



CHEMISTRY PRODUCT DESIGN

Mondays, September 13- December 13 (no class Oct 11, Nov 22; 12 weeks)

11:00am-12:15pm

Ages 8-10

Students learn how chemistry is used in the design and creation of everyday items, from self-care products to toys. As they learn the science and proper use of scientific tools, they modify protocols to create their final customized products. All lab costs are included in registration fee.

Instructor: Christina St Martin, MSc

Location: Science Center (suite 5)

Course fee: \$220 OR \$20/lab

Early registration (10% off) through August 6

10% sibling discount beginning August 7

Register for full semester or individual labs.

LAB SCHEDULE:

Bath Bomb Lab – Monday, September 13

Kids study the chemical reaction that makes bath bombs fizz, modify the protocol to determine the effect these changes have on their product and create their own unique bath bombs.

Soap-Making Lab – Monday, September 20

We investigate the science of saponification (soap making), as we test different soap bases, fragrances, inclusions and colors to make custom bars of soap.

Tie Dye Lab - Monday, September 27

Explore the science of tie dyeing as we use dyes that chemically react with fabric molecules to create unique, permanent patterns and designs on t-shirts and bandanas.

Crystal Treasures – Monday, October 4

Learn how to use chemical compounds to design and create beautiful lab-grown crystals, from small glow-in-the-dark alum crystals to long spikes of magnesium sulfate and more.

Lip Balm Lab – Monday, October 18

Customize a product that keep lips smooth and moisturized as we study the biology of the skin to see why it becomes dry, as how the ingredients in lip balm help keep lips from getting chapped.

Slime Product Design – Monday, October 25

Design a new slime that will sell out in toy stores everywhere! Learn the science behind slime and come up with creative ways to improve the already fun toy.

Custom Paint – Monday, November 1

Kids design unique paint media using household items to create custom textures and colors, then create a masterpiece on canvas to test the quality of their paint.

DIY Crayons – Monday, November 8

This week, kids design and create a set of scented homemade crayons using science to create the perfect formula, and creativity to give each color a great name.

Bouncy Balls - Monday, November 15

Using chemistry and physics, we analyze the best protocol for creating polymer balls that have the greatest elasticity (and have the highest bounce).

Water Bubble Lab – Monday, November 29

In this lab, we experiment with polymer spherification, a chemical process to create water bubbles from seaweed extract, similar to popping boba.

Lava Lamp – Monday, December 6

We use the properties of oil and water and explore density as we design and create a custom glowing lava lamp.

Hydrophobic Sand – Monday, December 13

Kids experiment with hydrophobicity to create sand that repels water and always stays dry even when it is submerged in water.