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Message from the President

The 69th Gem and Mineral Show is coming up fast. Hope you can attend the Show from July 7th to the 9th. And, of course, the 4th of July is upon us as well. I have been enjoying doing a mapping project in the La Plata Mountains. I had forgotten the ruggedness of the range, but the geology is amazing and complex.

69th Annual
Four Corners

GEM & MINERAL Show

July 7 - 9, 2023

La Plata County Fairgrounds
Durango, CO

Gems, Minerals, Fossils, Jewelry and more!

- Vendors from all over the world
- Kids' Activities
- Indoor/Outdoor Booths
- Hands-On Classes
- Food and refreshments available
- Silent Auction

\$5 Admission

Fri. & Sat. 10am - 6pm, Sun. 10am - 4pm

Don't miss it!

For more info: durangorocks.org



Durango Rocks
Since 1947



2023 Gem and Mineral Show!

Cindy Pugsley has been busy organizing and preparing for the 2023 Gem Show. You can still volunteer to assist at the Show or make a donation to the Silent Auction.

If you are interested in volunteering for the Show, visit the [Club's volunteer registration page](#). Volunteers receive free entrance to all 3 Show days. If you are new to this registration site, *please verify your email within 30 minutes after signup* to hold your spot. Contact Cindy at cindypugsley@sbcglobal.net or (847)-951-1993 if you have questions about the show or how to help.

You can also use the QR Code below to link to the site to sign up to volunteer.



Volunteer jobs at the Gem Show include:

- Setup (erect tables, chairs, signs, etc. in indoor and outdoor locations before the event)
- Info and Check (briefly orient volunteers and explain the Club to the public)
- Entrance (greet the public and accept entry fees)
- Silent Auction (set up items for sale, accept payment from winning bidders)
- Gold Panning and Kids Activities
- Door Monitor (direct visitors to main entry to pay entry fee)
- Runner (assist dealers and Gem Show chair)
- Class Assistant (assist teachers leading lapidary and metal smith arts)
- Finances (collect income and sales tax, prepare deposits)
- Take down (remove tables, chairs, signs, etc. in indoor and outdoor locations after the event)

Gem Show Classes

The Club is pleased to announce an exciting lineup of classes at the Gem Show from July 6 to 9. This is a great opportunity to learn a wide range of lapidary and metalsmith skills. Classes are small, and with both a skilled instructor and an assistant, you can expect plenty of personal attention. The classes cost less because our instructors agree to volunteer their time as a fundraiser for the Gem Club, and we wish to make these classes especially affordable for regional residents. Some classes will sell out quickly so register early at www.durangorocks.org/gemshowclasses.

Donations Needed for Gem Show

If you are still interested in donating an item to the Silent Auction contact Jennifer Floyd at (970) 759-4620 or jennifer@cartwheelclothing.com

Scholarship Assistance Program for Gem Club Classes

Scholarships funds are still generously available, thanks to the City of Durango Lodger's Tax Fund. A scholarship pays 2/3 the cost of tuition, both for weekend classes offered during the year or for classes at the Gem Show. If your cost of living is high but wages are low, these funds can help you learn new, valuable skills and make beautiful objects. Scholarship applications are available at www.durangorocks.org/classsscholarship.

Upcoming Classes in July

A few classes are being offered in July including Lost Wax Casting and Enameling with Stencils. In addition, there are several training sessions for soldering and kiln safety.

You can check on upcoming events at the [Four Corners Gem and Mineral Club Events Calendar - Four Corners Gem & Mineral Club \(durangorocks.org\)](https://durangorocks.org/events).

Open Shop Hours

Open Shop has been temporarily closed as we are working on placing a security system in the Club. We hope to have this done soon so the Open Shop can resume after the Gem Show. Please be patient while we do this. It is for the safety and security of all users and the Shop. When Open Shop resumes, it will follow the schedule below.



Open Shop Hours

Tuesday 1-4 pm

Tuesday 6:30-9 pm

Wednesday 9am-noon

Wednesday 1-4 pm

Thursday 1-4 pm

Thursday 6:30-9 pm

First & Third Saturdays 10am-2pm

See [calendar](#)

Open Shop Punch Card

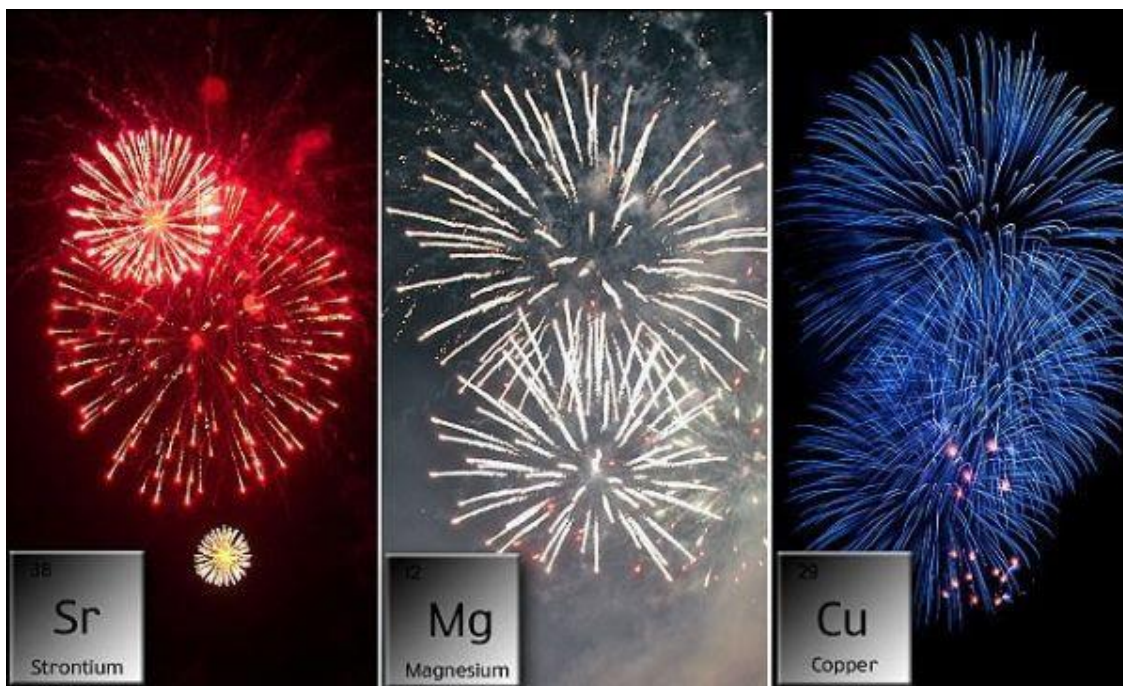
If you like using open shop, remember we have a punch card for multiple use. [Prepurchase](#) 10 visits for \$45 - a \$5 savings - and don't worry about having your "shop fee" when you come in!

Rock On: **Patriotic Minerals and Elements**

As an undergraduate student at Fort Lewis College, I learned a very useful method to help identify minerals. Many minerals contain elements that give a distinct color when heated under a flame. It is a simple test to put some of the powdered mineral on a platinum wire and then heat it in a Bunsen burner. I recall using this test to identify barite because barium gives off a distinct yellowish green color. This is now a lost art but it has relevance in the production of colors in fireworks. In this essay, I am only highlighting red, white, and blue in celebration of the upcoming fourth of July, but there are many other colors in fireworks created by the elements from minerals.

The science behind this phenomenon is fairly simple. Metals salts are packed into fireworks as pea to plum-sized pellets called “stars.” When the firework is ignited and sent into the sky, there is a fuse that slowly burns until it reaches the core of the firework which caused it to explode. The heat from the explosion causes electrons in the metal (element) salts to get excited to higher energy levels that create colors when the elements return to their starting energy state.

Red in fireworks is created by the element strontium (and lithium) which comes from minerals such as strontianite (SrCO_3) or celestite (SrSO_4). The blue is generated by copper salts, and the white is typically created by a combination of magnesium + titanium + zirconium. So, if you watch the fireworks this year, just reflect on another example of how minerals contribute to our world.



Elements that give red, white and blue colors in fireworks. Of course, minerals are the source of most of these elements. Taken from the Daily Mail Online.

Sources of Information

[The chemistry behind fireworks | Penn Today \(upenn.edu\)](#)

[How chemistry lights up the sky for the Fourth of July | PBS NewsHour](#)
[Chemistry of July 4th: What gives fireworks their color | Daily Mail Online](#)
[What minerals produce the colors in fireworks? | U.S. Geological Survey \(usgs.gov\)](#)



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