

HELL'S CANYON GEM CLUB
P.O. BOX 365
LEWISTON, IDAHO 83501



**Serving the Valley for
65 YEARS**

PURPOSE OF HELLS CANYON GEM CLUB, INC.

The purpose of this nonprofit, social club is to promote the rock hound hobby by providing opportunities for the collection, working and displaying of gems and minerals, as well as educational programs in the field of geology.

MEETINGS: 2nd Friday of each month

Business Meeting: 6:45 pm

VISITORS ARE ALWAYS WELCOME

Dues: Adult [per person] \$15.00; Junior [under 18] Free with a responsible adult membership.

2016 BOARD OF DIRECTORS

President	Bruce Borgelt	208-935-0806	1st Year Trustee	Joe Schacher	208-743-9238
Vice President	Randy Squires	208-743-8812	2nd Year Trustee	Teresa Stephenson	509-758-3880
Secretary	Lola Collinsworth	509-254-7482	2nd Year Trustee	Richard Pederson	208-276-7077
Treasurer	MaryLou Northrup	208-743-6944	Federation Director	Jerry Northrup	208-743-6944
Past President	Linn Enger	208-746-4957	Federation Delegate	MaryLou Northrup	208-743-6944
1st Year Trustee	Nathan Redde		WSMC Representative		

HELLS CANYON WEBSITE: <http://www.hellscanyongemclub.com>

WEBMASTER: Rick Westerholm: hcgemclub@yahoo.com

HOW TO FIND OUR MEETING PLACE



To get to the meeting location for the Hells Canyon Club, go south on 15th Street in Clarkston. 15th turns into Scenic Way and goes up the hill. Scenic Way turns into Appleside Rd. Continue south on Appleside Rd to where it turns and becomes Reservoir Rd. The Grange Hall is located at 2220 Reservoir Rd, at the junction of Reservoir Rd, 6th Avenue and 22nd Street. Additional parking is available in the Church parking lot across 6th Avenue.

Meeting minutes April , 2017

Minutes read, 1 correction, treasurer paid deposit only to fairgrounds not entire fee.

Treasurer report passed as read.

old business.

- Septic system not inspected yet. Waiting for a building. Cost will be \$300.
- Claims. Nathan Reade. A couple more weeks we should have some news.
- Mobile building. Two found, not what we want so passed on them.
- Northwest federation. May 20-21 Montana. After the meeting they plan on going to Blue Forest.
- \$100 scholarship was paid for federation.
- Buckets of nice rocks donated by Jack Kelly family. Thanks so much.
- Voted for 2 buckets to be donated to federation. The rest will be sold at our show or auction.
- A fossel dig was discussed at Banner ranch.
- Linn Engers article was very well liked. Thank you Linn. We need other people to submit articles also.

Field trips.

- McCann opals. April 22 meet at 8 at WWCC.
- China Hollow May 5-7 Oregon.
- Blue Forest May 25- 29 Wyoming.
- Rick and Beth Westerholm went to Saddle Mountain. Found alot of wood.

Show

- A 4x8 sign to be placed at Harley Davidson for our show.
- Painted rocks for ads to show. 1 free kids corner turn for redeeming them was discussed.
- Bruce always has great door prizes.

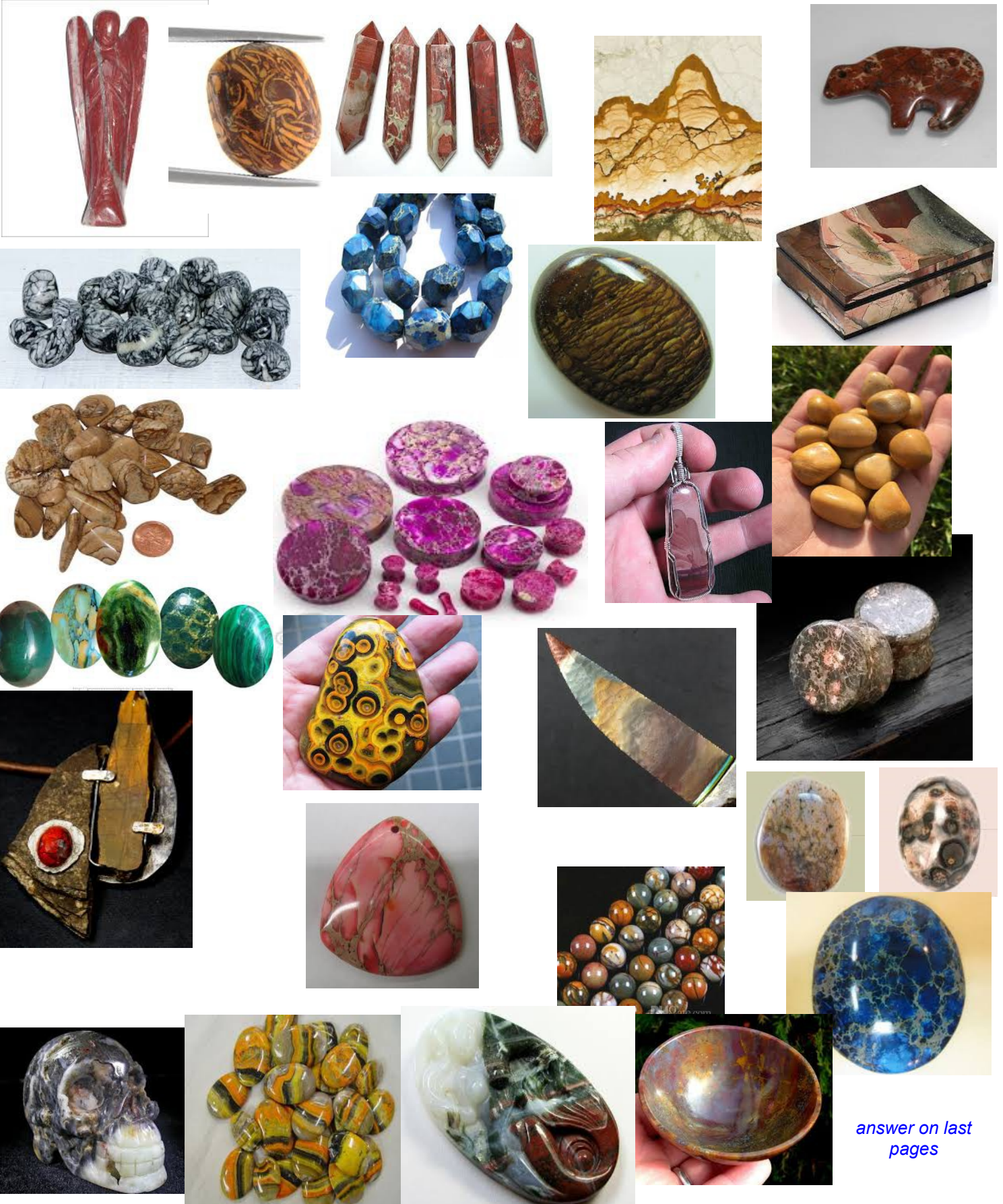
\$81 for silent aucton.

Minutes by Lola Collinsworth

Quiz-- What is a "Touchstone" answer on last page



Photo quiz- what do all of these stone creations have in common????



answer on last pages

2017 GEM SHOWS(partial list)

May 19 – 21 Fri, Sat – 10 – 6 Sun – 10 – 4	Bitterroot Gem and Mineral Society 79th Annual Gem and Mineral Show and 2017 NFMS	First Interstate Center Ravalli County Fairgrounds 100 Old Corvallis Road Hamilton MT	<u>Steve Vieth, 406 381 7597</u> viethsteve88@gmail.com
June 3 & 4 Sat – 9 – 5 Sun -10 - 4	North Idaho Mineral Club	Kootenai County Fairgrounds 4056 North Government Way, Coeur d'Alene, ID	Dean Hutchinson 208-664-2712 PO Box 1643 Hayden, ID 83835 daleruperd@gmail.com
Sept. 9 & 10 Sat – 9 – 5 Sun -10 - 5	Marcus Whitman Gem and Mineral Society	Walla Walla County Frgrounds Community Center Building 363 Orchard St., Walla Walla, WA	Keith Bacus, 509-529-1248 keithbacus@yahoo.com
Oct 21 – 22 Sat – 9 – 6 Sun – 9 – 4	Hells Canyon Gem Club	Nez Perce County Fair Building 1229 Burrell Avenue Lewiston, ID 83501	Linn Enger 208-746-4957 engerocks@yahoo.com

Standing Committees

1. Membership Chairman --- Linn Enger
2. Juniors Chairman -- David Dabritz
3. Fieldtrip Chairman --
4. Program Chairman --
5. Show & Tell Chairman --
6. Claims Chairmen – Nate Reade, Randy Squires, Jerry Northrup
7. Historian Chairman --
8. Library Chairman --
9. Hostess Chairman.--.
10. Bulletin Editor --- Ed Shoemaker

Gemshow Committees

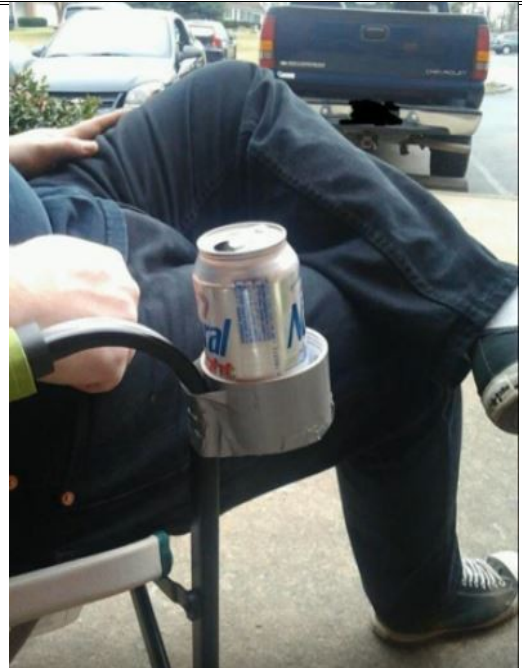
1. Show Chairman --- Rock Club Officers
2. Show Treasurer -- Marylou Northrup
3. Dealer Chairman – Lynda Grebe
4. Advertising Chairman -- Randy Squires
5. Displays Chairman -- Joe Schacher
6. Demonstrations Chairman -- Travis Heath
7. Floorplan Chairman -- Rick Westerholm
8. Silent Auction Chairman -- Jerry Northrup
9. Kids Corner Chairman – Don Johnson
10. Admissions Chairman – Lola Collinsworth
- 11.--Security Chairman –Bruce Borgelt and ?
- 12.--Raffle Chairpersons.--Nate & Lynda Grebe
- 13.--Floater for show.-- Bruce Borgelt

Dream more while you're awake.

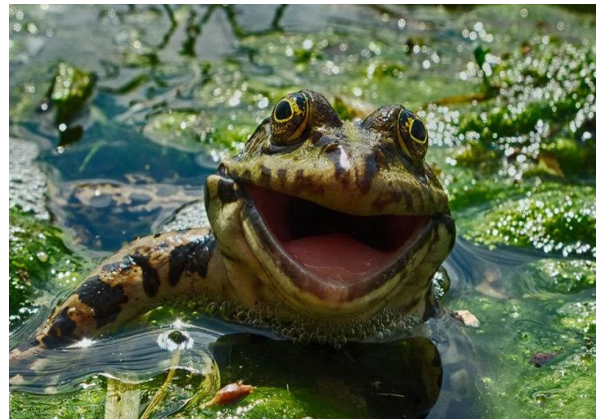
GIFT SUGGESTIONS FOR MOTHERS DAY!



Computer chair



duct tape drink holder



SMILE



God bless
our men and
women in service





MAY 19th, 20th, and 21st

Show Times are Friday 10-6, Saturday 10-6, Sunday 10-4

DEMONSTRATIONS!!

**Don Safford, DLS Flintknapper, daily demonstrations – First Interstate Building
Butte Club, Cabochons & Faceting, daily demonstrations First Interstate Building
Jeff Le Fever, Butte, Silversmith, daily demonstrations – First Interstate Building
Montana Gold Prospectors, Gold Panning on Friday & Saturday only, Outside.**

SPEAKERS

**Dave Trexler, Paleontologist, Two Medicine Center
Dick Berg of Montana Tech, Talks about Sapphires
Ted Antonioli, Consulting Geologist, Member of Montana Mining Association
Bruce Baty, Talk on Glacial Lake Missoula
Allen Marquette, Paleo-Education, Presentation on Woolly Mammoth
Dean Yongue - Mining Geologist/Surveyor, Presentation on Alaska mines**

**NFMS Annual Meeting will be held on Friday, May 19th at 4:00 p.m. in the Tammney Room of the
Bitterroot River Inn.**

139 Bitterroot Plaza Dr, Hamilton, MT 59840

**We have learned that GEM MOUNTAIN, which produce Sapphires, will be open beginning May
24, 2017. Hours are 9:30 a.m. to 5:30 p.m. You can purchase a bucket for \$25 and sift to find
the sapphires. Unfortunately it is the Wednesday after our show is over but it is a one of a
kind fun experience for the entire family. Consider adding this to your trip!**

METEOR OF THE MONTH

Meteorites (on 6 Different Occasions!)

Most people have never seen or even heard about a meteorite falling in their local region, yet this Bosnian gentleman, Radivoje Lajic has had six (6!) meteorites fall into his garden. The University of Belgrade confirmed that they were space rocks, and have begun investigating how such a coincidence could occur. The thinking is that the electro-magnetic activity around his house could be drawing the meteorites to his abode. The unsurprisingly concerned Lajic has now reinforced his roof with steel bars.



Photo Quiz answers-----They are all **Jasper**!! Jasper is so "common" that we take it for granted, heres a chance to re-think Jasper.

Jasper is an opaque variety of Chalcedony, and is usually associated with brown, yellow, or reddish colors, but may be used to describe other opaque colors of Chalcedony such as dark or mottled green, orange, and black. Jasper is almost always multicolored, with unique color patterns and habits.

Jasper is a rock of virtually any color stemming from the mineral content of the original sediments or ash. Patterns arise during the consolidation process forming flow and depositional patterns in the original silica rich sediment or volcanic ash. [Hydrothermal circulation](#) is generally thought to be required in the formation of jasper.

Jasper is not really a mineral in the strict sense, but a mixture of different types of microcrystalline quartz with impurities of other minerals, and is called a **textural** variety of quartz. Jasper of homogeneous color looks a bit like a colored, opaque flint, and shares many of its physical properties, but it forms in different environments.

What clearly distinguishes jasper from other cryptocrystalline varieties like agate, chrysoprase, sard, or carnelian, is its opacity. Only thin chips of jasper are translucent. It might, for example, be of the same color as a carnelian, but the latter is translucent. Heliotrope is opaque and thus considered a variety of jasper.

The high content of embedded iron compounds occasionally causes the streak to be slightly colored, which is very different from all other quartz varieties. Most of the time the streak will be colorless or white. Jasper can be modified by the diffusion of minerals along discontinuities providing the appearance of vegetative growth, i.e., [dendritic](#). The original materials are often fractured and/or distorted, after deposition, into diverse patterns, which are later filled in with other colorful minerals. Weathering, with time, will create intensely colored superficial rinds.

The classification and naming of jasper varieties presents a challenge. Terms attributed to various well-defined materials includes the geographic locality where it is found, sometimes quite restricted such as "Bruneau" (a canyon) and "Lahontan" (a lake), rivers and even individual mountains; many are fanciful, such as "forest fire" or "rainbow", while others are descriptive, such as "autumn" or "porcelain". A few are

designated by the place of origin such as a brown Egyptian or red African. Some variety names are generally used by collectors and dealers, but there are many made up by dealers to describe a locality or other habit.

Picture jaspers exhibit combinations of patterns (such as banding from flow or depositional patterns (from water or wind), dendritic or color variations) resulting in what appear to be scenes or images (on a cut section). Diffusion from a center produces a distinctive **orbicular** appearance, i.e., leopard skin jasper, or linear banding from a fracture as seen in leisegang jasper. Healed, fragmented rock produces **brecciated** (broken) jasper. While these "picture jaspers" can be found all over the world, specific colors or patterns are unique, based upon the geographic region from which they originate. Oregon's Biggs jasper, and Bruneau jasper from Bruneau Canyon near the **Bruneau River** in **Idaho** are known as particularly fine examples.

The appeal of Jasper is its interesting color patterns and formations. Though it can be a solid color, it is most often mottled, spotted, ringed, or striped. Each Jasper has a unique color or pattern, lending this gemstone much variety. Jasper is an ancient gemstone, and is mentioned in the bible and other classical sources. Though fairly common and affordable today, Jasper in antiquity was regarded as a valuable stone.

Perhaps the most wanted jasper of the U.S. is Morgan Hill Poppy Jasper, from Morgan Hill, south of San Jose, California. Its texture resembles that of "Ocean Jasper" from Madagascar, as it is largely composed of intergrown spherulites, but the colors are much more showy. The locality is on private ground and closed to the public.

Jasper has an over-abundance of variety names. The varieties below are the well-known names or varieties that are commonly encountered. Seldom-used and localized trade names are not described here.

- **Agate Jasper** - Opaque multicolored Jasper, or Jasper with banding; may also refer to a single stone with a combination of both Agate and Jasper.
- **Biggs Jasper** - Jasper from Biggs Junction, Oregon, with varying light and dark color brown bands and pretty formations.
- **Brecciated Jasper** - Jasper in rounded fragments naturally cemented together in a gray material; appears similar to breccia.
- **Bruneau Jasper** - Jasper from Bruneau Canyon, in Owyhee County, Idaho, with distinctive brown, cream, (and sometimes even red or green) banding and patterns.
- **Cave Creek Jasper** - Reddish Jasper found near Cave Creek in Maricopa County, Arizona.
- **Deschutes Jasper** - Jasper from a deposit slightly west of Biggs Junction, Oregon, near the Deschutes River, with good banding and interesting color formations.
- **Egyptian Jasper** - Form of Orbicular Jasper with white and gray circles on a red background. It is found as rounded pebbles on the beaches of Egypt. A similar Jasper is found on the beaches of Washington state and sometimes also labelled as Egyptian Jasper.
- **Green Jasper** - Jasper with a light to dark green color. Green Jasper differs from Prase and Plasma since it is fully opaque.
- **Jaspilite** - Banded rock that is a mixture of Hematite and Jasper.
- **Kinradite** - Orbicular Jasper with concentric rings of colorless or white Quartz. Occasionally used as a synonym of Jasper.
- **Leopard Jasper** - Form of Orbicular Jasper with tan color rings, appearing similar to the spots of a leopard.
- **Morgan Hill Jasper** - Jasper from Morgan Hill, California, with small reddish and yellow "poppy" formations. Also synonymous with "Poppy Jasper".
- **Morrisonite** - Multicolored Jasper from the Owyhee River gorge in Malheur Co., Oregon.
- **Moss Jasper** - Form of Jasper or Chalcedony containing dense inclusions of green Hornblende that cause the pattern to resemble moss. Often used as a synonym for Moss Agate, though Moss Agate is translucent whereas Moss Jasper is opaque.

- **Ocean Jasper** - Form of Orbicular Jasper found on the coast of Madagascar with small, tight, concentric ring formations.
- **Opal Jasper** - Form of Brecciated Jasper in which the cementing material is Opal.
- **Orbicular Jasper** - Jasper with rounded concentric rings throughout.
- **Owyhee Jasper** - Form of Jasper with scenic picture formations found near the Owyhee River in Oregon.
- **Picture Jasper** - Form of Jasper with scenic picture-like formations.
- **Poppy Jasper** - Form of yellow Orbicular Jasper with red concentric rings.
- **Riband Jasper** - Jasper with banded stripes, usually dark red, brown, yellow, or white bands.
- **Ribbon Jasper** - Form of Banded Jasper with thick banded lines.
- **Rogueite** - Green form of Jasper from the Rogue River in Oregon.
- **Russian Jasper** - Jasper from Russia, usually with reddish spots.
- **Stone Canyon Jasper** - Yellowish Brecciated Jasper from Stone Canyon (near San Miguel), California.
- **Wascoite** - Jasper from Wasco Co., Oregon, with irregular yellow, pink, and red concentric bands.
- **Zebra Jasper** - Dark brown Jasper with lighter brown to white colored banding streaks.
-

So how do you tell Jasper, Flint and Agate apart?

It is not easy to explain the term "agate". Very often agate is simply defined as "banded chalcedony", and for most practical purposes this should be sufficient.

But the notion of agate also embraces chalcedony variants that do not show any signs of banding, probably because of the long-term use of names like "moss agate" for stones that would simply be more difficult to sell as "moss chalcedony". It is difficult to draw a line between agate and other types of chalcedony.

A chalcedony is usually *called* an agate if it exhibits **any** of the following properties:

- banding of whatever kind, caused by different colors or different structure of the layers, or both
- translucency in conjunction with being multicolored
- translucency in conjunction with a nodular shape and colored inclusions

An "**ideal agate**" by that understanding would be a nodule filled with a translucent, multicolored chalcedony with parallel bands. The **minimum requirement** would be that it is either translucent and exhibits some colored pattern *or* shows banding.

Flint and chert are dense, cryptocrystalline varieties of quartz, slightly translucent to almost opaque. **Firestone**, **Hornstone**, and **Silex** are other names for flint and chert. Some authors use "chert" as the more general term, with flint being a dark variant. Others use the term "flint" for nodules and "chert" for large bodies of rocks. Both terms are more often used very broadly. There's apparently no clearly defined line that separates flint from chert and that people agree on.

Flint does not have a specific color, but is often dark gray with shades of brown, red, or yellow, and sometimes white. Brighter or more colorful variants are sometimes called chert by some people. If a large body of rock is entirely made of dense, dull cryptocrystalline quartz, it is generally called chert, regardless of its color. Flint may show color banding, but this is not a concentric banding as seen in agate.

Flint, like jasper, it has a very irregular, grainy structure, whereas agates - also a cryptocrystalline quartz variant - consist of regularly intergrown tiny quartz crystals that give them a "fibrous" structure. Jasper is almost opaque and typically its colors are more intense, while flint is often a bit translucent. The most interesting physical property of flint is the way it splits. Flint has a **conchoidal fracture** like rock crystal or glass, but its fracture surfaces are not as uneven and curved. It's easier to control the direction of the

splitting, and the edges are more straight. This depends a little bit on the amount of impurities, "purer" flint behaves more like glass. Chips coming off a flint can have razor sharp edges, making it suitable as a cutting tool.

Flint is easy to spot in a gravel pit: often it is covered by a thin white layer, and - in contrast to the other pebbles - it has an irregular shape.

Portions of these articles taken from the following sources. Click the link(s) for more info.

[wikipedia link](#)
[link to Minerals.net](#)
[The Quartz Page](#)

Answer to Quiz question: What is a touchstone?

A **touchstone** is a small tablet of dark stone such as [fieldstone](#), [slate](#), or [lydite](#), used for [assaying precious metal alloys](#). It has a finely grained surface on which soft [metals](#) leave a visible trace. The touchstone was used in ancient Greece. It was also used by the [Indus Valley Civilization](#) about 3500 BC for testing the purity of soft metals.

Drawing a line with gold on a touchstone will leave a visible trace. Because different alloys of gold have different colours the unknown sample can be compared to samples of known purity. This method has been used since ancient times. In modern times, additional tests can be done. The trace will react in different ways to specific concentrations of [nitric acid](#) or [aqua regia](#), thereby identifying the quality of the gold. Thus, 24 [carat](#) gold is not affected but 14 carat gold will show chemical activity.

A touchstone was for centuries a popular method of testing silver purity. It was often made from a wedge of thick slate upon which the silver item was rubbed. The colour of the resulting stripe was compared to the results from known metals. If the colour was similar, then further testing could be undertaken by applying "Aqua Regia" which was a solution of Nitric and Hydrochloric acids. Assay officers, mine officials and mineralogists use to carry their touchstone on the end of a fob chain - hence the pendant bale frequently found at the top of the touchstone.

The term *basanite* has occasionally been used to refer to a variety of jasper, a black [flinty](#) or [cherty](#) jasper found in several New England states of the US. Such varieties of jasper are also informally known as *lydian stone* or *lydite* and have been used as [touchstones](#) in testing the purity of [precious metal alloys](#)

As a [metaphor](#), a **touchstone** refers to any physical or intellectual measure by which the validity or merit of a concept can be tested. It is similar in use to an [acid test](#) or [litmus test](#)

What is the similar test called that helps us tell one kind of rock from another?