

# PART FIVE



Outreach  
Success Stories



## OUTREACH SUCCESS STORIES

CEF's goal for the *You Be The Chemist* (YBTC) programs is to join chemical companies with as many educators, students, and organizations in their community as possible – all in support of science education. Whether introducing CEF's YBTC programs to one, ten, a hundred, or a thousand grade K-8 students, each effort is a success.

As demonstrated in this guide, there are many different ways in which chemical industry members can implement CEF programs in their community. Handing out *Solutions* bulletins, starting a YBTC Challenge site, or conducting an experiment from the YBTC Activity Guides with students are all ways you can educate community members about the importance of the chemical industry and the science of chemistry.

The following pages detail several YBTC activities that chemical companies have organized and implemented in their community. These activities are real-life examples of the Suggested Activities for Community Outreach described in this guide; however, you will notice these examples are tweaked to meet the needs of the individual community.

The activities differ in size, cost, length, and volunteer hours, but all proved to be successful in bringing community members together to increase awareness of science education. These activities represent only a few of the success stories. Many more successful outreach efforts have taken place throughout the country (and abroad).

**CEF appreciates the efforts of all who have worked to implement our programs in their community. Remember, no matter how small the activity, by utilizing CEF's YBTC programs in your area, you are working to improve *the chemistry in your community*.**

## **You Be The Chemist (YBTC) Fair – Hubbard-Hall, Inc., Waterbury, CT**

**Objective:** To promote the science of chemistry, the benefits of chemicals, and the importance of chemical safety awareness through partnership with a local school.

**Materials:** YBTC Kits (Now the Activity Guides), materials for experiments

- Costs:**
- YBTC Activity Guides (\$12 for each grade K-4 booklet, \$15 for each grade 5-8 booklet, or \$20 for each set)
  - Materials for ten experiments (inexpensive; all materials can be found at all-purpose stores, such as Wal-mart or Target)
  - Plastic eggs with *You Be The Chemist* logo imprinted on the outside and goofy putty inside
  - Safety goggles for each student participant
  - Employee time

**Time:** Two months of prep time; one full day for the fair

**Background** To celebrate the birthday of the company's Chairman and CFO, twenty-two Hubbard-Hall, Inc. employees volunteered to spend the day helping local elementary students become chemists for a day. Company volunteers staffed ten different experiment stations in the gymnasium of a local elementary school. Students from the school took turns, by grade level, visiting at least two of the ten stations. Every student was given safety goggles and a plastic egg filled with goofy putty.

### **Procedure**

- The company decided what type of event they wanted to hold and selected an employee to organize the event. The company organizer contacted the CEF staff for suggestions.
- The organizer then contacted the local school, introduced the company, CEF, and the *You Be The Chemist* program. She explained that the company would like to host a day of chemistry for the students of that school.
- With the help of school administrators, they determined the number of students that would participate. (This school decided to have all of the students participate.)
- It was decided that there would be ten experiment stations, each with two employees and a different experiment. Company employees were asked to volunteer.
- The materials necessary to conduct the experiments were purchased. (Goofy Putty, Iron in Cereal, and Puffed Rice Fleas were three of the YBTC experiments used.)
- The demonstrations were practiced beforehand, so all of the volunteers were comfortable explaining the basic concepts behind each experiment.
- Promotional materials were produced including plastic eggs (with the YBTC logo printed on them) that contained the final product of the Goofy Putty experiment (given to each student who participated). Goggles were purchased for each participating student as well.

- Local media and school officials were invited to attend (with the school's permission).
- The fun began!

**Analysis** Approximately 600 students from the school participated in the event. The school and the students expressed their appreciation for the efforts of Hubbard-Hall. The students enjoyed the day of activities, and the administrators were thrilled to have an event sponsored by a community member that encouraged the study of science. The company also garnered some media attention, such as a press release distributed by CEF and mention in NACD's *Chemical Distributor* magazine.

### **Goals**

- To demonstrate simple, hands-on chemistry activities that increased students' knowledge and appreciation of chemistry and chemicals
- To partner Hubbard-Hall with schools and organizations in the local community
- To position Hubbard-Hall as an involved community member

**Extension** An Assistant Superintendent for the Waterbury Public Schools addressed the student body at the event. He complimented Hubbard-Hall on their outreach endeavor noting the entire school system's appreciation for this type of community connection.

## **You Be The Chemist (YBTC) Teacher Workshops – Arch Chemicals, Inc., (Arch) Norwalk, CT; Rochester, NY; and Brandenburg, KY**

**Objective:** To promote the science of chemistry, the benefits of chemicals, and the importance of chemical safety awareness by helping educators who may not have a background in chemistry feel more comfortable teaching the subject.

**Materials:** YBTC Kits (now the Activity Guides); materials for experiments

**Costs:**

- YBTC Activity Guides (\$12 for each grade K-4 booklet, \$15 for each grade 5-8 booklet, or \$20 for each set)
- Materials for experiments (inexpensive; all materials can be found at all-purpose stores, such as Wal-mart or Target)
- Employee time

**Time:** One day for the workshop and approximately one month of prep time

**Background** Distribution of CEF's educational materials is just part of Arch's Science Education Program carried out by their stakeholder relations department. The company has long-standing relationships with the communities in which their company operates. Through interactions with their local schools, an Arch representative realized that many elementary and middle school educators don't have a background in chemistry. As a result, the unfamiliar subject sometimes seemed daunting, leading them to focus less on teaching chemistry and more on the other sciences, such as biology and earth science. To bring chemistry back into early science education, Arch created YBTC workshops to show educators the ease with which many basic chemistry experiments can be conducted and how much fun the process can be – for them and their students!

### **Procedure**

- Arch contacted the elementary school principal of schools in the communities where the company operates and introduced them to the YBTC program.
- The company's Director of Stakeholder Relations volunteered to hold a YBTC workshop for educators.

(The administrators assisted by inviting educators who they thought the workshop would be most appropriate for and by suggesting the best time to hold the workshop.)

- Arch purchased the YBTC Kits – now Activity Guides. The Director of Stakeholder Relations reviewed the YBTC lessons, decided which experiments to cover with the educators, and gathered all of the necessary experiment materials.
- The Director of Stakeholder Relations practiced conducting each experiment before the event.
- The day of the event, educators were divided into groups to conduct the experiments. As they performed the experiments, the Arch employee talked them through the chemistry concepts.

**Analysis** The workshops proved to be successful for the educators involved. Participants reported gaining a greater understanding of how to engage their students in the study of chemistry and recognizing that it doesn't have to be hard to teach chemistry. The event strengthened Arch's long-

standing relationships with the schools in the communities in which the company operates.

### Goals

- To provide educators in Arch communities with a knowledgeable individual to help them better understand and teach chemistry
- To equip educators with the knowledge to educate students using hands-on chemistry activities, thus increasing the students' understanding of the subject as well as their appreciation for chemistry and chemicals
- To partner Arch with schools and organizations in the local community
- To position Arch as an involved community member

**Extension** Arch created a kit that contains all of the necessary materials to conduct all of the experiments from the YBTC Kits – now Activity Guides – and donated the material kit to the school.

Rochester educators that participated in the workshop were offered professional development credits.

In Connecticut, Arch invited leaders from other organizations, such as the Boys and Girls Clubs and after-school programs, to attend as well.

## **Detroit You Be The Chemist (YBTC) Challenge Site – PVS-Nolwood Chemicals, Inc., Detroit, MI**

**Objective:** To promote the science of chemistry, the benefits of chemicals, and the importance of chemical safety awareness by bringing members of the chemical industry together with the schools and organizations in their community.

**Materials:** YBTC Challenge study guide/question material (provided by CEF); other assorted costs based on site structure/logistics

**Costs:**

- YBTC Activity Guides (\$12 for each grade K-4 booklet, \$15 for each grade 5-8 booklet, or \$20 for each set) – grade booklet 5-8 (or set) recommended for participating classrooms
- Lab equipment for experiments
- Promotional posters and advertising
- Facility rentals, prizes (gift cards, iPods, etc.), trophies, and T-shirts
- Challenge giveaways (pencils, notepads, water bottles, etc.)
- Employee time

**Time:** Varied by site; a minimum of 10 hours per site

**Background** A strong supporter of CEF's YBTC programs for many years, PVS-Nolwood Chemicals, Inc. jumped at the chance to implement a Challenge in the city of Detroit. The company initially started small with only a couple of schools, but their efforts have produced an extremely successful competition that over the span of three years has grown to include over 40 schools within the city. They have also expanded the program further, launching new sites that include schools in the counties surrounding Detroit, as well as the schools associated with the area Arch Diocese. Through PVS-Nolwood's overall efforts in Michigan, the company estimates that over 200 schools and approximately 8,000 students in their area are participating in the program.

### **Procedure**

- A company employee was selected to serve as the Local Challenge Organizer. This person served as the main contact between CEF, the sponsoring company, and the school contact.
- The company employee Organizer approached the city of Detroit schools and introduced CEF, the Challenge, and the benefits of implementing the Challenge.
- Promotional materials were left with the schools. Those that were interested registered with the Organizer. The company also donated YBTC kits – now the Activity Guides – to the participating schools.
- A Challenge registration form (found on the CEF Web site) was completed by the Organizer and submitted to CEF.

- The overview, rules, and study guide were made available to participating educators and students by the Organizer.
- The logistics of the Local Challenge events were planned through the cooperation of the Organizer and the participating schools. Logistics included the venue, prizes, judges, moderators, etc. The majority of these competitions were held as “bee”-style events (see Challenge description in the Program Overview and Implementation section).
- The company ordered Challenge giveaways (pencils, notepads, water bottles, etc.) to give to participants at the Local Challenge competition.
- The company worked with local media outlets to publicize the competition.

**Analysis** Thanks to the efforts of PVS-Nolwood, the YBTC Challenge has become a well-known program in the Detroit area. The 2008 Michigan State Challenge winner and National YBTC Challenge first runner-up, was from a Detroit-area competition. The winner and the company garnered regional media coverage, including mention in the *Detroit Free Press* and a local radio station interview. Their efforts have proven that the more you put into a project, the more you get out of it.

### Goals

- To provide educators in Detroit (and its surrounding areas) with an easy, engaging tool to help them educate their students about chemistry
- To provide students with a fun, competitive event that will increase their knowledge of the subject as well as their appreciation of chemistry and chemicals
- To partner PVS-Nolwood with schools and organizations in the local community
- To position PVS-Nolwood as an involved community member

**Extension** As an extension to the program, PVS-Nolwood set up a booth at the Michigan State Fair and held a Local YBTC Challenge. The winner of that competition will compete in the Michigan State Challenge held in the spring. Additionally, company employees took turns staffing the chemistry booth and conducting experiments with students who visited the fair's science building.

## Washington, DC *You Be The Chemist* (YBTC) Challenge Site – National Association of Chemical Distributors (NACD), Arlington, VA

**Objective:** To promote the science of chemistry, the benefits of chemicals, and the importance of chemical safety awareness by bringing members of the chemical industry together with the schools and organizations in their community.

**Materials:** YBTC Challenge study guide/question material (provided by CEF); other assorted costs based on site structure/logistics

**Costs:**

- Prizes (gift cards to bookstore), trophies, and T-shirts
- Challenge giveaways (pencils and notepads)
- Employee time

**Time:** 10 hrs

**Background** CEF was created as the educational outreach arm of NACD. While CEF and NACD are now separate organizations, both continue to work closely together to promote chemistry education. CEF works with NACD members nationwide to implement the YBTC programs in the communities in which their member companies operate. To further show support of CEF's outreach initiatives, NACD headquarters implemented a YBTC Challenge site in Washington, DC.

### Procedure

- A Washington, DC school approached CEF about getting involved in the Challenge. As NACD was looking to get involved in the Challenge as well, CEF connected them with the school to coordinate a Local Challenge.
- An employee of NACD was selected to serve as the Local Challenge Organizer. This person served as the main contact between CEF, NACD, and the school contact.
- The Organizer provided the DC school with information about CEF, the Challenge, and the benefits of the program.

- Promotional materials were submitted to the school to encourage student participation.
- A Challenge registration form (found on the CEF Web site) was submitted to CEF.
- The overview, rules, and study guide were made available to participating educators and their students by the Organizer.
- The logistics of Local Challenge events were planned by the Organizer and participating school. The Washington, DC Challenge took the form of a written test. All eighth grade students took the test.
- The company ordered Challenge giveaways (pencils and notepads) to give to participants at the Local Challenge competition.
- The company worked with local media outlets to publicize the competition.

**Analysis** The competition was easy to implement and proved to be a success. An article ran in the *Washington Post* as well as in various publications produced by NACD. NACD also used the competition as a springboard to encourage their

members to get involved in CEF's educational programs, as CEF programs help NACD members satisfy the Community Outreach requirements of their Responsible Distribution Process<sup>SM</sup>.

### Goals

- To provide educators in Washington, DC with an easy, engaging tool to help them educate their students about chemistry
- To provide students with a fun, competitive event that will increase their knowledge of the subject as well as their appreciation of chemistry and chemicals
- To partner NACD with schools and organizations in the local community
- To position NACD as an involved community member

**Extension** NACD's President & COO and several staff members visited the school to award prizes during a weekly school-wide assembly. The overall winner, who moved on to the National YBTC Challenge, and each classroom winner all received prizes.

## Cub Scout Camp Chemistry Day – Van Horn, Metz & Co., Inc., Conshohocken, PA

**Objective:** To provide an atmosphere that engages students in learning about the science of chemistry, the benefits of chemicals, and the importance of chemical safety awareness.

**Materials:** *You Be The Chemist* (YBTC) Activity Guides; materials to conduct experiments

**Costs:**

- The purchase of YBTC Activity Guides (\$12 for each grade K-4 booklet, \$15 for each grade 5-8 booklet, or \$20 for each set)
- Materials to conduct experiments (inexpensive; all materials can be found at all-purpose stores, such as Wal-mart or Target)

**Time:** One full day for the event; several weeks of preparation

**Background** An employee of Van Horn, Metz & Co., Inc. was involved in the local Cub Scouts because of his children. He volunteered to coordinate a day of science activities during the weeklong Cub Scout summer camp and asked CEF to suggest activities from the *You Be The Chemist* programs.

### Procedure

- Experiments were selected from CEF's YBTC Activity Guides; the CEF staff recommended different lessons that varied by age-level
- Volunteers were asked to help conduct the experiments
- All of the necessary materials to conduct experiments were purchased
- On the day of the event, volunteers were assigned to different experiments
- Groups of students rotated through the experiment stations throughout the day (predetermined by the camp coordinator)

**Analysis** For four years, CEF's YBTC experiments have been used at the day camp. Each year, more than 200 students participate in the experiments. Students and group leaders enjoy the hands-on activities as well as learning more about how fun chemistry is!

### Goals

- To provide Cub Scouts with an environment in which they can learn more about chemistry, thus increasing their knowledge of the subject as well as their appreciation for chemistry and chemicals
- To partner a member of the chemical industry with schools and organizations in the local community
- To position a member of the chemical industry as an involved community member

**Extension** In addition to observing the experiments, Cub Scouts at certain levels were able to earn their Science Belt Loop by participating in the activities and demonstrating an understanding of the scientific method.