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Administrative

Mission Statement

ChemClub invites, motivates, and encourages high school students to explore the many ways that chemistry connects to their world. Supported by the American Chemical Society, ChemClub provides fun, authentic, and hands-on opportunities for members to:

- experience chemistry beyond what is taught in the classroom,
- learn about study and career opportunities in the many and varied fields of chemistry,
- provide service for the betterment of their communities,
- discover and pursue connections within the larger chemistry community, and
- develop leadership and communication skills.

Safety

Safety

Before starting any laboratory investigations, demonstrations, or outreach activities, it is important to create a safety culture. Become familiar with **RAMP**:

- **R**ecognize the hazards
- **A**ssess the risks of the hazards
- **M**inimize the risks of the hazards
- **P**repare for emergencies from uncontrolled hazards

(https://www.acs.org/content/acs/en/chemical-safety/ramp.html). Before performing a demonstration or having students complete laboratory activities, review the chemicals, equipment, and procedures used and identify potential hazards.

In addition to the documents included in this section, two recommended online resources are: the ACS Chemical & Laboratory Safety (https://www.acs.org/content/acs/en/chemical-safety.html), which explores safety culture, RAMP, resources for educators, and more; and Flinn Scientific (https://www.flinnsci.com/sds/), to locate copies of Safety Data Sheets for the chemicals you are using.

Included in this section are:

- Safety Guidelines for Chemical Demonstrations
- ChemClub Laboratory Safety Agreement
- *ChemMatters* article: “Safety Data Sheets: Information that Could Save Your Life”

Communications & Media Resources

Communications and Media Resources

There are many ways for ChemClubs to share news about their Clubs and activities with a wider community. For example, many ChemClubs promote their club activities through their school or local newspaper. We encourage you to share your club activities and news through our blog (http://acschemclubs.org), social media, and the ChemClub website (http://www.acs.org/chemclub).

To help you produce the best stories and pictures, we have put together a collection of general guidelines for photography and blog posts. Remember that we cannot share your photos or videos unless each person featured in the photo or video has a signed release form. A blank form is included in this section.

In this section:

- Writing for the ACS ChemClub Blog
- Photography Tips
- Criteria for Submission of Images
- Photo/Video Release Form

Activities: Laboratory Investigations

Sample Laboratory Investigations

Many ChemClubs dedicate time during meetings to carrying out laboratory investigations. You may already have a collection of laboratory activities or demonstrations that you would love to use with students in your classroom, but cannot fit into the busy school year. Those activities are a great resource to use with your ChemClub students. Some of the most popular laboratory activity topics among students and advisors have been food chemistry and forensics; ask your students for topics they'd like to investigate! Additionally, chartered ChemClubs receive activities on a quarterly basis during the school year from the ACS Office of High School Chemistry to incorporate into your ChemClub programming as desired.

Advisors and Club members should be aware of all relevant safety guidelines for your selected laboratory activities and demonstrations. Two sources of safety guidelines are the ChemClub Laboratory Safety Agreement (see Safety), and the ACS publication "Guidelines for Chemical Laboratory Safety in Secondary Schools" (https://www.acs.org/content/dam/acsorg/about/governance/committees/chemicalsafety/publications/acs-secondary-safety-guidelines.pdf). Safety questions can be directed to the ACS Committee on Chemical Safety at safety@acs.org.

You are encouraged to take photos of ChemClub members in action and share those photos with the ACS ChemClub office at https://fs7.formsite.com/ACSEducation/ChemClubBlogPosts/index.html. People in the photos must be shown using safety equipment appropriate to the activity (e.g., goggles, safety shield if required, food not being consumed in a laboratory setting, etc.) If you choose to submit photographs or videos, each student in the photograph or video must complete the Photo Release Form found in the Communications & Media Resources section.

We have enclosed four activities from past ChemClub resources to get you started:

- The Crime at Yum Yum Bakery — From 2011–2012 Resource Packet on Forensics
- Is Nail Polish Nano? — From 2012–2013 Resource Packet on Nanotechnology
- Making Cleansing Cream — From 2010–2011 Resource Packet on Makeup
- S'more Stoichiometry — From 2011–2012 ChemClub Cookbook Contest Packet

Activities: Service Learning Ideas

Service Learning Ideas

Many ChemClubs look for ways to interact with and serve their communities. Including service learning opportunities as part of a ChemClub enables club members to learn and have fun while contributing to their communities. Service projects could be done in conjunction with other school-based clubs, your ACS local section, or a collegiate ACS student chapter in your area.

To help ChemClubs reach out to and serve their communities, the ACS provides community outreach grants. This section contains more information about the grant, along with a Grant Idea Development Worksheet to help plan. Advisors are highly encouraged to involve ChemClub members in the grant writing process; it can be a great way to help them develop their leadership and communication skills, a component of the ACS ChemClub program's mission.

Several ideas that incorporate service learning, promote chemistry, and reach out to the community are to:

- Conduct or assist in school-wide recycling efforts.
- Work with local forestry officials to plant trees and ground cover to control erosion and help the environment.
- Raise money for a local, national, or international charity. These could include an animal shelter or the Children's Safe Drinking Water Program (http://www.csdw.org).
- Pick up trash at a local park, beach, or lake.
- Provide academic tutoring:
  - Tutor area elementary/middle school students with an after-school program.
  - Tutor other students within your school. This is an excellent opportunity to collaborate with another club/organization such as an academic honor society.
- Present chemistry demonstrations or hands-on activities to elementary or middle school students. Later in this section we have provided a few activities from the past ChemClub resource packets that you may consider adjusting for your outreach activities. Also, check out the following ACS resources for additional ideas:
  - *Kids & Chemistry* features a set of activities tested and contributed by ACS members. (http://www.acs.org/content/acs/en/education/outreach/kidschemistry/activities.html)
  - *Inquiry in Action* (http://www.inquiryinaction.org) uses an inquiry-based approach to teacher physical science and chemistry in grades 3–5.

- *Celebrating Chemistry* is designed to engage and educate children in the basic principles of chemistry and aligned with either National Chemistry Week or Chemists Celebrate Earth Day themes. Pdf's of current and past issues are available at http://www.acs.org/content/acs/en/education/outreach/celebrating-chemistry-editions.html. Many are also available in Spanish.

- Host a chemistry-themed movie night for your community (some possible ideas on how to organize such an event are included in this section).

Examples of activities and demonstrations that clubs have used in the past for their community outreach are provided in this section and include:

- Density Drink (activity) — From 2012–2013 Resource Packet on Chemistry of Everyday Things
- Mentos® Geyser (demonstration) — From 2012–2013 Resource Packet on Chemistry of Everyday Things
- Sodium Polyacrylate Shell Game (demonstration) — From 2010–2011 Resource Packet on Polymers