

Schmahl Science Workshops

A Schmahl Science Workshop

Schmahl Science Workshops, Inc.

Like children everywhere, the children at A Schmahl Science Workshop love science. And like children everywhere, they learn most when they are motivated, challenged and having fun. We are a partnership of students, parents, teachers, scientists and engineers who have come together to help foster this interest in science. We believe children are motivated to learn when their ideas are cultivated through the fun of designing and developing an experiment.

Fun with Middle School Chemistry Series

Thursdays, 9 - 10:45 am

January 7, 14, 21, 28; February 4, 11, 18, 25; March 4, 11, 18, 25; April 1

Winter and Spring Sessions

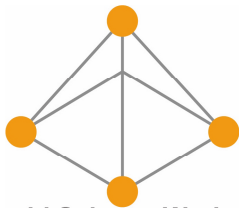
Fee: \$429 per student

1. **Element - O Game:** Elementeo Chemistry Card Game injects fun and fantasy into learning and transports kids to the world of chemistry!
2. **Flammability:** Fire is a useful tool - it cooks our food, heats our homes, etc. In order to make fire work for us, we need to know something of flammability. During this workshop, student will test various materials for flammability
3. **Solubility:** In this activity, students learn about the solubilities of different salts. They use solubility charts to find out which salts will form precipitates in solution.
4. **Recrystallization:** Recrystallization is a laboratory technique used to purify solids based on their different solubilities. Students will prepare purified crystals from technical grade crystals.
5. **Corrosion:** This visually striking lab clearly illustrates the processes of rusting, corrosion and cathode inhibition. Iron metal will rust in the presence of air and water, a process that accelerates in ocean water. Yet, in the presence of another metal (such as magnesium) the nails will not rust for a very long time as the magnesium sacrifices itself by supplying electrons to the iron nail. Eventually the magnesium will vanish, and a white solid will form on the bottom of the petri dish.
6. **Soap making:** The process of soap-making goes far back in history. The process (similar to what we will be doing in lab) involved combining some form of fat with an alkali (basic) material. Most commonly the alkali was in the form of potash and pearlash, which contain KOH. Potash and pearlash soaps were used by everyone from the reigning monarchs to the peasant or cottager, who made their own soap from the waste fats and ashes they saved.
7. **Water Hardness Testing:** This workshop is designed to familiarize students with testing water for hardness, which means the amount of minerals dissolved in the water.
8. **Carbohydrates:** Students learn about the sources of carbohydrates and their uses in the food industry. Students use pectin in conjunction with an acid and sugar to form jelly. By varying the sugar concentrations, the students observe that there is an optimum ratio for the creation of this spreadable gel.

For questions please contact Belinda Lowe-Schmahl, 281-7595 or bel@schmahlsience.org

Please visit our website at www.schmahlsience.org

Camden Homeschool Winter Spring Session



A Schmahl Science Workshop

Schmahl Science Workshops, Inc.

Schmahl Science Workshops

- Vitamin C Determination:** Vitamin C is in orange juice, broccoli, and Flintstones chewable vitamins. Students use titration methodology to determine if there is more Vitamin C in a strawberry or a tomato?
- Elephant Toothpaste:** Mix two solutions together and you get an amazing eruption of oxygen filled foam that looks like a giant stream of toothpaste.
- Metal Etching:** Copper etching is considerably important process in electronics industry, particularly in the fabrication of printed circuit board. Various etchants can be used for this purpose, but nowadays cupric chloride is more accepted etchant, because of its high etch rate and easy regeneration properties. During workshop, copper etching process with cupric chloride etchant will be investigated.
- Garden to Dye for:** Students learn to manipulate natural dyes as we introduce them to the techniques and principles of organic chemistry.
- Metal Reactivity:** Students describe properties of metals, making observations of metals reacting with water and group the metals in families based on their observations.



A Schmahl Science Workshop

Schmahl Science Workshops, Inc.

Schmahl Science Workshops

Child's Name _____ Grade 2009-10 _____

Child's Name _____ Grade 2009-10 _____

Child's Name _____ Grade 2009-10 _____

Parent Name _____ Email _____

(For registration confirmation)

Address _____

City _____

Zip _____

Home Phone _____

Emergency Phone _____

Any Medical issues for child(ren) _____

Workshop Series	Students' Names	# of Students	Amount Due
Middle School Fun with Chemistry			
\$429 per student			
Deposit of \$42.50 per student required			
Charter School Invoicing Fee \$5.00			
Total due			

- **Mail registration to:** A Schmahl Science Workshop, 171 Branham Lane, Ste. 10, PMB 223, San Jose, CA 95136.
- **Payment is due with registration. No refunds. No substitutions.** Send check or money order made out to A Schmahl Science Workshop. Credit Card Payments: MasterCard, Visa, American Express (Circle One)
 Card Number _____ Exp. Date _____ CID _____
 Signature _____ Date _____
- Check here to be added to our mailing list of future workshops _____.
- Check here for information via email _____.
- SSW may take workshop photos for use in SSW's publicity. Names and locations will not be published. Check here if we have your permission to take photos of your children during our workshop(s) _____.

For questions please contact Belinda Lowe-Schmahl, 281-7595 or bel@schmahlsience.org
 Please visit our website at www.schmahlsience.org
 Camden Homeschool Winter Spring Session