

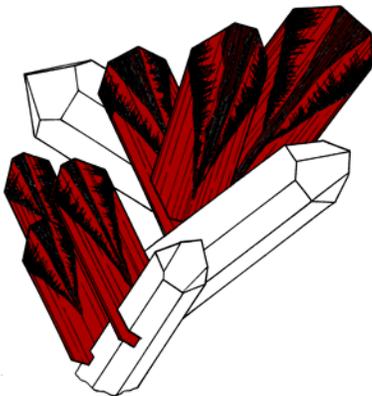
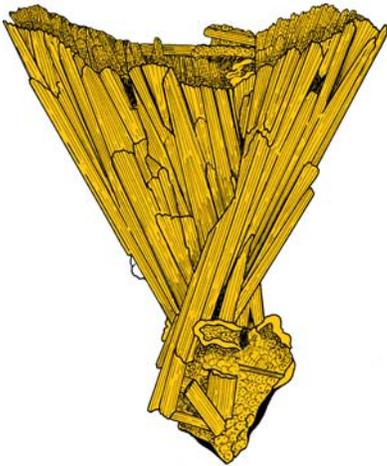
MINI MINERS MONTHLY

A MONTHLY PUBLICATION FOR YOUNG MINERAL COLLECTORS

VOL. 13 NO. 1

JANUARY 2021

Happy New Year! Welcome to another 12 Months of mineral collecting fun!!



Since 2008, we have been creating for you a variety of different mineral trading cards. We now have 13 different sets. You can print them, cut them out and trade or give them away. It has been a while since we published some new trading cards. In this issue you will find the two newest sets, both of which are in the theme of “World Class Minerals.” The front side has the color pictures of the minerals and the back side has the mineral names, the localities and some information about the minerals. Mineral clubs around the country have sent us pictures of their Mini Miners trading the cards with each other at their mineral shows and club meetings. **(You can purchase all 13 sets on our website. The link is on the home page at www.diamonddanpublications.net).**

At the end of this issue are two blank pages so you can create your own mineral trading cards. Draw your mineral pictures on the front side of the card inside the red border, and write the mineral name, its locality and some interesting information about the mineral on the back side. Then cut them out. You will have your own, unique, one-of-a-kind set of mineral trading cards.

Have you ever thought about creating your own mineral coloring book? You can do it by yourself or in partnership with a friend or friends in your mineral club, school class, or scout group. Instructions on how to put together and publish your own mineral coloring book is included in this issue. Do you need help? Don't hesitate to email or call Diamond

Dan. I would be honored to help you any way I can. (powellpublicationsgroup@gmail.com, 585-278-3047).

BE SURE YOU CHECK OUT THE VERY LAST PAGE OF THIS ISSUE. “MINI MINERS WITH DIAMOND DAN”

ON YouTube IS HERE!!! We have been sidelined by the holidays and other challenges. But new videos will be added in the coming weeks. Enjoy!!

What Mineral Am I?

I have metallic luster. My crystals are long and very, very thin. So thin they look like hair. If they are just thick enough they are very straight. But when they are thin enough, they curl and look like soft hair. I have nickel and sulfur in my chemical formula. And I was named after an Englishman named William Hallowes Miller. My mineral name is _____.

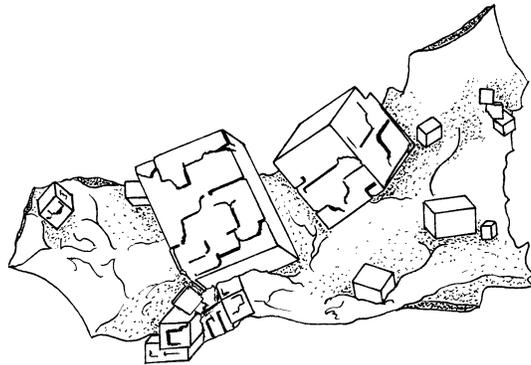
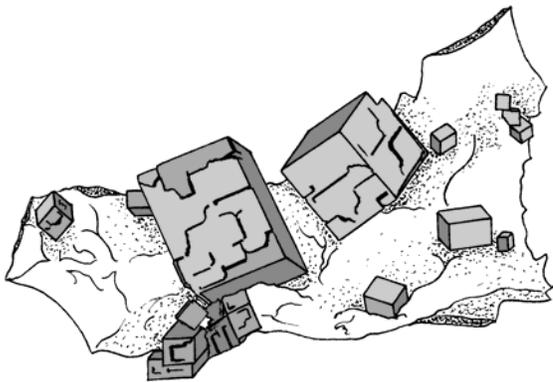
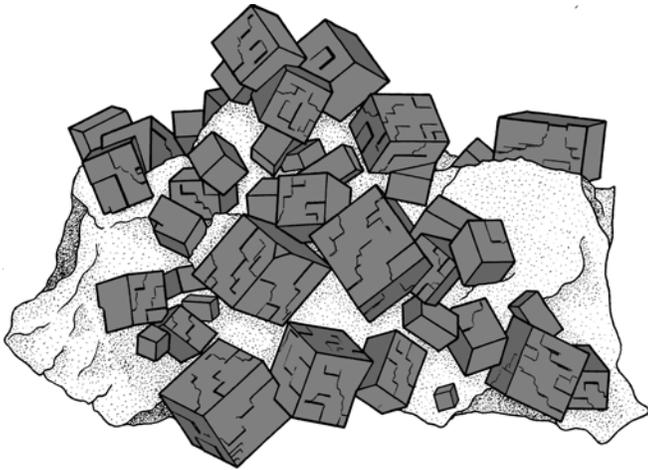
Check your answer on the next page.



MINI MINERS MONTHLY

Mineral of the Month

Galena



Color: Silver-gray; **Luster:** Metallic;
Hardness: 2 1/2; **Specific Gravity:** 7.5;
Streak: Metallic Gray; **Fracture:** Perfect Cubic
Crystal System: Isometric; **Chemical Formula:** PbS

This year our “Mineral of the Month” entries will be the most common and interesting minerals that collectors look for. And this month we start with one of the most common and most interesting minerals: Galena.

Galena contains only two elements, lead and sulfur (its formula is PbS). It is the most important ore of lead. Lead is mostly used to make car batteries. for radiation protection (the dentist will put an apron that has lead in it on you when she x-rays your teeth), to make lead crystal glass, and it is sometimes used to store liquids that are very corrosive.

Galena crystallizes in the cubic or isometric crystal system. It often is found as simple cubes. Many times these cubes grow together to make either groups of crystals or single, larger crystals that are made of the smaller ones.

However, it can also be found as octahedra (diamond-shaped) and combinations of cubes and octahedra. Rarely it can be found as dodecahedral crystals.

If you choose to add galena to your collection, be careful. Wear gloves when you handle it. And wash your hands after you handle galena specimens. This is to protect you from getting lead in your body. Lead is poisonous and can harm your nervous system.

What mineral am I? Answer: Millerite



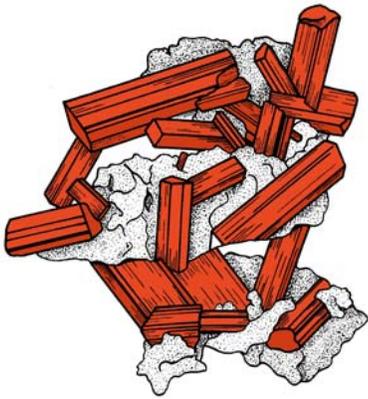
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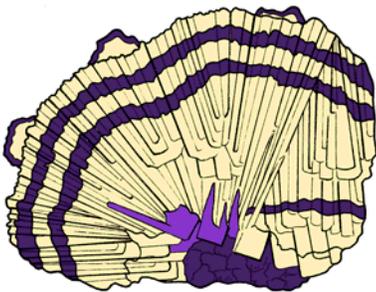
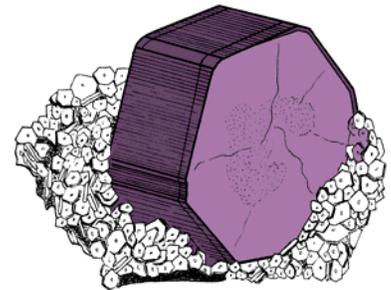
Write a Book & Illustrate It



In 1990, Diamond Dan said to himself, "Diamond Dan, the world needs a mineral coloring book!" And so he drew a bunch of mineral and crystal pictures, wrote some text to go with the pictures and had it all printed. It wasn't a very good book, but it was a start. And over the years the pictures got better and better and the text became better, and the books became better.

So why not you??!! Either by yourself, or working with others from your mineral club, create your own mineral coloring book. Here are some steps you might want to follow:

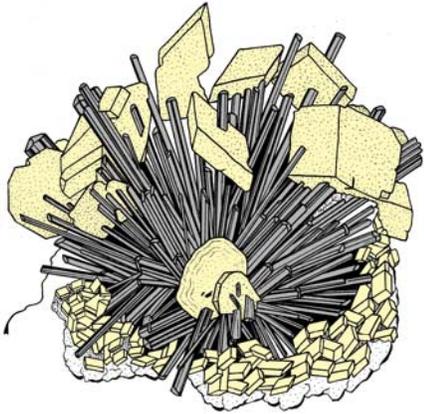
1. Choose a Theme (minerals from your state, colorful minerals, minerals from a region or country, "the most colorful minerals," your favorite minerals, etc.)
2. Make a list of the minerals and crystals you want to include.
3. Search mineral books and the internet for specimens of each mineral that you want to draw. You can try to draw the exact specimen or you can use that specimen (and a number of specimens) to create the perfect specimen you want to illustrate.
4. Draw your pictures.
5. Scan your pictures into your computer. Diamond Dan scans his pictures as black and white, 600 dpi (dots per inch), jpg format.
6. Create a document for your book using the software program you like best.
7. Start adding your pictures on the pages in the order that you want.
8. Now add the words, the text, that you want to have with each picture. At the very least, include the mineral's name and where it came from. Adding interesting facts about the mineral can make your book more



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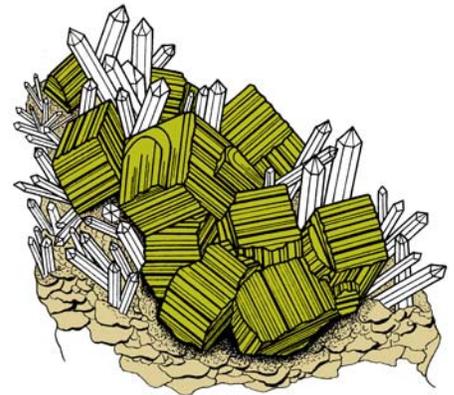
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are in the order that you want. It is always helpful to have another person read through the book for you. This is called "proof reading." Many times someone else will find mistakes that you did not see.

11. Print out your book and give it to your family and friends. If you made the book with friends from your mineral club, you may want to go to a local printer or a Print-on-Demand printer on the internet and have a lot of copies printed. This costs quite a bit of money. But if someone is willing to loan the money to get the printing done, you can pay the person back as you sell copies of the book.



interesting.

9. You will have to create a front a back cover. When Diamond Dan first started, he would color his drawings with colored pencils, scan them in color and then add them to the document.

10. Before you print out your book, look it over and make all the corrections you will need to make. Check for spelling mistakes. Be sure the text is next to the correct picture or pictures.

Make sure the pages



If you and/or your mineral club wants to make it's own mineral coloring book, Diamond Dan is here to help you. Email or call me and I will support you in the process as much as I can. And keep me informed...I will advertise your project in future issues of Mini Miners Monthly. Perhaps mineral clubs would be interested in buying or using your mineral coloring book.

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A VALENTINE'S DAY GIFT FOR YOUR MINERAL-LOVING FRIENDS AND FAMILY



Giving someone a box of chocolates for Valentine's Day is boring. Everyone expects chocolate. So if you have a friend or family member who loves minerals and crystals (and fossils, too) give them a heart full of specimens.

1. Go out and buy a heart-shaped box of chocolates.

2. Open it up and remove the chocolates and store them in a zip closed plastic storage bag. However, leave the little paper cups that hold the chocolate. (You and your family can eat the chocolates later...or not!)

3. Cover the bottom of the box with a pretty thick layer of cotton. Then put the paper cups back in the box, on top of the cotton. Why the cotton? When you put the top back on the box, this will help hold the specimens against the top which will keep them from sliding around and bumping into each other.

4. Place a small mineral specimen in each of the paper cups in the Valentine's heart box.

5. Now, here's a potential problem: If you tilt the box, the specimens are going to slide all over the place and bump into each other. We don't want that. It will ding your specimens. So be very careful that you try not to tilt the box or shake it around!

Now you have a Valentine's gift that will really be loved...and it will last!

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Mineral Drawer Pulls



The handle on a drawer or cabinet door is called a *drawer pull*. Many are designed to attach to a drawer with screws that go through a hole in the drawer. Here's a fun project for you to make mineral and crystal drawer pulls for your dresser or any set of drawers in your room.

The first step is to purchase the number of drawer pulls you need to replace the ones on your dresser. *Be sure to purchase pulls that are flat, because you will be gluing your mineral specimens to them.*

Compare them to the pulls you are replacing to make sure the holes for the screws will line up with the new handles.

Take one you are replacing

with you to the hardware store and compare

the backs so the screw holes will line up.

The second step is to purchase or find the mineral specimens you want to attach to your drawer pulls. They can be all the same or they can be different. It's all up to you.

The third step is to attach the minerals to the pulls. The best, and probably the only, way to attach them is using glue. So you will need a type of glue that is super strong and will bond any materials together. Strong glues like Gorilla Clear Glue work very well.

After the glue has completely dried and bonded the mineral specimens to the drawer pulls, the last step is to screw them into place.

And there you have it! A new mineral-themed decoration for your room...that is also very useful! Enjoy!



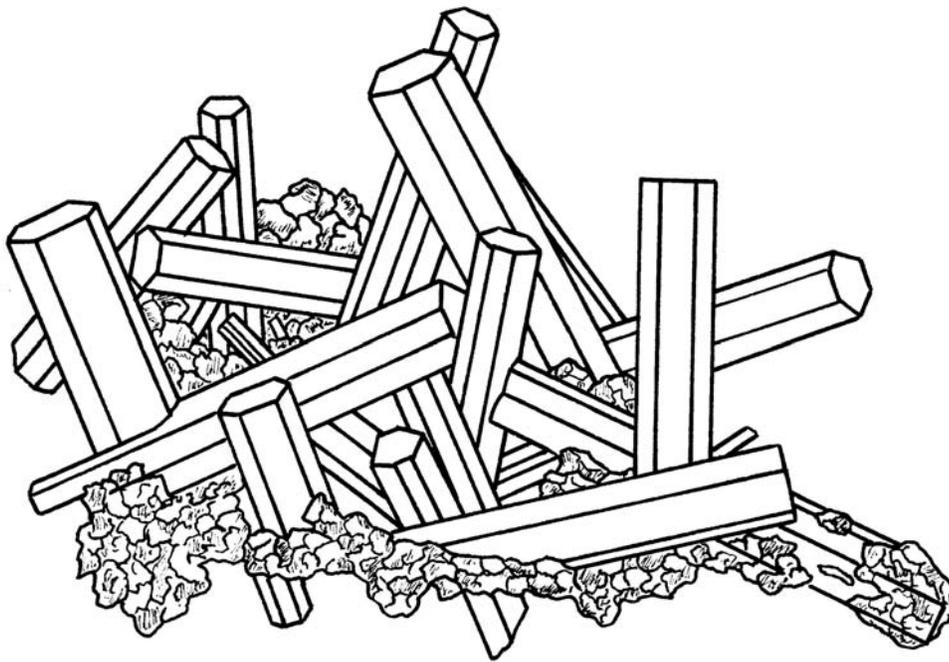
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Mineral Coloring Pages

Coloring is always a lot of fun. So, here are a few pages of mineral drawings to color. The theme is simply "Very Colorful Minerals." Scan and email your colored mineral drawings and Diamond Dan will feature them in a future issue of *Mini Miners Monthly* (powellpublicationsgroup@gmail.com).



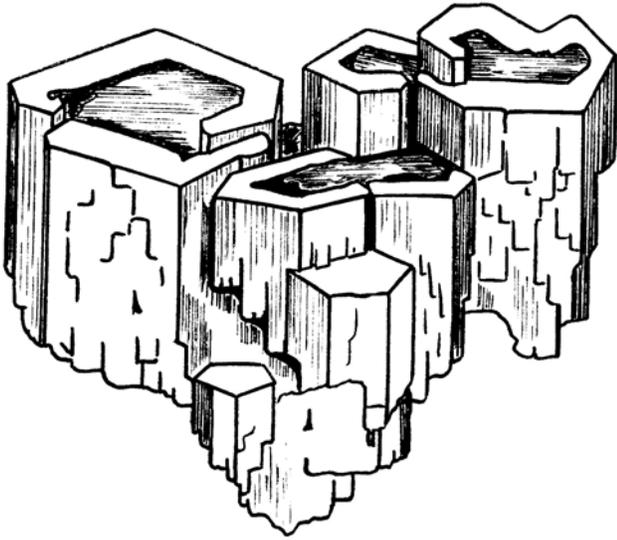
Light blue Aquamarine crystals.



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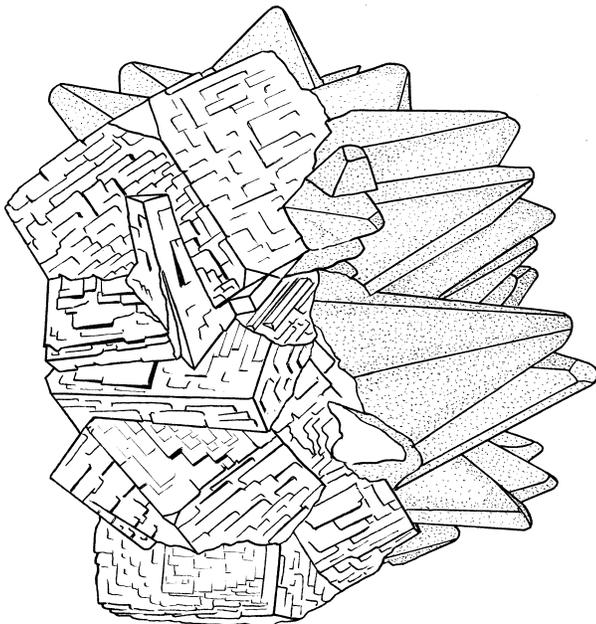
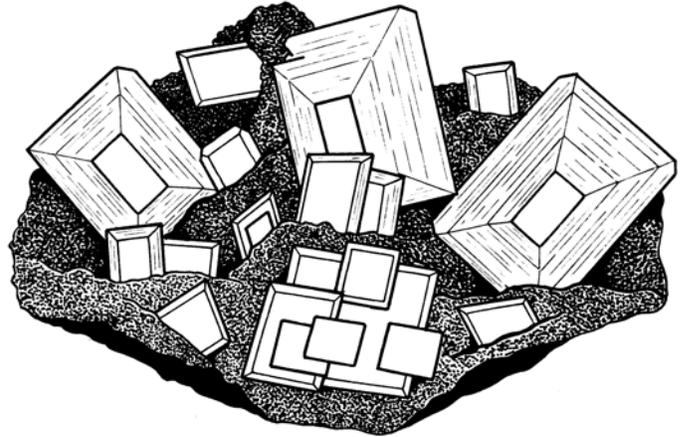
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Left: Red vanadinite from Arizona.

Right: Bright yellow wulfenite crystals from Arizona.

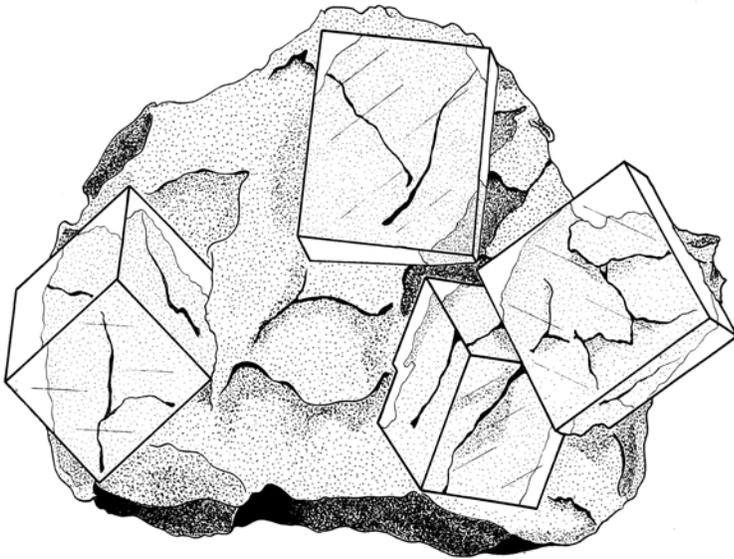


Left: Dark purple fluorite cubes with yellow calcite crystals.

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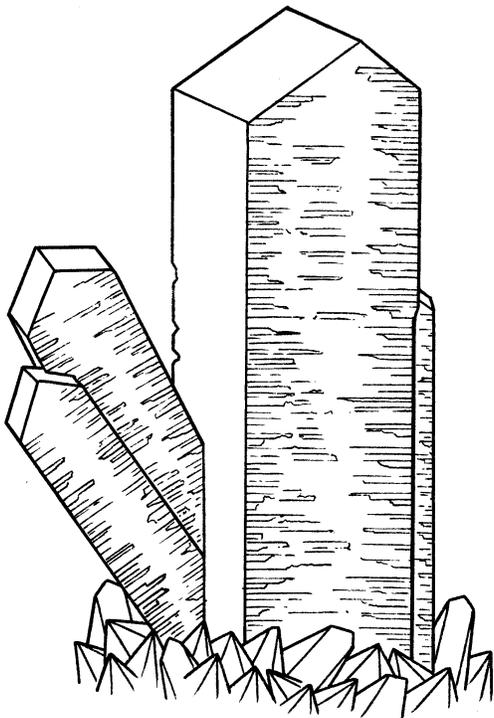
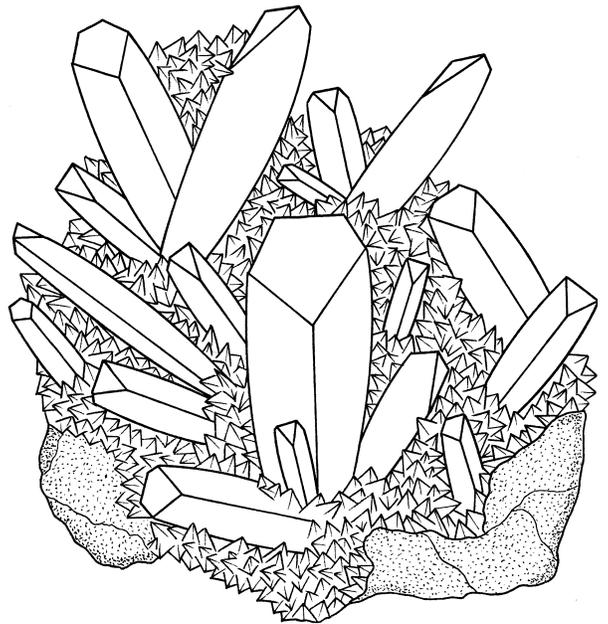
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Left: Light green fluorite cubes on rust-red matrix.

Right: Dark brown (root beer brown) barite on yellow calcite.



Left: Light blue celestine on yellow calcite.

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THE BLINDFOLD MINERAL IDENTIFICATION CHALLENGE: A FUN GAME TO PLAY WITH YOUR MINERAL CLUB KIDS

Here's a fun challenge to play with your mineral club friends. (Remember to social distance! Keep at least 6 feet apart from each other during this COVID pandemic. Wear your masks and protect yourself and each other from catching the virus!)

Select 12 mineral specimens that are sturdy enough to be handled, touched and passed around. Don't use your best specimens, just in case someone drops one of them! Select mineral species that are strong and durable like quartz, fluorite, pyrite, galena, calcite, tourmaline, mica, agate, feldspar, barite, gypsum, corundum, garnet, sphalerite.

If you want to make this into a challenge with prizes, you can give away the specimens at the end of the challenge to the kids that participated. (One way to encourage kids to become actively involved in your club for many years is to give them specimens to help them build their collections.)

The challenge itself is simple:

1. Blindfold a participant.
2. Hand the participant a mineral specimen. Let her/him feel it. Encourage them to even smell the specimen because some minerals have a sulfur smell, like some pyrite and galena specimens. Sphalerite typically has a noticeable sulfur smell. Have them notice the weight of the specimen compared to its size. This is an estimate of its specific gravity. Using all of these senses - touch, smell, sense of weight - the participant can now take an educated guess: what is the mystery mineral?

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CRYSTAL ARCHITECTURE

You are hired by "The Best Minerals in the World" mineral museum to design their new museum building. The only direction the museum director gives you is that it has to look like crystals from the outside. On this page and the next, design the museum. What will it look like from the front, the back and the two sides?

Submit your "Crystal Museum" drawings to Diamond Dan. We will feature them in a future issue of "Mini Miners Monthly." Each Mini Miner that submits an entry will receive a free copy of our most popular book, "Crystals & Crystal Forms."

Mineral Museum from the Front

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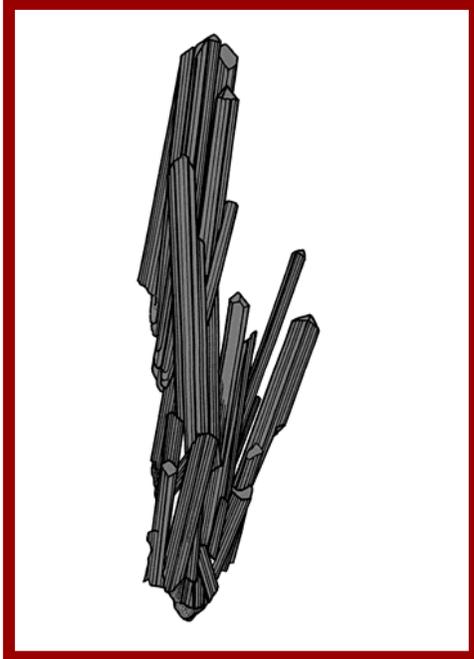
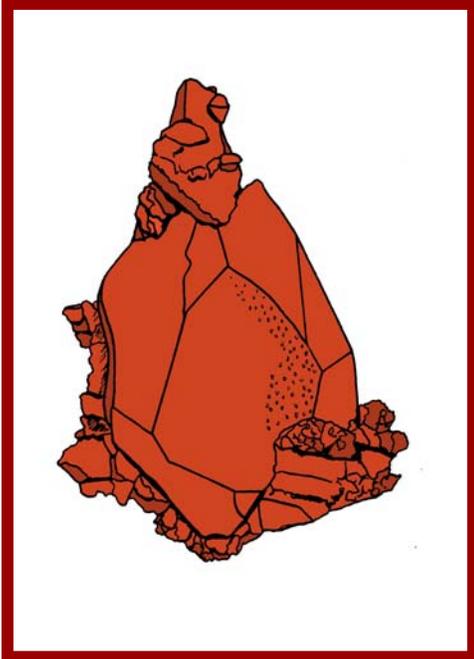
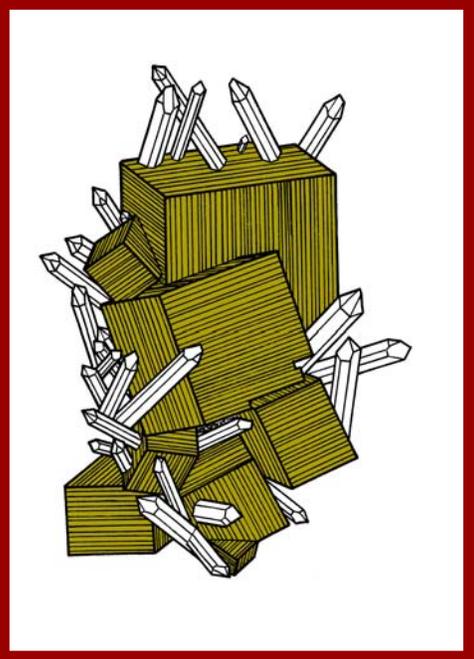
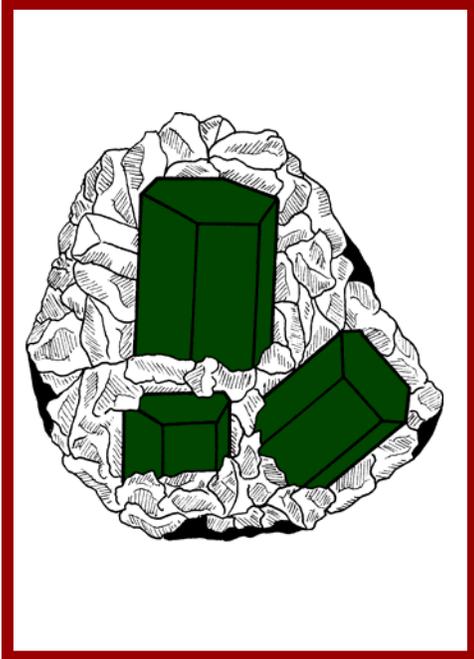
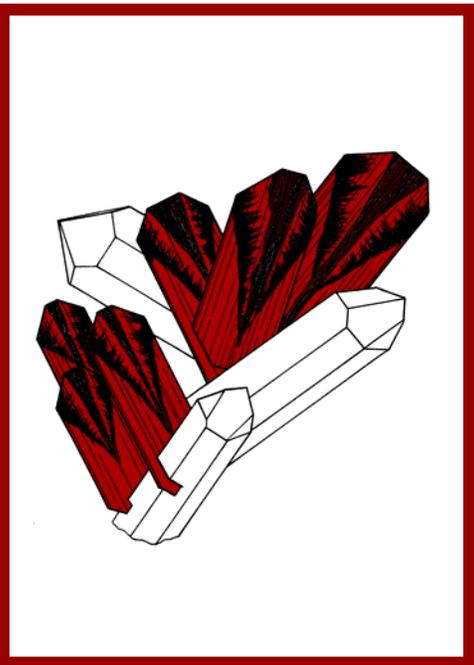
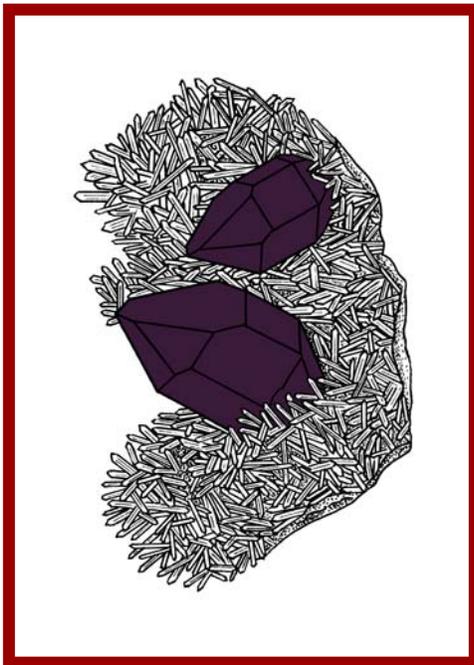
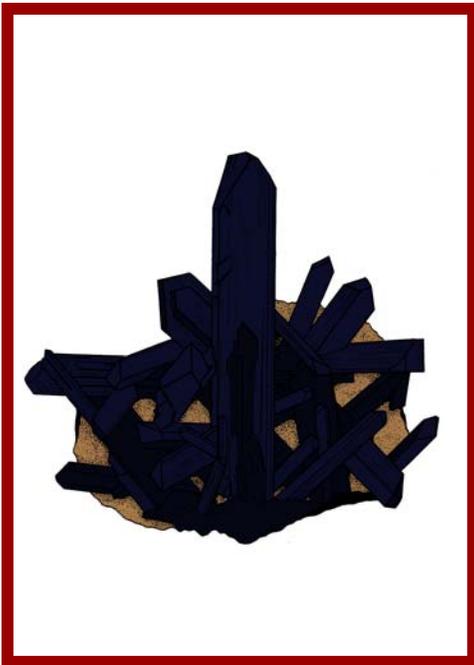
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CRYSTAL ARCHITECTURE

Mineral Museum from the back

Mineral Museum from the end



Brookite

Kharan, Baluchistan, Pakistan

In 2004 very fine Brookite crystals were discovered in Kharan, Balochistan, Pakistan. These sharp, well-formed crystals are glassy, reddish brown to deep red, very thin, transparent, and striated. They are also very large for this mineral species. They are often found intergrown with Quartz crystals. Individual crystals and crystal groups, especially associated with Quartz.

©2021 Darryl Powell

Amethyst

Jackson's Crossroads,
Wilkes County, Georgia

Jackson's Crossroads Amethyst is often gem-quality and is cut and polished to make beautiful jewelry. In addition to individual crystals, the mine also produces groups of crystals. Some very attractive specimens, like the one pictured on this card, contain deep purple Amethyst crystals sitting on a bed of small, colorless Quartz needles."

©2021 Darryl Powell

Azurite

Tsumeb, Namibia

The exceptional mineral riches at Tsumeb, Namibia were discovered because of the green Copper ore that was found on the surface. For those who love mineral specimens, the Tsumeb mine has been the source of some of the finest mineral specimens ever recovered. Among its best specimens are Copper crystals, Dioptase, Cerussite, Willemite, Bayldonite and, as pictured here, Azurite.

©2021 Darryl Powell

Pyrite & Quartz

Spruce Ridge Claim, King
County, Washington

The Spruce Ridge Claim is a private claim that has been a source of museum-quality Quartz and Pyrite specimens for decades. The cubic crystals at the Spruce Ridge Claim have striations on the faces of the cubes. Notice that the striations on each face go in a different direction from the other faces. One of the features that make these specimens so famous is that the Quartz crystals appear to grow right through the Pyrite crystals. ©2021 Darryl Powell

Legrandite

Ojuela Mine, Mapimi,
Durango, Mexico

In 1979 the largest Legrandite specimen ever found was discovered in the Ojuela Mine. It is lemon yellow and is 7 inches long. It was given the name "The Aztec Sun" (pictured here). Its size, eye-catching lemon-yellow color, and overall form make The Aztec Sun the very best Legrandite ever found. It is also considered one of the best mineral specimens ever recovered anywhere at any time.

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Emerald

Coscuez Mine, Boyacá,
Colombia

Most of the best Emeralds mined in the world today come from Colombia. A lot of lower quality Emeralds are mined in other localities. They are very well-formed hexagonal crystals and crystal groups. They occur in white to gray Calcite matrix. Geologists say that Colombian Emeralds are the purest Emeralds found anywhere in the world.

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Silver

Kongsberg, Norway

The mining region of Kongsberg, Norway includes more than 80 individual mines. Silver mining in Kongsberg began in 1623 and it continued until 1958. Wire Silver specimens from Kongsberg are classics. They are among the most famous mineral specimens ever discovered in the history of mineralogy and mineral collecting.

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Stibnite

Ichinokawa Mine, Iyo, Japan

Stibnite crystal groups from the Ichinokawa Mine, Japan are found in mineral museums all over the world. The crystals are large, sharp, bright metallic gray, strongly striated and very well-formed. The best specimens from this mine were found in the 1880's. The mine closed in the 1950's, so if a mineral collector wants to own a Japanese Stibnite, it will only come from an old collection.

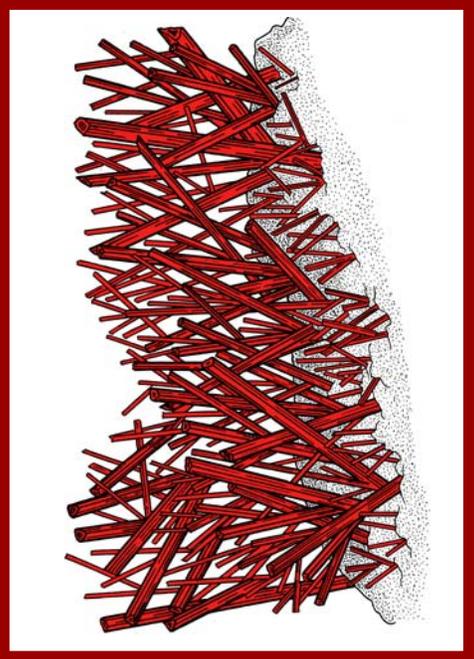
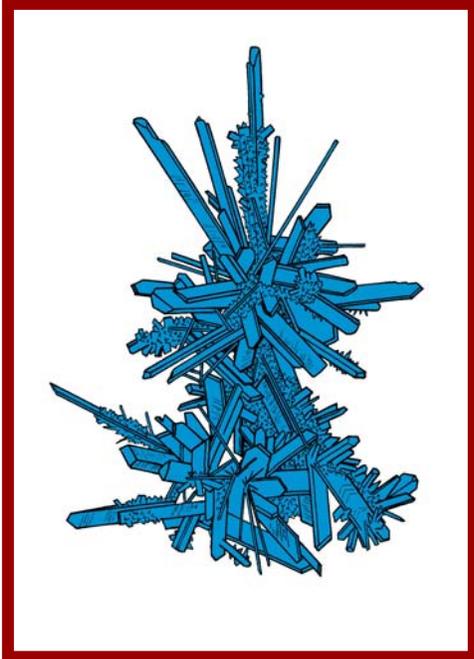
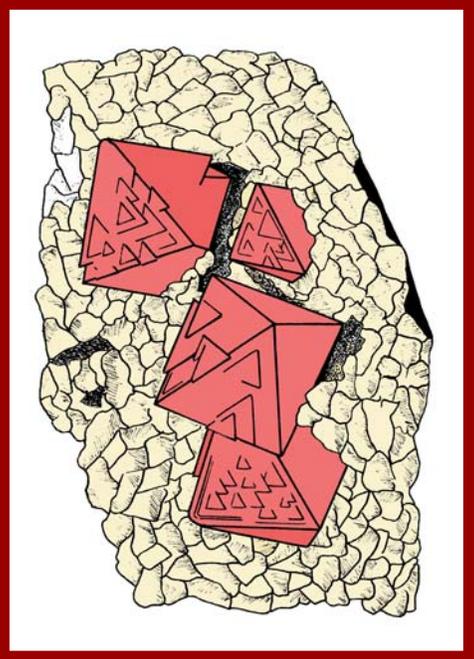
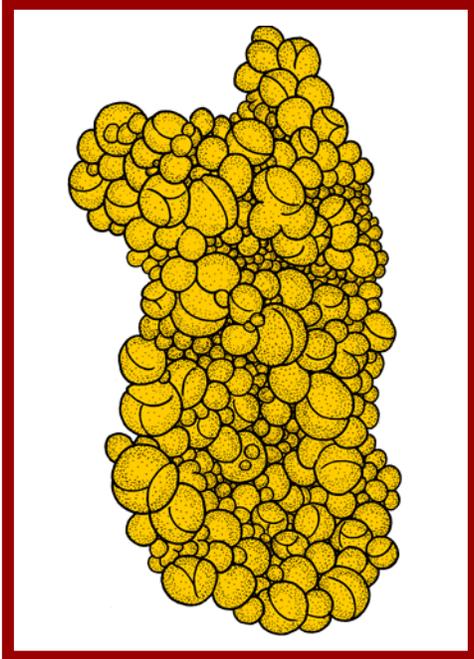
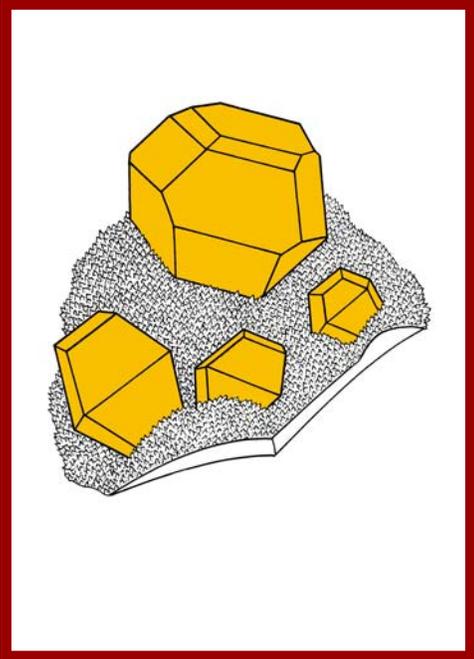
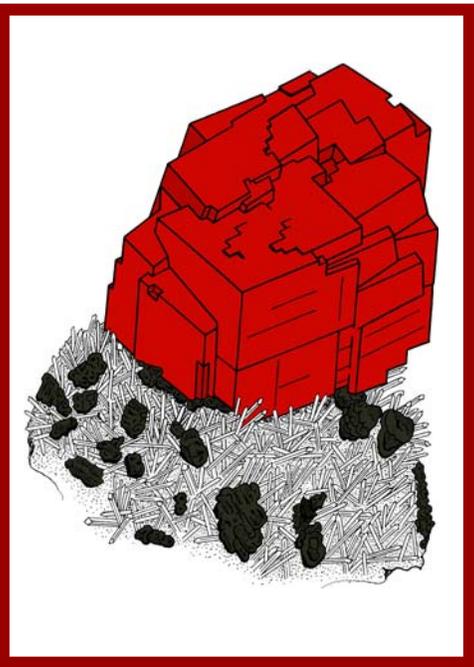
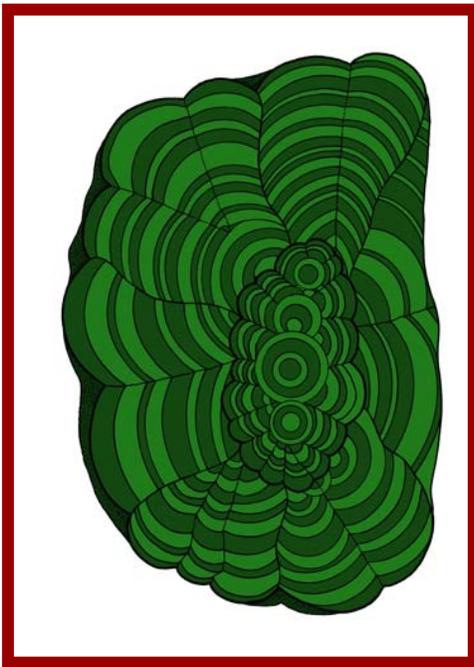
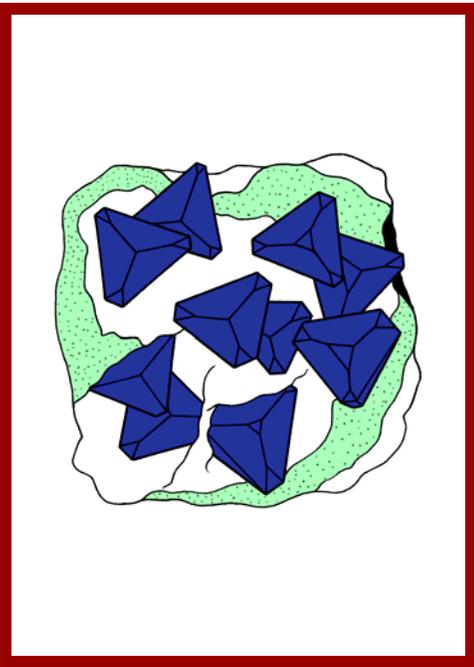
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Copper

Ajo District, Pima County,
Arizona

Natural copper (called Native Copper) is rare. It takes a very special geologic situation for Copper masses and crystals to be formed in the earth. Usually the Copper combines with other elements to form many different minerals. Arizona and the Upper Peninsula of Michigan are two of those special places where natural Copper can be found in large quantities.

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Rhodochrosite

"The Alma Queen"

Sweet Home Mine, near Alma,
Colorado

There are some mineral specimens that are known by most serious mineral collectors. One of these exceptional specimens is a Rhodochrosite discovered at the Sweet Home Silver mine in the mountains of the Mosquito Range near Alma, Colorado. This very special specimen is known all over the world as

"The Alma Queen."

©2021 Darryl Powell

Malachite

Katanga, Democratic
Republic of the Congo

Malachite was first named by the ancient Roman naturalist, Pliny the Elder. He called it molochitus after the Greek word "mallow."

Mallow is the word given to a green plant. This is a reference to its green color. Malachite is well-known for its massive, banded formation. The bands alternate between dark green and lighter

green.

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Benitoite

San Benito County, California

Benitoite is a special mineral for a number of reasons. One reason is that it is the first mineral discovered that belongs to the special crystal class called the (are you ready?!) ditrigonal-dipyramidal class of the hexagonal system. Benitoite is also considered one of the most beautiful gemstones. It is easy to cut and looks similar to Sapphire.

©2021 Darryl Powell

Fluorite

Pointe Kurz, Haute-
Savoie, France

Fluorite is one of the most common minerals. Yellow, blue, and purple specimens are common and are found in many localities around the world. Pink Fluorite, however, is rare. Beautiful pink octahedral Fluorite crystals have been found in Alpine regions of France, Switzerland and Austria, Peru and China.

©2021 Darryl Powell

Mimetite

San Pedro Corralitos,
Chihuahua, Mexico

The Mimetite specimens from Chihuahua, Mexico have been described as "Neon-Yellow." The bright yellow color makes these specimens truly eye-catching. The bright yellow color and the rounded, botryoidal, form together create specimens that are featured in museums and private collections all over the world. Specimens from this locality are considered to be some of the best Mimetite specimens in the world.

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Sulfur

Sicily, Italy

Fine, undamaged sulfur crystals are very rare. It is a very soft mineral. It also is easily damaged by heat. In fact the heat from your finger is enough to make the surface of a sulfur crystal crack! Fine sulfur crystals, like these from Sicily, are very special because they have survived.

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Crocoite

Adelaide Mine, Dundas,
Tasmania

Throughout the 1900's, a number of mines in Tasmania produced world-class groups of Crocoite crystals. These mines include the Adelaide, Red Lead, West Comet, and Platt mines. The crystals are long and slender, bright orange-red, and very glassy. Crocoite is the source of the element chromium which is used to make chrome-covered parts.

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Pentagonite

Poona, Haharashtra, India

Cavansite and Pentagonite have the same chemical formula. However, they crystallize in different crystal systems. Mineralogists call this "polymorphism" meaning "many forms." Pentagonite crystals are very small and almost always grow in groups, often groups that look like small balls or small crystal clusters. The color of Pentagonite is described as "electric blue."

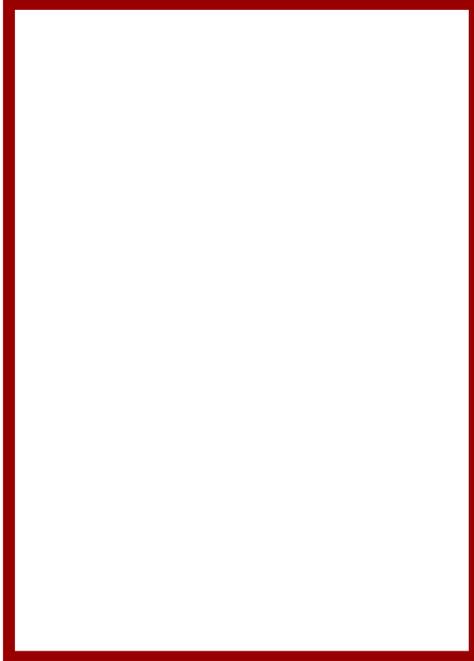
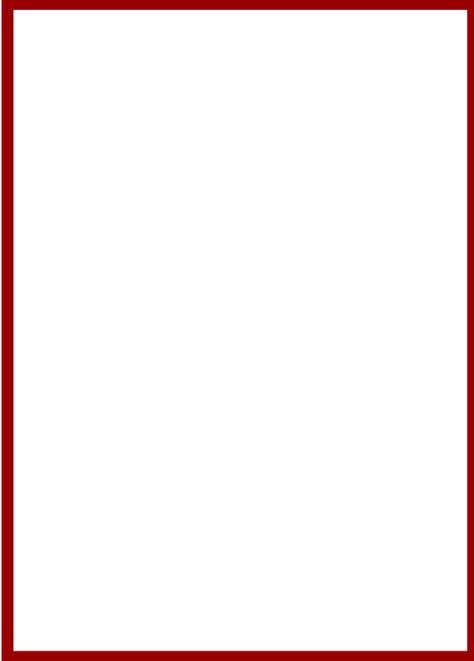
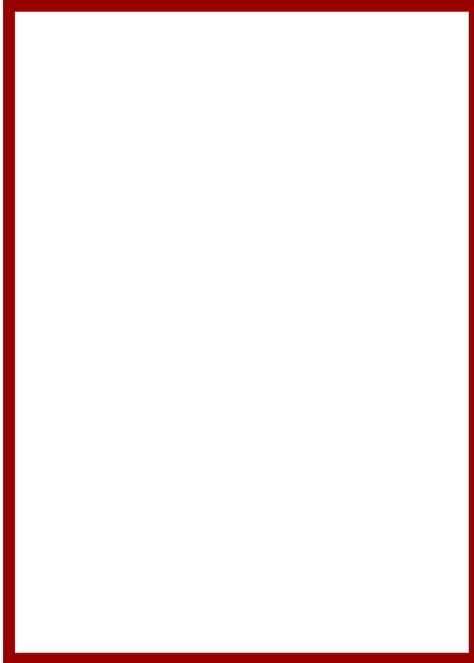
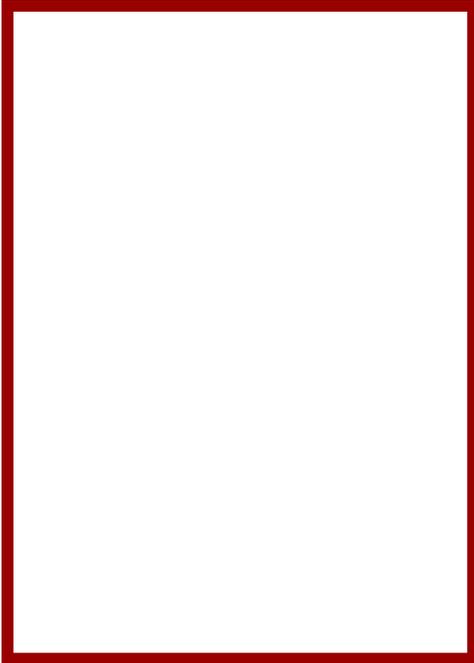
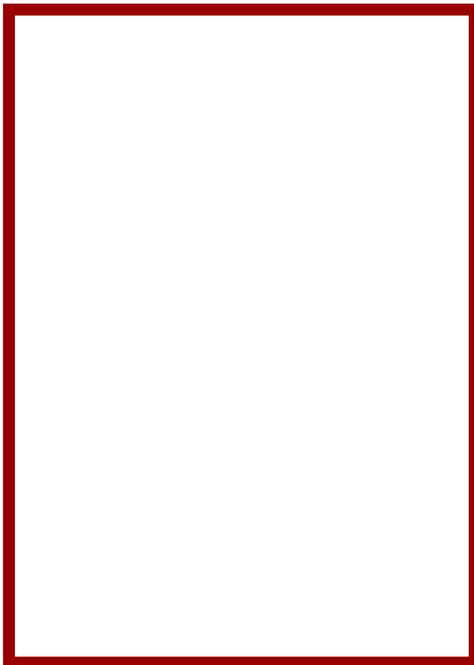
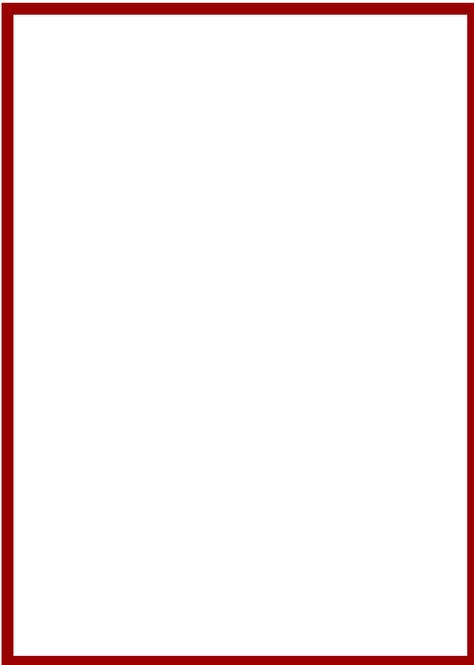
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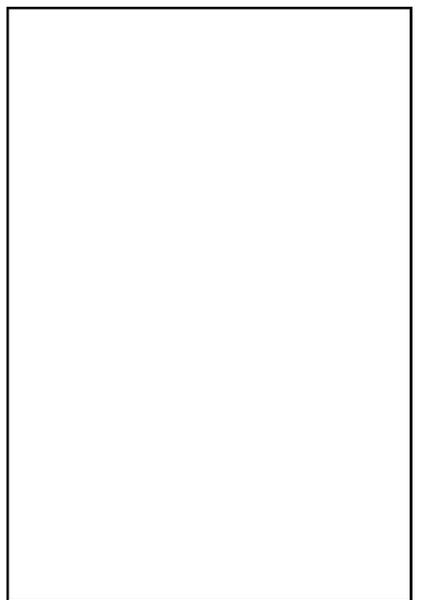
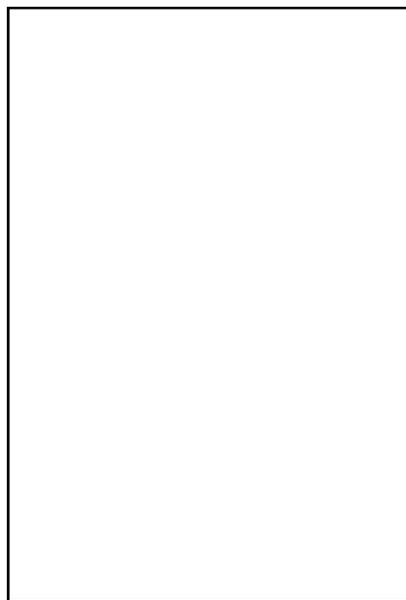
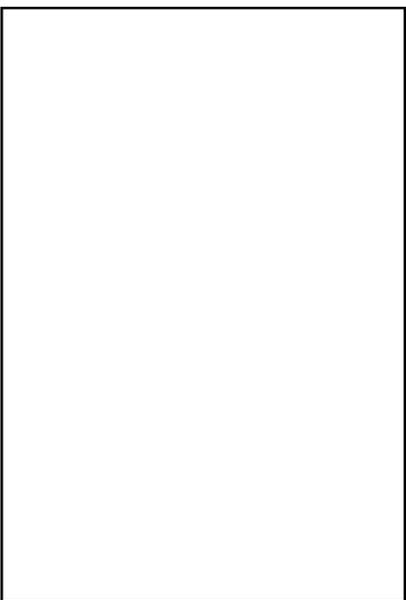
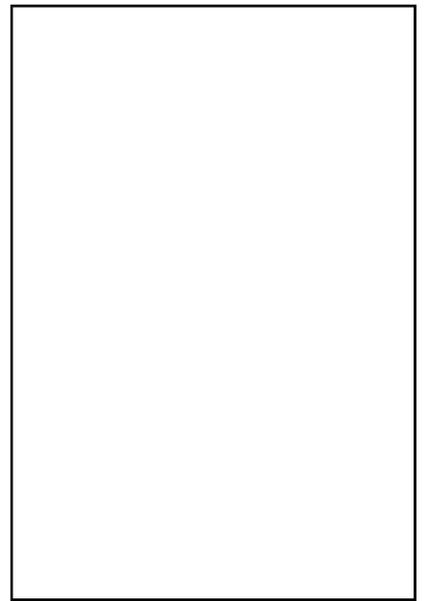
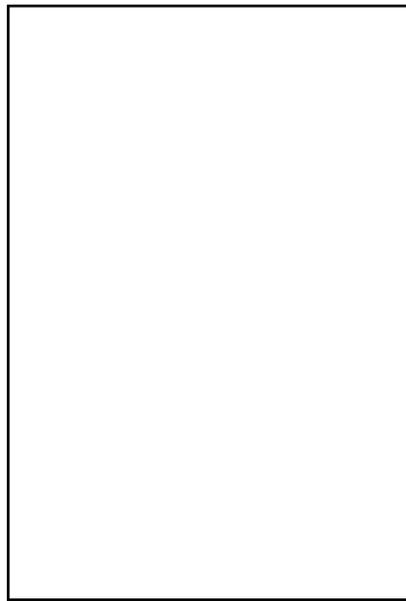
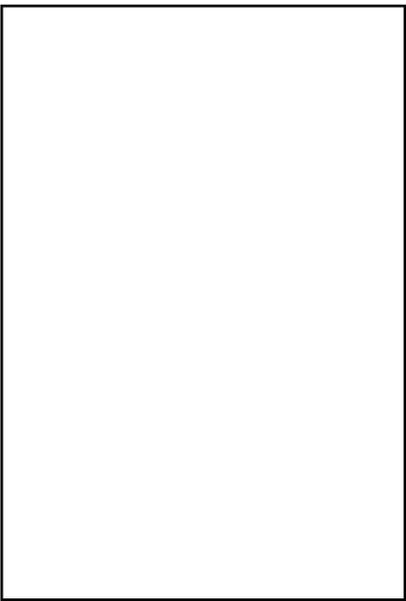
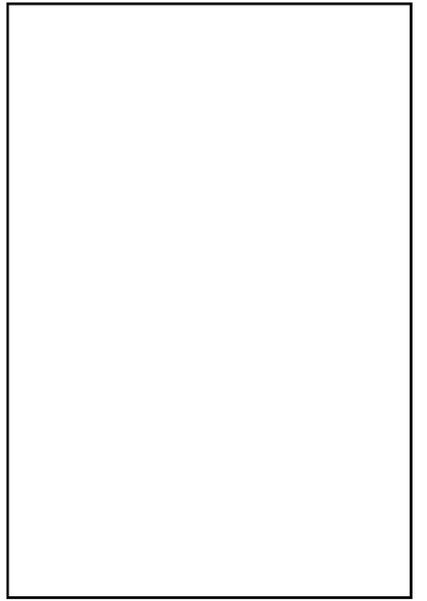
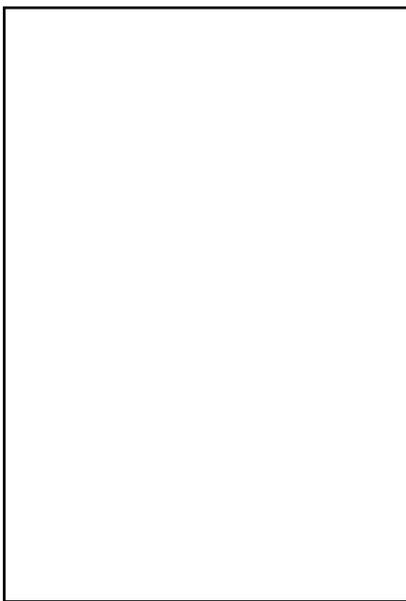
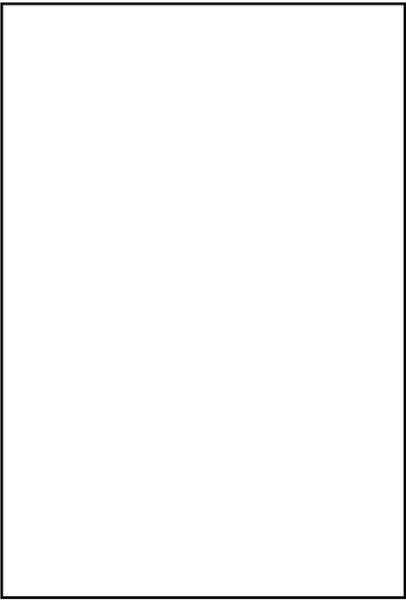
Vanadinite

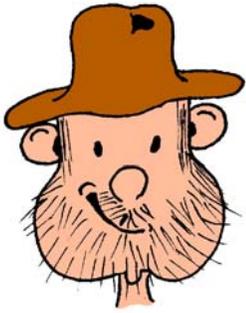
Hamburg mine, Yuma County,
Arizona

High quality, well-formed, bright red and glassy vanadinite specimens are among the many mineral treasures of Arizona. As a matter of fact, some of the best vanadinite specimens ever discovered came from Yuma County's "Silver District." The "Silver District" was discovered in 1860. As you can tell by its name, silver ore was the treasure in the mines of this region. One of the more famous mines of the region (at least to mineral collectors) is the Hamburg mine.

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DIAMOND DAN'S

"ONLINE

MINERAL ACADEMY"

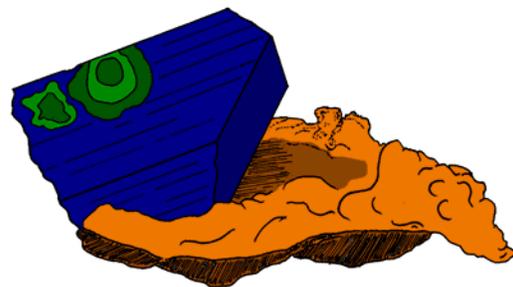
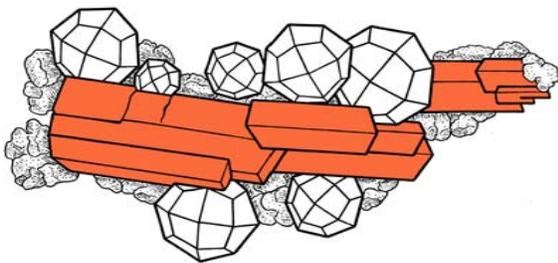
You will be doing a lot of schooling at home and online this year.

When you need a break from Math and Social Studies, check out Diamond Dan on YouTube for some fun videos about minerals, mineralogy and mineral collecting.

On YouTube, search for

MINI MINERS WITH DIAMOND DAN

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