

# The CMS Tumbler

**September  
2019**

This publication is an official bulletin of the Cascade Mineralogical Society Inc. (CMS).  
(Previously known as the Boeing Employees' Mineralogical Society (BEMS))

**Next Meeting:**  
**September 12, 2019**  
**7:00 p.m.**

**American Legion Hall**  
**25406 97th PI S**  
**Kent, WA**

Mark will give an update on our gem show.

Merriann will give a short presentation on  
how to sell rocks and minerals on eBay.

The Show & Tell is your  
favorite tumbled rocks.

This month remember  
to wish a  
Happy Birthday to  
Angie Bayer on September 4,  
Philip Trepanier on September 23,  
Betty Swift on September 25,  
James Shaffer on September 30,  
and also remember  
to wish a  
Happy Anniversary to  
Scott & Pat Thomasson on September 6

## **Connect with us!**

Website: [cascademineralogicalsociety.org](http://cascademineralogicalsociety.org)

Club Facebook: [facebook.com/CasMinSoc/](https://facebook.com/CasMinSoc/)

Show Facebook:

[facebook.com/cascadegemandmineralshow](https://facebook.com/cascadegemandmineralshow)

Instagram: [instagram.com/cascadegemandmineralshow/](https://instagram.com/cascadegemandmineralshow/)

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Tips, suggestions, recipes and experiments printed in this newsletter are the experiences and/or opinions of the individuals submitting them. We are not responsible for their authenticity, safety, or reliability. Caution and safety should always be practiced when trying out any new idea.

The monthly newsletter of the Cascade Mineralogical Society, Inc., Kent, Washington

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Email preferred.  
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## 2019 Elected Officers

<u>Title &amp; Name</u>	<u>Home Phone</u>	<u>Email Address</u>
President Kat Koch	425-765-5408	president@cascademineralogicalsociety.org
Vice President Meriann Fu	253-236-5593	merriannf@gmail.com
Treasurer Charles Benedict	425-306-0465	charlesbenedict@comcast.net
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Past President Bob Pattie	425-226-3154	bobpattie@comcast.net
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Federation Representative Michael Blanton	425-271-8757	mblanton41@hotmail.com
Federation Representative Kat Koch	425-765-5408	president@cascademineralogicalsociety.org
Mineral Council Bob Pattie	425-226-3154	bobpattie@comcast.net
Mineral Council Jacque Pattie	425-226-3154	dianahorsfall@comcast.net

## 2019 Show Committee Chairs

Cascade Show Mark Hohn	253-332-3736	showchair@cascademineralogicalsociety.org
Cascade Show Co-Chair Kat Koch	425-765-5408	president@cascademineralogicalsociety.org
Cascade Show Treasurer Pete Williams	425-228-5063	petewill02@gmail.com
Cascade Show Silent Auction Michael Blanton	425-271-8757	mblanton41@hotmail.com
Cascade Show Raffle Donations Michael Blanton	425-271-8757	mblanton41@hotmail.com
Cascade Show Demonstrators Richard Russell	253-736-3693	richru1@yahoo.com

## 2019 Committee Chairs

Club Historian		
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Field Trip Roger Danneman	425-228-8781	roger.danneman@q.com
Health & Welfare Bev Williams	425-228-5063	britbev1957@outlook.com
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Meeting Programs Miriann Fu	253-236-5593	merriannf@gmail.com
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Raffle/Display Roger Pullen	206-387-3214	june.d.murff@boeing.com
Shop Operations Bob Pattie	425-226-3154	bobpattie@comcast.net
Show & Tell Michael Blanton	425-271-8757	mblanton41@hotmail.com
Webmaster Mark Hohn	253-332-3736	showchair@cascademineralogicalsociety.org

*2019 CMS Dues are \$25 per year per family*

*Pay online, by mail, or at our meetings.*

*Mailing Address: Charles Benedict, 25838 W Lk Wilderness Dr SE, Maple Valley WA 98038*

You can pay your dues via credit card!! We now accept all cards through our website or at the meeting.

You can renew your membership or enroll as a new member and pay your dues all in one shot online. You will find it under the "Membership" tab on our website. <http://www.cascademineralogicalsociety.org>

The object of the Society shall be to stimulate interest in the study of the earth sciences, lapidary arts and related subjects.

This Society is affiliated with the American Federation of Mineralogical Societies; the Northwest Federation of Mineralogical Societies; and the Washington State Mineral Council.

Every member of the club should be receiving a copy of the Northwest Newsletter. If you are not receiving a copy contact Mike Blanton in person or by telephone at (425) 271 -8757 or by computer at [mblanton41@hotmail.com](mailto:mblanton41@hotmail.com)

To get information to the Tumbler via the Internet send it to [greenrockdraggin@yahoo.com](mailto:greenrockdraggin@yahoo.com) Please put Tumbler and subject in the Subject Line. The deadline is the 20th of each month.

The Cascade Mineralogical Society Facebook page: <https://www.facebook.com/CasMinSoc/>

The Cascade Mineral & Gem Show Facebook page: <https://www.facebook.com/cascadegemandmineralshow/>

# September

Sun	Mon	Tue	Wed	Thur	Fri	Sat
1	2	3	4	5	6	7
8	9 Show Meeting 6:30 pm Board 7:00 pm	10	11	12 General Meeting 7:00 pm	13	14
15	16	17	18	19	20 Show Setup	21 CMS Show
22 CMS Show	23	24	25	26	27	28
29	30	<b>Our club show is September 21 and 22 at Green River College Physical Education Building!</b>				

CMS Show Committee Meeting:...Monday, September 9.....6:30 pm to 7:00 pm

CMS Board Meeting:.....Monday, September 9.....7:00 pm to 8:00 pm

CMS General Meeting:.....2nd Thursday, September 12.....7:00 pm to 9:00 pm

Lapidary Class Hours:.....By appointment, call to set a time & day for your lesson (425) 226-3154

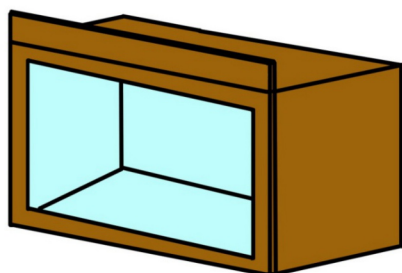
Lapidary Shop Hours:.....Most Tuesdays..... 2:00 pm to 5:00 p, call ahead (425) 226-3154

Lapidary Shop Hours:.....3rd Saturday..... by appointment only (call a few days ahead to set time)

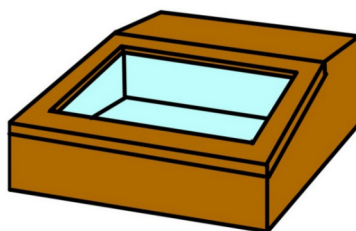
More Field Trip info can be found on Page 11

More Show info can be found on Page 12

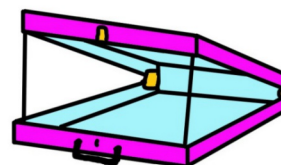
## A Handy Guide To Display Cases



Federation Case



Regional Case



Brief Case

TKAM ©2019

The Tumbler has received One-Time Rights to publish this cartoon

**CMS Show Committee & Board Meeting Minutes August 5, 2019** by Pete Williams, 2019 Secretary

## Attendance:

President Kat Koch	Vice President Merriann Fu
Treasurer Charles Benedict	Secretary Pete Williams
Federation Mike Blanton	Mineral Council Jackie Pattie
Past President Bob Pattie	Show Chair Mark Hohn
Director Roger Pullen	Director Rich Russell

CMS Show Committee – Meeting called to order 6:30

All 64 booths have been sold with 33 vendors. Double sided signs and directional arrows have been ordered. A volunteer is needed to place the signs the Sunday before. A Mexican food truck vendor will be explored for food at the show. Ads in Facebook, Instagram, Eventbrite and local newspapers have been placed. Vendors who supply bios are having those posted on Facebook.

Board Meeting: Meeting called to order at 7:07

A motion was made and the Board approved donating an item to the AFMS auction. Another motion was made and approved to donate a crystal plate with an estimated retail value of \$50 for the AFMS auction. The AFMS had requested items with an estimated retail value of \$75 or more. Most clubs in the AFMS do not provide any donations.

For the upcoming club picnic, Bob will purchase the drinks and Mark will bring a cooler with ice. Charley is the contact with the arboretum and is coordinating the set up of the area.

The September meeting program will be Mark discussing the upcoming club show. The October program will be Joan from Jerry's Rock Shop speaking on a topic yet to be selected. Merriann will be writing the Young Tumbler's page for the September newsletter.

There were 6 people at Bob's first class on getting familiar with the equipment. Participants need to contact Bob directly to schedule future classes on using the equipment.

Donations of material for the monthly club raffle are needed. A discussion was held on potentially selling the club sluice box at the show. Elections for club officers will take place this Fall. All positions are open with the exception of one director.

The next Show and Board meeting will be held on September 9.

Meeting adjourned at 7:52

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**What Lies Beneath: Minerals of the Pacific Northwest Exhibit** by Marianne Graff

I'm reaching out to share information about an exhibit at the Whatcom Museum in Bellingham that might be of interest to your members. Our exhibit, What Lies Beneath: Minerals of the Pacific Northwest, opens Aug. 17 and will feature more than 50 excellent specimens.

The exhibit will be held at our Old City Hall building, 121 Prospect St., Bellingham, WA 98225. You can learn more about the exhibit here: [www.whatcommuseum.org/exhibition/minerals-of-pacific-northwest/](http://www.whatcommuseum.org/exhibition/minerals-of-pacific-northwest/).

Please visit our website for information about our hours of operation and admission fees. We hope you will consider visiting us to see this exhibit!

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**Happiness On A Field Trip Is**

1. Finding a geode as big as a basketball and weighing as much as a golf ball.
2. Having to ask someone to help carry your crystal back to the truck.
3. Finding the fool's gold on your piece of quartz, isn't!
4. Being told by your partner that the snake you just sat on, is just a garter snake.
5. Being told by the leader that the hike up the hill is a mile, and it turns out to be only half a mile.
6. Finding out you had the biggest and best bragging rock found on the trip.

via Golden Spike News, 7/19; via PGGs Petrograph, 6/96 & 6/19; from Rock Writings, 5/96

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The scablands of Eastern WA were formed by the catastrophic flooding of Lake Missoula during the last Ice Age. A wall of water and ice shook the ground as it stripped away hundreds of feet of soil and cutting deep canyons -- "coulees" -- into the underlying bedrock.

"How fast does a fault move?"

A mylonite!

from USGS Twitter, 9/4/19



## CMS Picnic August 11, 2017

No minutes arrived by press time.

### A Note from the President's Desk...

by Kat Koch, 2019 President

We are getting close to Show Time!!

We need a lot of volunteers. You can now sign-up online at our website under the tab Cascade Gem and Mineral Show. I suggest that you sign-up online before too much time passes so we know where we stand on covering all our bases. You can also text or call Mark and let him know when you can help out.

We had to take a larger venue in order to have our show on the 3rd weekend of September as the college made a mistake and the Student Union was not available. In having to cover costs for a much larger venue we went from 43 booths to 63 booths plus all our other activities. So we really need volunteers in order to run the show.

The success of our show directly benefits our club as the proceeds from the show goes towards getting a permanent indoor lapidary shop. We all know how great it would be to have a nice indoor lapidary shop again. So your volunteering to help at the show has a stated goal. So please volunteer to help. 10 or 12 members can not run a 2-day show by themselves.

We all enjoyed talking "rocks" at our annual picnic. They had predicted rain for the day but the weather was good until we were packed up and gone. I know I hit a huge downpour halfway home. It was good though seeing everyone and visiting with one another and picking up some great bargains at our auction.

We had a good turnout for our gold panning field trip. I know I had fun. I did find 2 very small gold flakes. The trip completed a bucket list item for me.

If anyone is going to the Puyallup Fair they have moved the Hobby Hall to the 2nd floor of the pavilion building just as you enter the Gold Gate. They have all new display cases with a completely different floor layout. They had eliminated several competition categories and demonstrators but found out they have more room than expected. Right now they plan on restoring some of the displays and demonstrators next year. The lapidary categories are still there this year. I saw some awesome entries, so if you go to the Fair be sure to check them out.

### Young Richard's Almanac by Dick Morgan

Over the ages historians have named the different ages for where the most advanced activities created the name for the era (bronze era, iron age etc), so the twentieth could rightly be called the age of the engineer, for all the advancements that improved life in that century. From slide-rules to Artificial Intelligence Super computers. From cloth-skinned airplanes to vehicles sent to outer space. From songs about the moon to man landing and walking on the moon. Not to mention the peaceful use of nuclear energy for electric power and ship power.

### Cascade Show Request For Volunteers

by Mark Hohn, 2019 Show Chairman

We are less than a month away from our 2019 Cascade Gem and Mineral Show. The show will be at Green River College PE building in Auburn, WA.

Date of show: September 21-22, 2019

Setup will be on Friday Sept 20, 2019.

Venue: Green River College Physical Education Building.

We have sold all 63 of our booths and have a total of 33 vendors signed up for the show.

We need your help. It takes a lot of help for setup and during the show. We have a list of opportunities listed on our website here: <https://www.cascademineralogicalsociety.org/volunteer-schedule-gem-and-mineral-show/>

You can view the positions on our website. If you can help you can sign up for any of the positions. Just let me know if there are specific hours you are available. We will need extra help on Sunday evening closing the show and packing up and getting our vendors and our stuff out of the gym.

Last year we had a great turnout of volunteers and we hope to have even better support this year.

We appreciate your help and support

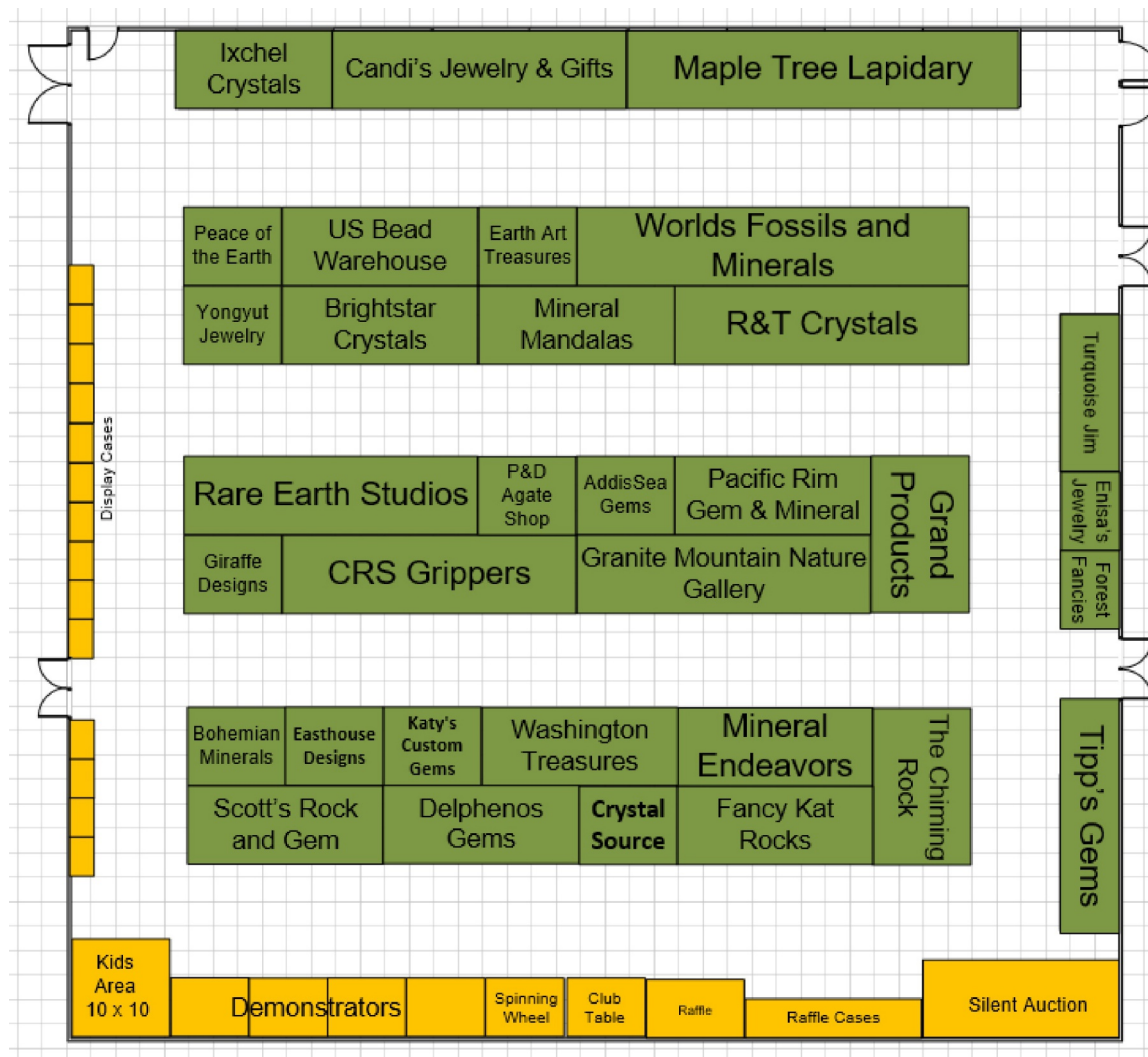
Mark Hohn Show Chair [showchair@cademineralogicalsociety.org](mailto:showchair@cademineralogicalsociety.org) 253-332-3736

Kat Koch Co-Chair [president@cademineralogicalsociety.org](mailto:president@cademineralogicalsociety.org)

Our list of Vendors

AddisSea Gems LLC	Fancy Kat Rocks	P&D Agate Shop	Bohemian Minerals
Forest Fancies	Pacific Rim Gem & Mineral LLC	Brightstar Crystals	Giraffe Designs
Peace of the Earth Jewelry	Candi's Jewelry & Gifts	Grand Products Co., Ltd.	
R&T Crystals	CRS Grippers	Granite Mountain Nature Gallery	
Rare Earth Studios	Crystal Source	Ixchel Crystals	Scott's Rock & Gem
Delphenos gems	Katy's Custom Gems	The Chiming Rock	Earth Art Treasures
Maple Tree Lapidary	The World's Fossils & Minerals	Easthouse Designs	Mineral Endeavors

Tipps Gems      Enisa's Jewelry      Mineral Mandalas      Turquoise Jim  
 AddisSea Gems LLC      Fancy Kat Rocks      US Bead Warehouse      Bohemian Minerals  
 Forest Fancies      Washington Treasures      Yongyut Jewelry  
 Below is our floor plan for the show.



## Meteorite Found in Siberia Contains Naturally Impossible Crystal by Nathan Falde

In 2009, Princeton University theoretical physicist Paul Steinhardt, with assistance from the Italian geologist Luca Bindi, made a groundbreaking discovery in a box obtained from the Italian Museum of Natural History in Florence, Italy. He found a small grain of extraterrestrial mineral that was formed shortly after the birth of our solar system, 4.5 billion years ago. The mineral traced to a remote area of the Koryak Mountains in eastern Siberia, and was delivered to Earth by an object known as the Khatyrka meteorite. The matter was further discovered only after researchers returned to the area in search of more exotic minerals in 2011.

This new rock has been designated as a quasicrystal, in recognition of its unique structural properties. A quasicrystal looks like a normal crystal on the outside, but on the inside it is noticeably different. While the atoms in a pure crystal are arranged in constantly repeating patterns, the atomic lattices inside the quasicrystal are both ordered and diverse, displaying a range of shapes never before seen in a natural substance.

More than 100 synthetic versions of these minerals have been produced in laboratories, between 1982 and the present day. Until these experiments, such a form of matter had never been seen before, and in the past had been believed to be theoretically impossible according to accepted ideas about the laws of nature. Previously the only thing

ever found were crystals, with their rigidly repetitive patterns, and so-called normal solids, which are comprised of atoms arranged in no particular order.

Even after quasicrystals were created in a laboratory, their existence in nature was doubted. Steinhardt predicted that quasicrystals might actually be makeable. He was determined to leave no stone unturned (figuratively and literally) in his search for quasicrystals formed by the processes of nature.

To uncover the true origin of the quasicrystal sample, his team investigated numerous possibilities. They tried to develop a realistic scenario explaining how the quasicrystal could have formed naturally on Earth. In the end, they were able to establish with near 100-percent certainty that it had arrived on Earth from somewhere else in the solar system.

Steinhardt's analysis showed the mineral was embedded in another mineral known as stishovite. This rock comes from meteorites, and its encirclement of the quasicrystal meant both minerals had been formed by a high-pressure process at approximately the same time inside a meteorite that eventually landed in the wilds of Siberia. Further cementing their conclusion was the discovery that the ratio of oxygen isotopes inside the quasicrystal was not consistent with ratios found on Earth, but was instead explainable only if the quasicrystal had been created off-planet.

This article is condensed and reprinted with permission.

For the complete article and further reading go to <https://www.ancient-origins.net>



## August Bonney Lake Senior Center Display by Dick Morgan

In early August I put a display in the Bonney Lake Senior Center for the seniors to see. It will be there for about a month, Mostly items that I finished myself.







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## Peridot

If fire appears to leap from the vibrant green surface of the Peridot, this may be because this gem is formed as a result of volcanic activity. Many years ago, natives discovered Peridot crystals in the black sands of Hawaii, explaining their presence as tears shed by Pele, the volcano goddess. Throughout history, August's birthstone has been used as a means to connect with nature. Early Egyptian priests drank a stimulating beverage called Soma from cups made of Peridot, believing this practice to draw them closer to Isis, the goddess of nature.

The name Peridot comes from the Arabic word "faridat," meaning gem. Ancient Egyptians called them the "gem of the sun," because of their dazzling brilliance when seen in the desert sun. It was believed that the Peridot glowed with light even as darkness fell, which is why miners were said to have scouted for these gems during the night, marking their location, and returning in the light of day to retrieve them. Perhaps this legendary mining method is the reason that the Peridot is sometimes called "evening emerald."

Peridot is a mineral named Olivine, which is found in a variety of greens, ranging from light yellowish green to a dark olive. Early mining for this gem was done on Saint John's Island near Egypt around 1500 BC. The green crystal was considered protective against evil and when set in gold, especially helpful against night terrors. It was ground to powder and used as a remedy for asthma and as a cure for thirst brought on by fever. Today, Peridot is mined in Burma, Norway, Brazil, Australia, Hawaii, the Congo, and in Arizona.

The force of nature is alive within a Peridot, making a gift of this gemstone symbolic of vitality. It signifies strength, both individual and within a relationship, as well as the promise of new growth in years ahead.

from Golden Spike News, 8/19

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In Greek mythology, the god of the ocean, Poseidon, was also the god of earthquakes since they believed the ocean surrounded and supported the land.



## Young Tumblers' News

### Volcanos

Did you know that Mount Rainier is a volcano?! Let's learn about volcanoes and make our own!

Facts About Volcanoes:

A volcano is a mountain that erupts.

Rock under the earth's surface is so hot that it melts. This melted rock is called magma.

Erupting magma is called lava.

Volcanoes become bigger every time they erupt as the lava cools and makes a new layer of rock.

Volcanoes can erupt under water and form new islands from the cooled lava.

Volcanoes can be found on the moon and other planets.

There are more than 500 active volcanoes on Earth.

What You Will Need?

You will need an empty plastic bottle (this is 1 litre bottle), newspaper torn up in strips, PVA craft glue, masking tape and a container for the water and glue mixture.

To make the lava to mimic that of a real volcano you will need bicarbonate soda, red and yellow food colouring (or orange) and white vinegar.

To make the basic shape of a volcano, cut the middle of the plastic bottle out and then overlap the two ends together securing it with masking tape. To give the volcano a more pyramid/mountain shape, you can roll newspaper into a tube shape and wrapped it around the base of the plastic bottle and secure it all with masking tape.

When the Paper Mache was dry, paint the volcano and let it dry. Now, you will need 4 tablespoons of bicarbonate soda and 1 cup of vinegar mixed with some red and yellow food dye.

Sifting the bicarbonate soda and then pour in the colored vinegar.....you have to be super quick to get the funnel out.

Your volcano will be fizzing and frothing as the bicarbonate soda and vinegar react together.

from <https://www.learning4kids.net/2012/04/11/how-to-make-a-homemade-volcano/>



### Moraine by Duane Flackus

As ancient glaciers moved slowly downhill they scuffed out everything right down into bedrock. This rock debris became embedded in the ice, and was then carried along with the glacial flow. Eventually as the ice melted, these loose rock deposits were all that was left of the ice field.

These remaining mineral glacial deposits are known as "Moraine".

from The Clackamette Gem, 8/19

## Attention All Young Tumbler's – Display Case/Badge Time

by Kat Koch, President

I would like to see all our Young Tumbler's enter a display case in our Gem Show Sept 21st and 22nd.

We will be working on the "Collection" badge (#5). If you went gold panning you can simultaneously work on earning the "Gold" badge (#12). If you like fossils then simultaneously work on earning the "Fossil" badge (#3). You are also free to work on any badge of your choosing but it's a good time to at least earn the Collection badge.

### 5. Collecting

- 5.1 Building a collection.
- 5.2 Cataloging and labeling your collection.
- 5.3 Storing a collection.
- 5.4 Displaying your collection.
- 5.5 Reporting about your collection.

### 12. Gold Panning & Prospecting

- 12.1 Gold as a mineral.
- 12.2 Uses of gold.
- 12.3 Gold throughout history.
- 12.4 Gold resources in your own state or region.
- 12.5 Field trip to a gold mine.
- 12.6 Panning for gold.
- 12.7 Metal detecting for gold, coins, and other artifacts.

### 3. Fossils

- 3.1 The geological time chart.
- 3.2 Types of fossilization and making or excavating fossils.
- 3.3 The forms of life.
- 3.4 Collecting fossils.
- 3.5 A fossil-collecting field trip.
- 3.6 Your state fossil.
- 3.7 Dinosaurs.
- 3.8 Fossil and dinosaur names.



**Collecting**



**Gold Panning  
& Prospecting**



**Fossils**

You are also free to work on any badge of your choosing. Guide lines are in the program manual.

You can find all the details to earn a badge on our website under the "Young Tumblers" tab, then click on "Young Tumblers Program". You have to complete any 3 items under the specific badge you want to earn. I would also like to note that the cases are judge by the age of the Young Tumbler.

Age Group 1: ages up to 5 years

Age Group 2: ages 6 through 8

Age Group 3: ages 9 through 11

Age Group 4: ages 12 through 15

Age Group 5: ages 16 through 18.

As soon you decide what your case is going to be and what badges you are trying to earn please let me know so I have enough time to order the badges.

I will need to know your name, your age on Sept 15th, 2019 and what badge you are trying to earn. Send this info to [president@cascademineralogicalsociety.org](mailto:president@cascademineralogicalsociety.org).

We will have a case at the September general meeting for everyone to see. We have a few new Young Tumblers that have not entered a case or seen the display cases before. By seeing the case you will know size and shape of the case. We use regional cases for our club displays. The case size is 40" wide x 21" deep with a height of 10" in the back, slanting down to 6" in the front and a glass top. In the meantime, you can use a large bath towel placed on a table for the approximate size.



## Field Trips

The club or clubs sponsoring the field trips are shown in *italics*. When known I have listed a phone number and contact person for each sponsoring club below the listed trips. If you are not a member of the sponsoring club, you should phone and ask permission to go on their field trip.

Information from the Washington State Mineral Council webpage (<http://www.mineralcouncil.org>).

September 7-8 All Rockhounds Pow Wow - Red Top/Teaway - Meet at Teaway at middle fork Camp before 8:00 am - Geodes, Agate, Jasper & Jade - Bring digging & hard rock tools  
Larry Vess [vessel3755@gmail.com](mailto:vessel3755@gmail.com) or (253)473-3908

September 21 Puyallup Valley Gem & Mineral - Little Naches - Meet at the Enumclaw Ranger Station before 9:00 am  
- Thundereggs, Washington Lily pad & Fossil - Bring digging & light hard rock tools

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### Aug. 3 Field Trip Report - Gold Panning with NAMA at Peshastin Creek Claim by Roger Danneman

We had 12 club members on this outing, 4 kids included. We met in Cle Elum at 9:30 and arrived at the claim about 10:00. We were given some panning instructions by NAMA members and then went to a section of the stream to try our luck. The weather was hot and sunny and most of us had water shoes on to work in the stream. Quite a different experience for us, as a single flake of gold was worth at least a little celebrating. It was fun and interesting. There's something very soothing and calming when working in moving water. Just need a comfortable place to sit. We did find a few flakes and a lot of specks. I enjoyed watching the sluicing operations of the NAMA members.





## Shows

September 7 & 8: Saturday & Sunday 10 am - 5 pm  
Marcus Whitman Gem and Mineral Society, 50th Annual Gem and Mineral Show  
Walla Walla County Fairgrounds, Community Center Building, 363 Orchard St., Walla Walla WA

September 7 & 8: Saturday 9 am – 5 pm; Sunday 10 am - 4 pm  
Clallam County Gem and Mineral Association, Annual Show  
Vern Burton Community Center, 308 East 4th Street, Port Angeles WA

September 21 & 22: Saturday 10 am - 5 pm; Sunday 10 am - 4 pm  
Southern Washington Mineralogical Society, Annual Show  
Castle Rock Fairgrounds, 120 Fair Lane, Castle Rock, WA

September 21 & 22: Saturday 10 am – 6 pm; Sunday 10 am – 4 pm  
Cascade Mineralogical Society, Annual Show  
Green River College, 12401 SE 320th St, Auburn, WA

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## Ruby

The ruby is a form of the mineral corundum, as is sapphire. The only difference between sapphires and rubies are color. If a piece of corundum mineral is a shade of red, it is a ruby. If it is any other color it is a sapphire. Ruby is the birthstone for the month of July. Along with sapphire, emerald and diamond, it is one of the four precious stones.

The name ruby comes from the Latin word *ruber*, which means red. About 90 per cent of the world's rubies come from Myanmar, Burma. Myanmar's Valley of Rubies produces the most valuable and rare color of ruby called 'pigeon's blood'. The working conditions of the mines in this region are horrendous, and there are actions being taken to improve the working conditions there. Rubies are also mined in Vietnam, Thailand, Ceylon, Northern Pakistan, Nepal and Afghanistan.

Rubies have been known and treasured since antiquity. They are mentioned in the bible. India especially has a long tradition of ruby appreciation. The gemstone is mentioned in ancient Indian literature. Even the name of the mineral corundum is a derivative of the Sanskrit word *kuruvinda*.

Rubies are among the hardest substances known. Only diamond is harder. This has led to the use of ruby-tipped blades for the cutting of other very hard materials, and other industrial applications. Most of these applications use synthetic rubies. Synthetic rubies are also used for jewelry, and make a more affordable choice. But they should always be disclosed as synthetic ruby.

Most natural rubies today are heat-treated in some way to improve clarity and color. With rubies, color is the determining factor of value. Next is clarity. There are authentic rubies used in less expensive forms of jewelry that are more opaque. High quality rubies are very rare, even more rare than diamonds, especially stones that are over 3 carats in weight. A 16 carat ruby was sold at auction for over \$3.2 million.

There is also a gemstone virtually identical to ruby called spinel. It comes in many colors, but the most popular is red. These stones can be found in the same locations as authentic ruby, and one of the few ways to tell the difference between the stones is by testing its hardness. Ruby is much harder.

A ruby is the same type of mineral as sapphire except for trace amounts of chromium, which give it its red color. Ruby red is the color of passion, of blood, of life itself. And that makes all the difference.

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