



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.

Artistic Science Chemistry Series

Thursdays

Grades K-1: 11 - 11:50 am

Grades 2-5: 12 - 1 PM

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

Fee: \$240 per student

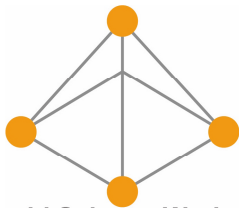
"The artists of the Renaissance said that man's main concern should be for man, and yet there are other things of interest in the world. Even the artists appreciate sunsets, and the ocean waves and the march of the stars across the heavens. There is then some reason to talk of other things sometimes. As we look into these things we get an aesthetic pleasure from them directly on observation. There is also a rhythm and a pattern which is not apparent to the eye, but only to the eye of analysis; and it is these rhythms and patterns which we call Physical Laws." - Richard Feynman, 1965

1. **Jell-O Printing Press:** Make monotypes using unflavored, edible gelatin as the printing surface. This is a versatile process requiring no press, and using water-soluble nontoxic inks. While results of gelatin monotypes can mimic a variety of printmaking techniques, the gelatin possesses its own unique characteristics, lending itself to experimentation. These handmade prints can be used for book covers, cards, or simply as art.
2. **Shaving Cream Towers:** Science meets art in today's crazy science program. Strange shaving cream art creations become cool structures; yummy foods become masterpieces.
3. **Jelly Critters:** Few marine creatures are as mysterious and intimidating as jellyfish. Though easily recognized, these animals are often misunderstood. Some bathers and beachcombers react with fear upon encountering these invertebrates, but, in fact, most jellyfish in South Carolina waters are harmless. A coffee filter jellyfish is a fun, easy craft that makes a unique craft that also creates a perfect opportunity to talk with children about jellyfish and other marine life, and the importance of preserving the aquatic environment.
4. **Beetle Mania:** Beetles have more described species than any other species of animal kingdom in the world - about 350,000 kinds! They are very important organisms, and your child is more than likely to find beetles, as well as other creepy crawlies, fascinating. Beetles come in many shapes and colors and make inspiring models for this craft project. Students will learn about these amazing organisms while they create their own beetles to paint and play with!

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

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- 5. Rainbows and Oil Spills:** Isaac Newton was one of the first to experiment with thin films and their effect on color. When viewed by reflected white light, thin transparent soap films, oil slicks and layers of shell show varying patterns of colors.
- 6. Soap Bubble Art:** I really like blowing bubbles but the worst part is when they break. Here's a way to capture the shape of the bubbles after they pop.
- 7. A Garden To Dye For:** Students learn the basics of dyeing with natural dyes, several recipes, an introduction to the physics of light and color, the chemistry of dyes and dyeing and the biology of plant dyes. Each dye is presented in the recipe section along with relevant cultural information and the name or class of the chemical substances in the dye.
- 8. Bandana Chromatography:** Chromatography is a technique used to separate mixtures. Many different science fields use chromatography. The technique is used in environmental studies to detect pollution in water and air. Chromatography also is used by crime laboratories to identify clues such as blood, ink, or other substances found at a crime scene. In this workshop students create their own colorful Bandanna design while learning about chromatography. Students separate the ink from permanent colored markers to make a rainbow of colors on your Bandanna!
- 9. Flower Pounding Bandanas:** You may be wondering what in the world is "Flower Pounding". Put simply, it is the process of transferring plant pigments to specially treated fabric via pounding with a hammer to create floral imagery reminiscent of water color painting. Once you try flower pounding, you will never look at flowers the same.
- 10. Dirt, Art and Cave Paintings:** Have you or your kinder-artists ever looked at pictures of prehistoric paintings? You have? Great! Now, have you ever thought about trying your hand at some "cave" paintings? Prehistoric paint was created by mixing dirt, ground up rocks and animal fat. Sometimes, bits of burned wood were ground up, mixed with animal fat and used for painting as well. Students will create their own "prehistoric paint" and then make cave paintings to take home.
- 11. Chalk Clocks:** The hourglass is sometimes referred to as a sand clock or a sandglass. Like other timepieces, it needs to be carefully calibrated. Students build a chalk, and will test their instruments and fine-tune them to measure the correct length of time.
- 12. Fish Prints:** The Japanese have used the art technique of goyakto record their fish catches. Students will use this technique to record the fine details of a replica fish body on paper. Fish prints are one way for students to preserve the beauty of a fish and at the same time create attractive pictures that they can be proud of.
- 13. Paper Clay Science:** When making paper clay, children use their senses and have the chance to talk about the changes that happen to things they are familiar with in certain forms. For example, by taking the surprising step of adding water to construction paper *and* grinding it up in a blender, children see that paper can be made into a watery mixture (pulp) which is somewhat similar to the flour mixture for paper mache (although paper is made of *cellulose* - the "woody" non-digestible part of a plant - and flour is composed of carbohydrates and starch - the part of certain plants that our bodies can use for food energy).

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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
Artistic Science K-1			
\$240 per student			
Artistic Science Grades 2-5			
\$240 per student			
Deposit of \$24 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) _____.

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