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January 2026 Newsletter

Message from the President

Happy New Year!

Did you know the Club is turning 79 years old this year? Talk about a long-standing presence in Durango! The clubhouse walls could tell stories: rockhounds recapping their field trips, cabochons being cut with pride for various projects, and silversmiths whooping with success or suffering major meltdowns (with words the walls should not repeat!). Members have opened their own brick & mortar and online businesses, sold at craft fairs and gem shows and many just keep coming back because they love learning and creating.

Gem Show

We are hosting our 72nd Gem & Mineral Show in July. This is no small undertaking! Every year, our small community of members comes together to present, by all accounts, the very best gem show between Denver and Tucson. BRAVO! Some dealers have been vending at our show for over 30 years straight, and there is always a waitlist for newcomers. This year's first Gem Show

Planning Meeting is **Wednesday January 7** starting at 5:15. No commitment is required, but take note: almost all the jobs left are "fun" or "easy" jobs so please attend to find something manageable you can do to check off our planning list.

Club Cleanup Party

On **Sunday January 18th** from 1 to 4 pm, board members, stewards and hopefully some of you, will join in to give the Clubhouse a top-to-bottom wipe down, inventory, organization and installation of new grinding wheels and grits on the lapidary line. Pizza for all that come, so bribe, bribe, bribe!

Monthly Social Hour

Mark your calendars for the LAST Wednesday of each month from 6 to 7:15 pm for our monthly social hour and presentation. Presentations are usually short science topics led by members or guests, but some topics pertain to art. The next Social Hour is **Wednesday January 28 at 6 pm.**

Committee Priorities

The Board meets this month on **Wednesday the 14th at 5 pm**. I will ask board members to set up two urgently needed committees: Membership Drive and Building committees.

- **Membership Drive Committee.** 2026 is going to be a great year for the Club! After the facility is tidied up, we will implement a membership drive. New members will enjoy more field trips, classes, demos and social hours this year. They will bring new and different skill sets to help the Club move forward. A larger presence in the community with a marketing campaign might open the doors for sponsorship of the Gem Show or the Club's facility needs.

- **Building Committee.** Should we rebuild on site or should we move? A solid research and development plan is needed this year.

Something Personal

I am so excited to go next week to the Pala Chief Mine in California. It is a pay-to-dig site that offers the chance to find tourmaline, kunzite, morganite, aquamarine, quartz and garnets. I will report back next month with my finds. *(Image by Gems of Pala Mining Adventures)*.

My first plea of the year is for each member to take on one big, medium or small task to help out. Let's keep our community ROCK SOLID.

For the love of minerals and metals!
Cynthia Pugsley, President

Hello from Your Shop Stewards

Shop Stewards keep the hearth warm at the Gem Club all winter long. They are volunteers and while many live nearby, others travel an hour or more one way just to open the doors for you. Stewards try hard to cover all shifts. If it turns out a Shop session is closed because no steward can make it, look for closure announcements on the Club's Facebook Page. If you would like to be a shop steward, visit with your friendly neighborhood Shop Steward during your next Shop visit. In the meantime, admire this photo of recent work by Steward Eric Hodges. Eric opens up on first and third Saturdays, and has demonstrated here that you can still make beautiful objects, even when silver prices shoot through the roof!

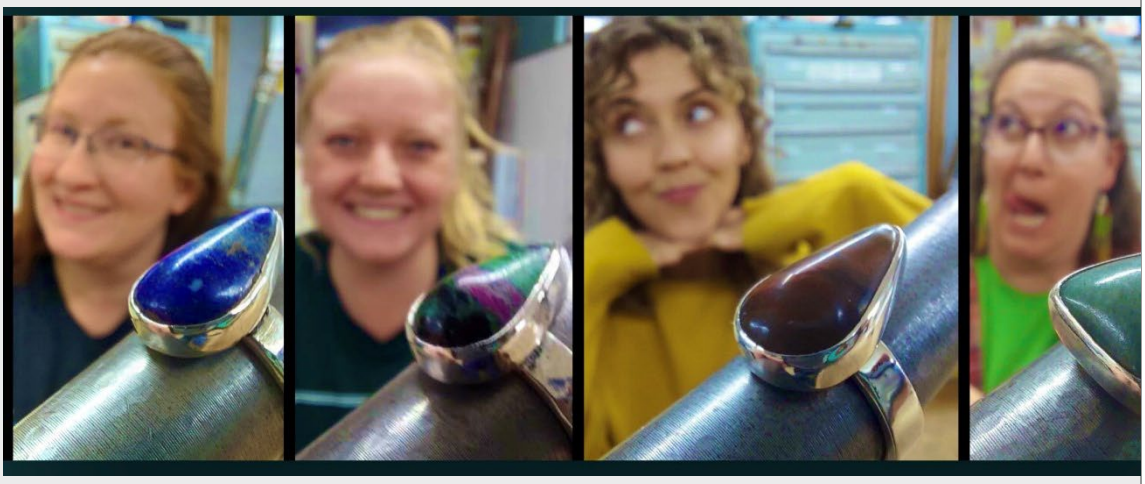
Classes

Keep an eye out for new class offerings this month. The next two classes are currently scheduled for January, but we expect more to be added to the calendar this month. So check back for an updated schedule.

- January 10-11 **Introduction to Silversmithing: Statement Rings** taught by instructor Carlos Manon.
- January 24-25 Introduction to **Wax Casting** taught by Jaymus Perry.

To register and for more details click on your class selection on the Club's Calendar. Then follow the enrollment directions from each teacher. Please note: our teachers are independent art instructors. Your participation helps support local art entrepreneurs!

The next image is from Carlos' last Statement Ring class, showing each student looking proud of their shiny
creations.



Guest Article: Elemental "Art"
by Dave Gonzales, Fort Lewis College Earth Sciences Department

Many artists integrate symmetry into their creations. One of the most renowned is

M.C. Escher, whose drawings and paintings utilize symmetrical patterns. I maintain, however, that the greatest artist of symmetrical creations is Nature itself, particularly in the form of crystals.

Humans are attracted to crystals because symmetry enhances their beauty. The recipe for making crystals in nature is relatively simple, yet the process is remarkably complex. The formation of natural crystals is an extraordinary phenomenon founded in chemistry. A substance is considered crystalline when the atomic constituents (atoms, ions, complexes) are arranged in a regular and predictable 3D pattern called a lattice. In a given geologic environment, if the size and electron structure of different atomic building blocks allow them to bond and organize, a crystalline compound forms. The symmetry of the atomic lattice ultimately determines the faces expressed in a crystal.

Some natural substances, such as opal, are an exception. Opal contains atoms of silicon and oxygen like quartz, but because water disrupts the atomic arrangement, the atoms do not organize into a lattice and crystals do not form. Minerals are not the only substances capable of crystallizing; consider sugar crystals, for example.

All perfect crystals display faces related by symmetry. These symmetrical relationships define the 32 crystal classes, which are grouped into 7 crystal systems. A crystal system is a classification based on the overall geometry or shape of the crystal. For instance, crystals in the isometric system are defined by three imaginary axes of equal length that intersect at 90 degrees, producing crystals that can fit into a cube. Within the isometric system, there are 5 classes distinguished by their different symmetry elements.

The next level of classification is the crystal form, defined by the angular relations and symmetry of crystal faces. There are 48 unique forms, but different forms can combine to create an even greater variety of crystal shapes, provided they belong to the same symmetry class. For example, a cube and an octahedron are distinct isometric forms, yet crystals may display faces of both because they share the same symmetry content. Because forms reflect the atomic structure of minerals with a given composition and arrangement, they lead to distinct physical and chemical properties. It is intriguing to consider how halite (NaCl) and galena (PbS) share the same atomic symmetry despite having different elements and properties.

Closed forms are shapes whose symmetry-related faces fully enclose space. An example is the octahedron with 8 faces (Figure 1). Some other closed forms are the cube, dodecahedrons, dipyramids, and the rhombohedron. Open forms, by contrast, consist of faces that do not enclose space on their own and must be combined with other open or closed forms. For instance, two faces in a crystal that are parallel to each other are known as pinacoids, and these must be combined with additional forms to create a complete crystal (examples in Figures 2-3).

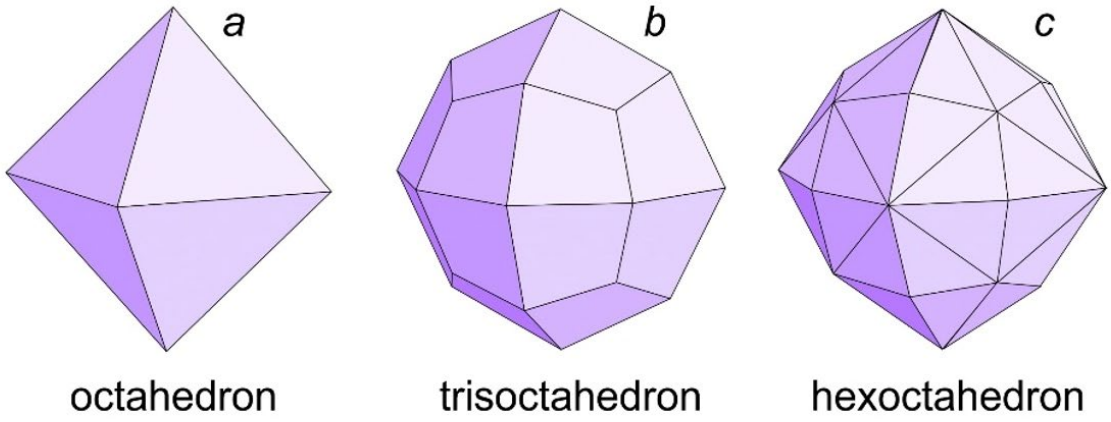


Figure 1. Examples of closed octahedral forms in the isometric crystal system. Taken from 10 Crystal Morphology and Symmetry – Mineralogy.

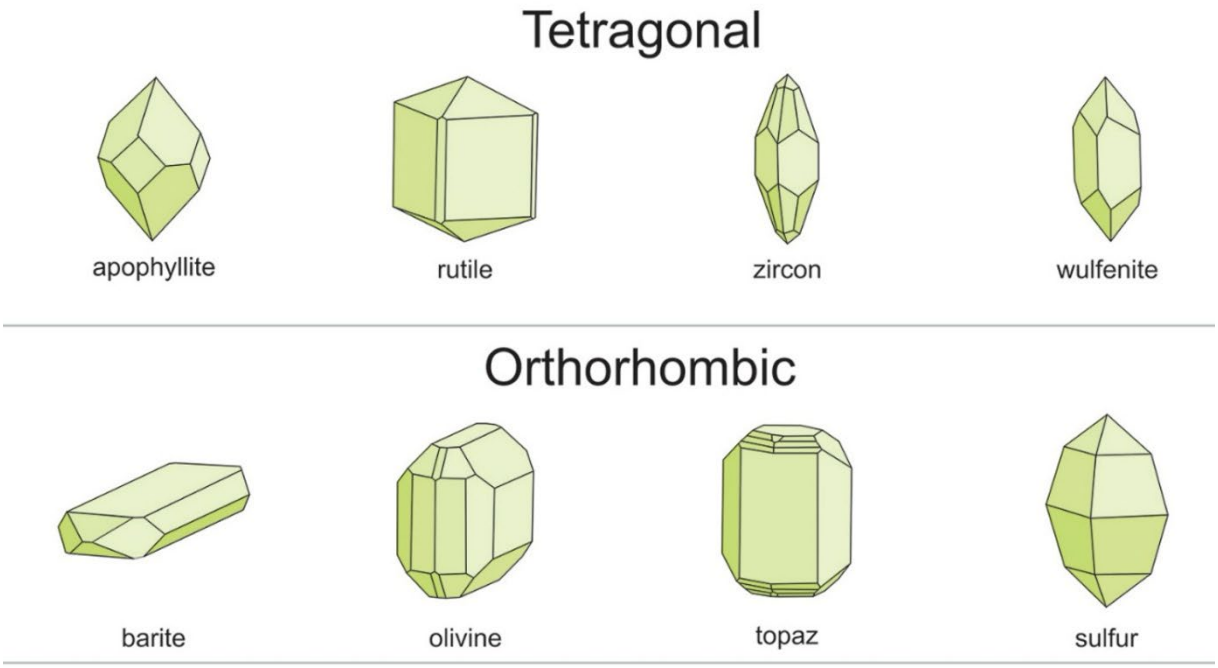


Figure 2. Crystal shapes in the tetragonal and orthorhombic crystal systems formed by combinations of closed and open forms. The rutile crystal shown above is a combination of two tetragonal prisms and a tetragonal dipyramid. Taken from 10 Crystal Morphology and Symmetry – Mineralogy.

Crystals do not always form in natural settings. Their creation requires the right atomic ingredients and proper environmental conditions. Thus, even though all minerals are crystalline, they may not develop visible crystals due to a variety of limiting factors. As I often tell students, even if you have the right ingredients to bake a cake without an oven all you have is batter. So, the next time you admire the beautiful shapes of crystals, consider the intricate and fascinating process whereby Nature creates symmetrical works of art with its atomic "paintbrush."

Figure 3. Emerald crystals are a great example of forms in the hexagonal crystal system. In the photograph above a hexagonal prism is combined with flat faces (pinacoids) to create the crystal shapes. Note that the crystal in the center is very well developed but the other two crystals are somewhat distorted and not perfect, as you might expect in nature. Taken from Emerald | Properties, Formation, Occurrence » Geology Science.

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