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Geodes: It's what's inside that counts

WC McDANIEL: Geode is a universally recognized term that transcends all levels of interest in rocks. Set up a geode cracker or saw at a rock show or crafts festival and a convoy of eyes, whether they belong to a geologist, the serious or casual collector or just onlookers, will gather and eagerly await the cracking or cutting of the geode to unveil its interior secrets. Those secrets, millions of years in the making, are a geological phenomenon that has some distinct theories on what is a geode, how they were formed and why they

CELESTITE GEODE

What is and what is not a geode?

are found in certain areas.

The term geode is derived from the Greek word Geoides which means "earthlike." Practically speaking, any round shaped rock is usually referred to as a geode. However, once you get past that outer layer and make your way inside, some differences and variations appear that can distinguish geodes from other rocks and can help identify where it was found and how it was formed.

The most common characteristics for a rock to be called a geode usually include three basic components. It should be a rounded, spherical shaped

>> see Geodes on page eight >>

September MAGS events					
06 6:30p	MAGS Board Meeting • Blue Plate Café, 5469 Poplar Avenue				
14 7:30p	MAGS Membership Meeting • Shady Grove Presbyterian Church 5535 Shady Grove Road • Bring refreshments and display	Youth program will be "First Americans" presented by Park			
15 10:00a	Rock Swap at the home of Alan and Alishia Parks [see page 3]	Noyes.			
15 7:00a	DMC Field Trip to Harleyville, SC [see page 6]				
29	MAGS Field Trip to Vulcan Quarry, Parsons, TN [see page 3]				

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President's corner: WC McDANIEL

The last few weeks certainly have been riveting and sobering as we watched Hurricanes Katrina and Rita storm onto the shores of the Gulf States and wreak havoc to those states and the people who live there. Several MAGS members' family and friends were directly impacted. However, no loss of life or injuries has been reported. In addition several of our current and past show dealers live in the area. The only report I have heard was the J.P. Lasiter's house

The only report I have heard was the J.P. Lasiter's house in Gulfport, Mississippi. was destroyed by the storm surge and that he safely escaped by riding out the surge. Let's hope the autumnal equinox of September 22 will bring cooler weather to the Gulf and diminish the fuel supply of warm water.

The cooler (hopefully) fall days are a good and welcome time to hit the creeks and hills to rock hunt. Our field trip in October will be to the Vulcan Quarry for fossils and November to Memphis Stone and Gravel. Check the newsletter or membership meeting for field trip information.

The last couple of meetings the displays have been lacking in quantity but not quality. Our theme display for the October meeting will be Geodes. So bring those displays. Only two more months before the Christmas party and drawing for display winners

In the next couple of months look for two important announcements. First, MAGS will be making a change in our field trip policies regarding liability and waivers. Look for specific information in the November newsletter and membership meeting. The other announcement is a special event for our members in early 2006. You will have the opportunity to make some money and win some money with our first annual Membership Auction and "I found (field collected) it or I made it" display contest. Details in the November newsletter. **WC**

Welcome new member

CORNELIA McDANIEL: Give a hardy MAGS welcome to our newest member.

Rita M. Lander • 4045 Powder Mill Cove, Memphis TN 38125 • wlander123@aol.com • 901.751.6670

MAGS youth notes

MAGS Youth continue to learn about the first Americans this month

Mike Baldwin: At the September Youth Meeting the MAGS kids learned a few things about their Native American heritage, looking at some Native American points and regalia, learning a Native American dance or two and finding out how the Native Americans used rocks in their culture. This month, Park Noyes will continue the study by taking the youth on a journey into pre-history . . . back to the time when the first people arrived in North America. The kids will learn where the first Americans lived and how they used the things they found in nature. Kids, don't miss it. Come join us in October.

Library book donations in memory of John Jones

NANCY FOLDEN: Doris Johnson Jones has donated seven books to the MAGS Library in memory of John Jones who passed away on April 17, 2005. Drop by the library and check them out! (1) <u>Colorful Mineral Identifier</u> by Anthony C. Tennssen Ph D; (2) <u>Gems Minerals Crystals and Ores</u> by Richard M. Pearl; (3) <u>Lost Civiliations/Fact and Enigmas in Archaeology</u> by Henri-Paul Eydoux; (4) <u>Still Digging</u> by Sir Mortimer Wheeler (Archaeology); (5) <u>The Seven Caves</u> by Carleton S. Coon (Archaeology); (6) <u>An Introduction to American Archaeology Volume One: North and Middle America</u>; and (7) <u>Color Treasury of Gems and Jewels/Uncut Stones and Objects D'Art</u> (Cresent Books).

Call for entries–Fransktown

MICHAEL HERREN: Do you have an unusual, extremely fine, or somewhat rare vertebrate fossil from Twenty Mile Creek near Frankstown, MS? If so, and you are willing to let it be measured and photographed for a in-progress guide book to that site, please email Michael Herren at bonesnjunk@mindgamesstudios. com. What I am looking for are pathological specimens, jaw sections, very fine condition teeth, crocodile teeth, mosasaur teeth, sawfish rostral teeth, etc." Visit my website at http://www.mindgamesstudios.com/bonesnjunk

October MAGS field trip

LOU WHITE: The MAGS field trip for October will be on Saturday, October 29, Vulcan Quarry, Parsons, TN. We will be collecting marine invertebrate fossils such as corals, crinoids, brachiopods, sponges and trilobites, found in gray limestone and shale. Specific field trip meeting times and locations will be available at the October membership meeting. If you are unable to attend the meeting, you can contact Lou White at 901-937 8522 or WC McDaniel at 901-274-7706 (or w.c.mcd@worldnet.att.net) for details. Note that the October field trip is the last weekend of the moth. Mark your calendar and don't miss the fun!

Dates to remember

	Board Meeting	Membership Meeting	Due Date for Newsletter Articles
Oct	6	14	-
Nov	3	11	October 23
Dec	1	9	November 20
Jan	5	13	December 18
Feb	3	10	January 21
Mar	3	10	February 18

Website statistics for September

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MIKE BALDWIN: Here's a brief look at our website			
[www.memphisgeology.org] from 01.21.02 through			
10.02.05:			
Visits 113,187			
Hits 485,808			
Avg visits/day past month			
Top pages in the past 30 days:			
Home page683 hits			
argon2003.pdf 609 hits			
Explorer0203.pdf 401 hits			
TriangulumCluster2005.pdf			
explorer0403.pdf 306 hits			
A visit is every time someone comes to our website. A hit is every			
page viewed once a user enters our website.			

Sunshine and caring

MIKE BALDWIN: MAGS has lost another great friend and lifetime member. George Fulghum, age 90, passed away on Sunday, October 2, 2005 at Methodist University Hospital. George was a World War II Army Engineer Captain and a Retired General Contractor and Proprietor of George Fulghum Co. He was a long time member and Deacon of First Baptist Church of Memphis. He leaves his wife Maxine S. Fulghum; three daughters Mara Fulghum Jones Sprott of Memphis, Anne Elizabeth Fulghum Ontiveros of Germantown, MD, Carol Jean Fulghum Fox of Memphis; two step-sons Lonnie Simpson and Craig Simpson of Memphis, TN; one sister Mrs. Henry H. Farmer "Dorothy" of Memphis. He also leaves seven grand children and one great-grandchild.

George was a quiet, gentle

person. My family and I loved being around him. His witty sense of humor always brought a smile to our faces. We got to know George through the Micromount Group that met at Roger Van Cleef's home for several months. During the spring months, George would bring tiny flowers for us to observe through the microscope, while he shared his life stories. A visit to George's home was an adventure in itself. At one time, his backyard would remind you of a sugar plantation, filled with 20 to 30-foot-high cane. George loved life. He loved sharing, and I count it a blessing to have known him. We'll miss him too Maxine.

If you have news about MAGS members, please send them to Melba Cole at JMelCole@aol.com or give call her at 382-0344.

Don't miss the last rock swap of 2005

SHERRI BALDWIN: Alan, Alishia, Harrison and Noa Parks will be hosting the October Rock Swap and Catfish Fry at their new home in Collierville. Alan will be cooking catfish and hushpuppies. You should bring a side dish or dessert (enough for your crew and some to share with the rest of us) and drinks. There will be rock swapping, buying and selling. Please bring your own tables and chairs. If you plan on selling, please bring a specimen to

donate for a door prize. Members are requested to bring a shoebox of material for the show's gem dig and/ or grab bags. Just started collecting and you don't have enough, that's ok come and enjoy the day. The Parks live at 831 West Powell Road in Collierville (901-853-6898). From Poplar Avenue in Collierville, turn north on Byhalia Road, then left at the third light (West Powell Road).

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October Birthdays

MELBA COLE: Birthstone for October is Opal.

- 1 Susan Hailey
- 5 Matthew Lybanon
- 5 Jon Scilken
- 6 Dick McKitrick
- 7 Alan Jacobs
- 7 Chris Vaughn
- 8 Jeanette Britt
- 9 Charles Hill
- 11 Barry Burns
- 11 George Everett
- 12 Michael Devine
- 13 Mike Baldwin
- 16 Dr. Joe Young
- 18 Emily Randolph
- 21 Mathilda Doorley
- 21 Taylor Faddis
- 21 David Sanders
- 24 Peter Doorley
- 24 Raynee Randolph
- 24 Keith Riding
- 28 Anne Fordyce
- 30 Mary Klug

Bold type indicates lifetime members.

October Opals

Unlike most other birthstones, the opal is opaque—not transparent. The gem is iridescent, reflecting light and seeming to shine with flashing rainbow colors. The true colors of opals range from colorless to white to green to black—the most valuable. Opal comes from the Sanskrit word upala, which means "jewel" or "stone." The best stones are found in Australia, but fine specimens have also come from Mexico, Nevada, and Eastern Europe.

Reference: Laurie Steding; <u>Birthstones</u>; Nancy Hall, Inc.; 1995. Information used for educational purposes under the provisions of the Fair Use Act of 1976.

MAGS Roadcut

WC McDANIEL: The October Roadcut focuses on our theme display for the October membership meeting "Geodes" by looking at some of the minerals found in Keokuk (Iowa) Geodes

- 18 -20 minerals have been identified as occurring in Keokuk Geodes
- Quartz is the most common occurring as drusy or large defined crystals ranging in color from clear, green, smoky or pink.
- Calcite (occurs as common crystals, dogtooth and nailhead types with colors white, brown and rarely pink.)
- Chalcedony (a microcrystalline mineral ranging in color from gray, black, blue, orange, red and the rare green. Chalcedony also makes up the geodes outer shell
- Chalcopyrite (crystals range from bright gold to bronze.)
- Dolomite (pink, brown or buff saddle shaped crystals sometimes dominate the entire geode cavity.)
- Malachite (green inclusions and microscopic crystals.)
- Marcasite (occurs as masses of small crystals with a brassy or bronze color sometimes with a greenish tint.)
- Pyrite (occurs as reddish, gold or black cubic or capillary crystals.
- Some rare ones include Chlorite, Hematite, Smithsonite, Sphalerite

Graves Mountain Rock Swap and Dig

The Southeast Federation of Mineralogical Societies, Inc

Graves Mountain "Rock Swap and Dig"

8 am to 6 pm, Friday, October 7, 2005 8 am to 6 pm, Saturday, October 8, 2005 8 am to 6 pm, Sunday, October 9, 2005

MAGS is invited to field collect minerals at Georgia's premiere mineral location! The mountain will be open to collecting from 8 am to 6 pm each day. All participants must stop at the welcome table to sign a liability release and make a small contribution to defray the cost of opening the mountain and providing port-o-lets. There will be several golf cart type vehicles available to transport those participants who have trouble walking long distances. The dig will cease and everyone is expected to be off the mountain by around 6 pm each day. Participants will be allowed to park in a designated area on the mountain.

Rock Swap and Hot Food/Drinks: An area will be available in the upper parking lot for tables to be setup for a daily rock swap. Anyone who would like to setup a table(s), please contact the caretaker at the phone numbers listed below. Hot food cooked on the grill, cold drinks and chips will be available for purchase on the mountain during all three days of this event. Don't forget to bring some extra money to buy a special "Graves Mountain Rock Swap and Dig" T-shirt!

Contact Information: Clarence Norman Jr. • 706.359.3862 (his business) or 706.359.2381 (his home)

DIRECTIONS: From Atlanta's I-285, take I-20 east to the exit for Washington, GA SR 78 (SR 10, SR 17) and turn left. Travel north to Washington, turn right onto SR 378 and drive 11 miles to the Graves Mountain area. The entrance to Graves Mountain is on your right about 8/10 mile past the Lincoln county line sign. The entrance is a paved road that goes through a gate and up a hill. There will be some one at the gate to hand out a liability release form to sign and to take a donation for the portable bathrooms, etc.

Southeast Federation news



DMC program of the SFMS field trip committee An official field trip of Lowcountry Gem and Mineral Society 7am • October 15, 2005 • Harleyville, South Carolina

WHAT: Fossil Collecting Trip. This mine is primarily noted for its Eocene marine fossils including scallops, oysters, brachiopods, echinoids, shark teeth, ray teeth, etc.

WHERE: LaFarge Cement Quarry in the Harleyville/Holly Hill area, South Carolina

COLLECTING HOURS: Participants should start arriving at 7:00 A.M. to check-in, sign a release form, and receive a brief safety briefing. The dig will be from 7 A.M. to 12 Noon. There is no fee for this dig.

SPECIAL CONDITIONS: Because this is a working mine, safety is most important. Hard hats and safety glasses are required and will be supplied by the LaFarge mine. It is also recommended that you wear safety shoes (sturdy shoes), gloves, and appropriate outer clothing. Everyone must sign a release form prior to going into the mine. We will probably meet at our LaFarge Cement Quarry hosts "work trailer" to sign release forms and get a safety briefing before entering the mine.

WHAT TO BRING: Bring something to collect into, picks, hammers, small shovels, a bag lunch, and plenty of drinking water. If the weather is nice, we may be able to drive into the mine, otherwise we walk (approximately a quarter mile or more). Also, bring a lunch since there are no restaurants close by.

TRIP CONDITIONS: We will be limited to the first 50 for this field trip and there will possibly be other organizations collecting with us bringing the total to around 100 or more. LaFarge only opens up the mine to collectors once per quarter. Because of this condition, club Field Trip Chairman Mark Easterbrook will be the point of contact for both the mine and the DMC participants.

CONTACT INFORMATION: Mark Easterbrook - Email: asgardsgc@earthlink.net or mark. easterbrook@erm.com. Home Phone: (843) 552-1049; Cell Phone: (843) 276-4016

If you would like to attend this trip, please contact Mark by no later than October 9. If you send an email, please put "DMC October Trip" in the subject line, so he can expedite completion of the list of participants to provide to LaFarge. If there is a change in the number allowed or additional information provided, we will pass along a message for posting as soon as possible. The first 50 responders will be included on the signup list for the trip.

Field trips are open to all members of associated clubs of the DMC program of the SFMS Field Trip Committee and to all members of SFMS member clubs who have provided their membership with SFMS liability insurance. Because of insurance requirements, members of the GENERAL PUBLIC are NOT invited on this or any DMC program field trips!

SFMS Field Trip • Free Site • 8am until noon • October 8, 2005 Standard Mineral Company • Glendon, North Carolina

Collecting: pyrite cubes, pyrite cubes in matrix, green fluorite, and micro-minerals. The SFMS has been invited to visit one of the best field trip locales in the Southeast. If you have not been, you should not miss an opportunity to go to this quarry for quality specimen/cabinet grade pyrite. The Glendon pyrophylite mine is an open pit quarry that has produced many perfect pyrite crystals up to 4 inches on a side and 6 inches long!! Generally, you can find a cube approaching 2 inches or so and a bunch of others in all shapes and sizes up to one inch or more. You may also find small greenish blue fluorite crystals in crevices on some of the larger boulders strewn about the middle of the quarry floor.

DIRECTIONS: Take 1-85 North through Charolotte. Exit I-85 at Lexington on to US 64 and travel through Asheboro to SR 42. Turn right and follow SR 42 past Bennett and SSR 902. SR 42 makes a left towards Carbonton and Sanford. Before Carbonton there is a flashing yellow light @ SSR 1006. Turn right onto SSR 1006/ Glendon-Carthage road south to the mine on your left. Jim Flora-SFMS Field Trip Chair (sfms@amfed.org)

Upcoming shows and other events

October 6-8, 2005, Mount Ida, AR: 19th annual contest, "World Championship Quartz Crystal Digging Contest" Mount Ida Area Chamber of Commerce; Montgomery County Fairgrounds; Thu. 9-3, Fri. 9-3, Sat. 9-3; an international event, register ahead of time; contact Maureen Walther, (870) 867-2723; e-mail: director@mtidachamber.com

October 7-9, 2005, Dallas, NC: Gaston County Gem and Mineral Society • 27th Annual Gem and Mineral Show • Dallas park (Biggerstaff Park), right off Hwy 321, Hwy 279-Dallas Cherryville Highway • Hours: 7th and 8th, 9:00 A.M.-6:00 P.M.; 9th, 10:00 A.M.-5:00 P.M.

October 14-16, 2005, Knoxville, TN: Knoxville Gem and Mineral Society • 15th Annual Gem, Mineral and Jewelry Show • Kerbela Temple at 315 Mimosa Avenue • Hours: 21st and 22nd, 10:00 A.M.-6:00 P.M.; 23rd, 11:00 A.M.-5:00 P.M. • Contacts: Travis Paris at 865.691.8228 and Eileen Price at 865.694.4071.

October 14-16, 2005, Huntsville, AL: Huntsville Gem and Mineral Society; 37th Annual Show; Von Braun Center, 700 Monroe Street SW - Hours: 14th and 15th, 10:00 A.M.-6:00 P.M.; 16th, 12:00 P.M.- 5:00P.M.. Contact: Debora Little, (256)880-2291; Featuring the rock food table, gold/silver jewelry, crystals, minerals, fossils, lapidary, children's gem dig, mining flume (panning for minerals), mineral displays and more. \$2 donation/person, children under 5 free. Non-profit Educational Organization.

November 4-6, 2005, Reidsville, NC: Rockingham County Mineral Club • 14th Annual Show • Wentworth Recreation Center, intersection of Gibbs Road and Hwy 87 • Hours: 4th and 5th, 10:00 A.M.-6:00 P.M.; 6th, 12:00 Noon-5:00 P.M. • Contact: Iris Conner at 336.342.3958.

November 5-6, 2005, Winter Haven, FL: Imperial Bone Valley Gem, Mineral and Fossil Society • Gem, Mineral and Fossil Extravaganza! • The Nora Mayo Hall, 500 3rd Street NW • Hours: 5th, 9:00 A.M.-5:00 P.M.; 6th, 10:00 A.M.-4:00 P.M. • Show contact: Susie Percefull, Show Chair at 863.858.1846 or Misubrea@aol. com.

August 2005 board meeting notes

Susan Thom, MAGS Secretary

The MAGS board of directors met on August 4, 2005 at the Blue Plate Café, 5469 Poplar Avenue, presided by Lou White who opened the meeting at 6:30 p.m. The minutes from the Board and Membership meetings were presented, seconded, and approved. In attendance were: Mike and Sherri Baldwin, James Butchko, Melba Cole, Sherida Helms, Terri and Park Noyes, Raynee Randolph, Susan Thom, and Lou White. Reports presented were: (1) Treasurer--Lou White presented treasurer's report for Cornelia McDaniel. (2) Field Trips--September to Turkey Creek near Eupora, Mississippi to collect marcasite specimens. In October, hopefully Blackrock trip, and in November, Vulcan Quarry. (3) August Program--4th annual indoor rock swap and annual potluck! No business meeting. (4) August Youth--No youth meeting so all can enjoy potluck and rock swap. In July kids learned fun Safety sayings like "red on black, friend of jack" (snakes) and "leaves of three, let them be" (poison ivy). For September program, Mike Baldwin will give In-dian Lore program with Park Noyes. (5) Library--Will not be open during August meeting. (6) Web/Editor--No report. (7) Sunshine Report--Sympathy goes out to Thomas family; Susan's father, Al Klug passed away. Good news!--Roger Van Cleef is doing well. (8) Membership--Two new applications were presented, seconded, and approved--Barry and Joanne Gilmore and David and Linda Waddell. (9) Show--Barry Burns will audit show books. James Butchko will begin committee formation for next show. (10) Old Business--None. (11) New Business--In September DMC will sponsor geode field trip near Murfreesboro, TN. Meeting adjourned at 7:15 p.m.

August 2005 membership meeting notes

Susan Thom

The MAGS August membership meeting was held at Shady Grove Presbyterian Church on August 12, 2005, presided by W.C. McDaniel. There were 60 members and 4 visitors--Vicky and David Hines, Mary Enders, and Katey Jo Henry. No air conditioning-it was warm! (1) Pink Palace behind the scenes tour with Ron Brister--Saturday at 10 a.m. and Sunday at 1 p.m.; meet in lobby. There is a long waiting list. If you signed up, make sure you can attend or allow someone else to go in your place. Another tour may be scheduled later in the year. (2) David McIllwain will lead field trip to Turkey Creek in Mississippi, next Saturday 8/21. (3) DMC will sponsor trip to Woodbury in September. Many people won door prizes at the 4th Annual Indoor Rock Swap and Picnic. Lots of good specimens to swap or buy and to bid on at silent auction. The food was delicious! Meeting adjourned at 8 p.m. with potluck and rock swap to follow.

Geodes << continued from page one <<

rock with a hollow or partially hollow inside and with the interior crystals pointing inward. Most of the crystals will be quartz. In addition, the geode may, depending on its location, have other minerals such as calcite, chalcedony, and many other minerals in varying concentration.

.....

Other rocks that sometimes are described as geodes include nodules and concretions. A nodule in all appearances looks like a geode. The major difference is that nodules are essentially solid on the inside, lacking any hollow space. Depending on the location, it is not uncommon to find nodules and geodes occupying the same area, may look identical, yet when opened one will be essentially a solid mass while the others may be hollow with crystals. One theory is that these geodes were once solid nodules and over time eroded out to produce the crystals. Some of the most well known nodules are thunderheads. Concretions are formed by the deposition of distinct minerals, different from the surround-ing rock, very firmly cemented around a nucleus. They are generally lens shaped.

How geodes are formed?

One writer of an article speculated that there were as many theories about the formation of geodes as there are places to find geodes. The following bulleted points are a summary of some of those theories:

>> see Geodes on page nine >>

Geodes << continued from page eight <<

- Geodes form in any cavity that is buried, which can be bubbles in volcanic rocks, pockets under tree roots, or even animal burrows. Over time, the external wall of the cavity hardens, and the dissolved silicates and/or calcites are deposited on the inside surface. This slow feed of minerals allows crystals to form inside the hollow chamber. Then, over millions of years, the geode makes its way back to the surface through normal geologic processes.
- Geodes initially formed in a shallow-burial environment as nodules of anhydrite, which later altered to calcite and/or silica.
- Geodes were originally nodules of limestone or anhydrite formed within a soft sediment by concentric outward
 growth around small nucleus or core. The interior of the concretion washed out, causing a hollow groundwater
 solution that left behind a replacement of the geode walls & the crystals inside.

Where Can You Find Geodes?

Geodes are found throughout the world. The most concentrated areas are located in the deserts, volcanic ash beds, or regions containing limestone, are common geode locations. Some of the areas in the midwest and south include Middle Tennessee extending up to Kentucky and the Keokuk, Iowa area. In addition, geodes are occasionally found in gravel deposits. The Keokuk and Tennessee/Kentucky geodes are found in limestone and in the Salem and Warsaw formations. Keokuk Geodes are some the best known and collected geodes. They are found within a 45 mile radius of Keokuk, Iowa at the confluence of the Mississippi and Des Moines Rivers. These geodes have well defined and sparkling interiors. While quartz is the most prevalent mineral, an additional 18 minerals have been identified as occurring in the Keokuk geodes. The Tennessee/Kentucky geodes have similar appearances and mineral concretions. Many nodules are also found among the Tennessee/Kentucky geodes.

How do you check out the inside of a geode?

The lure to see inside a geode is strong and irresistible. In order to do that you must find a way to see inside without damaging the geode. The first thing you should do is try to determine if the rock is hollow or solid. The most basic step is by weight. A hollow or partially hollow geode will most likely weigh less that what it should based on the size of the rock. This is especially true when you have several rocks to compare. A sure fire, easy way is to shake it and if you hear a rattle, you've got a geode. The noise is most likely a loose crystal. So, you have determined it is a geode and you've got to get inside. There are several ways that include using a geode



cracker, rock saw or a hammer/chisel. A geode cracker is usually referred to a tool that will let you crack the geode. The most common and effective is a pipe cutter that has a chain that is wrapped around the geode and you exert a moderate degree of pressure on the handles until you hear the cracking sound. This method usually produces a fairly clean break of the geode into two pieces. It rarely damages the interior structure. It also has a natural and appealing appearance. A rock saw is also used, although many people are reluctant to use an expensive diamond blade due to the tendency that some loose crystals may pop loose and ruin your blade. The breaking of a geode with a hammer and/or chisel is precarious and should be avoided if at all possible. This method will most likely produce a shattering of the geode into multiple pieces and you will lose all semblance that it was a geode. If you must do this be sure to wrap the geode in a cloth before smashing it and wear eye protection.

The lure, uniqueness and beauty of geodes will insure that they will maintain a strong presence and interest for rockhounds.

RESOURCES: www.geodegallery.com, www.alicatsrocks.com and www.rocksforkids.com. Information used for educational purposes under the provisions of the Fair Use Act of 1976. This poem was written by our very own Tracy Motter. It recently won first place in the Midwest Federation and an honorable mention in the American Federation.



Be it big or be it small, A Geode's bountys' worth it all, One never knows what surprise it may hold, And how they're formed the earth has never told, From Quartz to Calcite, Gypsum to Pyrite, Each specimen offers a different delight

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The main purpose of Memphis Archaeological and Geological Society is to promote and advance the knowledge of the Lapidary Sciences in the mining, identifi¹⁰



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