

Women's Chemistry Group: An Introduction

The Women's Chemistry Group ("**WCG**") is an informal organization of academic and professional women, sponsored by the Southern Arizona section of the American Chemical Society, **SAZACS**. The WCG features monthly networking meetings plus various outreach projects primarily directed at attracting young ladies into STEM related careers.

OUR START:

The WCG traces its origins to the **early 2000's** when Pat Schumann, longtime SAZACS rep to the National ACS, initiated the group as an offshoot of the national ACS Women in Science initiative. The WCG program featured monthly first Friday networking breakfast gatherings for local women in chemistry related positions, and participation in **Science Olympiad** and other outreach opportunities.

"The Way Things Were" Pre- Pandemic, through Spring 2020

We met From September to May, and included in our annual calendar:

- **Monthly:** first Friday breakfasts
- **November: Arizona STEM Adventure**, where we present an individual "Silly Putty" experience in a scientific context for most of the 1000 students attending annually
- **March: SARSEF Regional Science and Engineering Fair**, where we function as sponsored judges and award prizes and notes of commendation for best female project at each level K-5.
- **December:** collections of Christmas gifts for the Emerge! Center Against Domestic Abuse,
- **May:** Happy Hour collection of gently used professional clothing to the YWCA's Your Sisters Closet program earmarked for women reentering the workforce.

We also present, as time allows, "hands-on" exhibits at the Tucson Botanical Gardens adjoining the Butterfly Magic exhibit and have a repertoire of "hands-on" exhibits for this presentation.

"The Way Things Will Be" Post Pandemic, Fall 2021

Our life in pre-covid times ended with the SARSEF science fair judging, March 2020 which featured well distanced judges only, no students or teachers; it was our last "live" event for over a year.

Fall 2020 featured a “virtual” Stem Adventure Silly Putty Event in which over 1700 kits of our design were delivered to schools by SARSEF volunteers for individual distribution, and we developed an accompanying video which got >5000 hits on U-Tube!

In **spring 2021** we held small outdoor breakfasts after all were vaccinated to access plans for times to come, especially our potential participation in the ACS regional meeting, and we did virtual judging for the SARSEF Science Fair in March.

Summer 2021 has featured several breakfast meetings to prepare for the Rocky Mountain Regional Meeting Oct 20-23 in which the WCG will sponsor a luncheon/poster session featuring notable accomplishments of women in STEM.

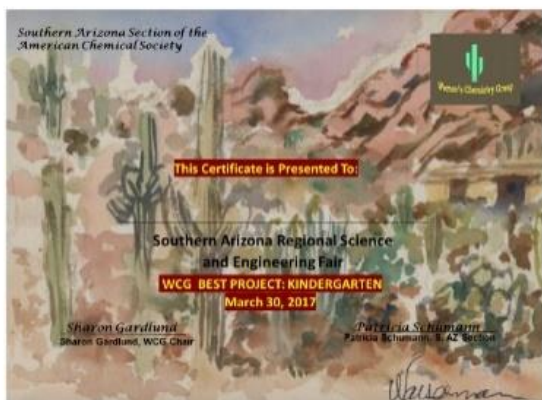
All ladies (and gentlemen!) who’d like to join us are encouraged to contact Sharon Gardlund (sgardlund@yahoo.com) and/or Ellen Caldwell (ellen.caldwell@cox.net); in these uncertain times our fall 2021-spring 2022 schedule will be determined a step at a time!

Summarized below is a bit of history of our evolution to where we are today ...

WCG, 2008-2018: A Ten Year Overview

10 years ago, 2008, the group lost founder Pat Schumann’s leadership due to her increased professional responsibilities, and the statewide Science Olympiad moved from Tucson to Phoenix, taking with it the chemistry based Crimebusters event for which the WCG had been responsible. The WCG had some re-inventing to do following these 2008 losses.

Spring 2008 featured the initiation of an annual participation in the **SARSEF Science Fair**, in which the WCG awards a certificate and Barnes & Noble gift card for the best female project in each grade level competition, K-5. (120 female K-5 projects were reviewed that year; in spring 2019 the number rose to 474 and judges had to use a table station upstairs as the student exhibits covered the entire floor of the auditorium at the TCC convention center!). Pictured is the parchment certificate awarded each year and the judging team for Spring 2017.



In **Fall 2008** Ellen Caldwell decided to continue as membership coordinator, the role she has filled since the initiation of the WCG, and Sharon Gardlund assumed role of chair. The group researched outreach activities to compliment the continuing first Friday “nibble, nosh, and network” sessions. A visit to the Raytheon sponsored **Science Technology and Engineering Fun Fest** led to our inheriting the **Silly Putty booth** from a UA graduating PhD candidate, Rachael Morris, which the WCG has maintained since 2009.

SILLY PUTTY BOOTH at the FunFest/ Arizona STEM Adventure

From the outset, this has been a big crowd pleaser and we have tried to present the whole activity as an adventure in chemical experimentation, relating the production of the silly putty in context of ingredients, conditions and careful measuring, bolstered by banners showing the chemical composition of the reactants.



In **Fall 2009** we used the “Styrofoam cup method” bequeathed to us and donned our new WCG shirts to do our first exhibit at the Funfest event held at the Tucson Convention Center (TCC): **By 2010** at TCC we had new reaction posters and a new group “red bowl method”.

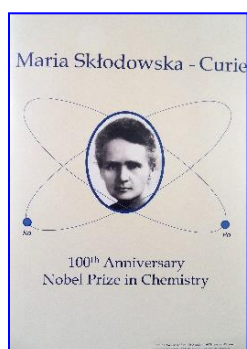


By 2016 the **Raytheon Fun Fest** had morphed into the **Arizona STEM Adventure** and moved to PCC Northwest campus where we had turned to the current, most successful “Ziploc bag” procedure.

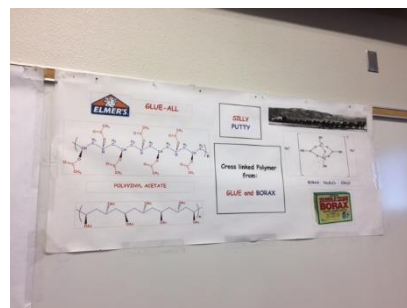
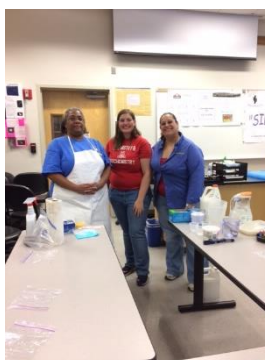
In **Fall 2017**, we returned to NW campus for our 9th Silly Putty exhibit, where a total of 695 students made “silly putty in a bag” in a time span of under four hours! We were provided with an adjoining room to handle the waiting lines for whom we setup a series of posters themed on 20th Century women scientists for inspection.



The posters were first prepared for the SAZACS **September** dinner meeting in **2011**, where the WCG, in conjunction with UA WISE (Women in Science and Engineering) and SMACS (Student Members, ACS) groups, presented a poster session featuring 9 famous women chemists to celebrate the ACS celebration of the 100th anniversary of Marie Curie's 1911 Nobel Prize.



Our 10th and 11th Silly Putty events, **Fall 2018, 2019** featured a joint venture with the Geology Dept of PCC NW campus: Our student participants toured the Geology exhibits in the adjoining room before entering into the Silly Putty session next door in teams of 8-10: We were able to handle the crowds more efficiently and were able to allow almost 650-750 students to make and take home their individual silly putty bag.



A **third outreach event** was added to our annual schedule in the spring of **2010**, when we were invited to setup an April weekend chemistry exhibit (pictured below) for the enjoyment of families visiting the Butterfly Magic event at the **Tucson Botanical Gardens**. We were joined in this venture by members of the **UA SMACS club**, which has partnered with us at the TBG and Silly Putty exhibits ever since.



Our latest exhibits, Oct 21-22, 2017 featured 5 hands-on exhibits including the Mole Table to celebrate Mole Day Oct 23 and National Chemistry Week.



Spring 2019 Exhibit at the Presidio School Science Fair:



Other annual events for the WCG include the **Happy Hours** held in May and occasional luncheons to allow members who cannot join the first Friday breakfasts to participate. In December, we continue to gather holiday gifts for the Emerge! Center.

