor Ingrid Montes, who helped launch the Festival Training Institute. “It’s the same message worldwide.”

Celina Luiz Obregón, who helped organize Chemistry Festivals in Cusco, Peru, says the festival offers students another opportunity to engage in chemistry. “Cusco is a tourist region, not an industrial region. It’s difficult because most of the students

are interested in history, archaeology, and social science. There are few people interested in science,” she says. “If we don’t teach about science, if we don’t learn about science, we never will be developing as a country or region.” She says that the few students who are interested in science usually leave the city or country after finishing their university studies. “We have a challenge

that they must compete with students from another part of the country or other countries.”

Mah Siau Hui has been helping organize Chemistry Festivals in Malaysia. “A lot of people have the wrong perceptions on chemistry. They always think that chemistry is dangerous or it’s boring,” she says. “I wanted to change their minds on that and show them that chemistry is really fun.” ■

React with us

Post your photos and memories of NCW through the years on social media using the hashtag #NCW30years.