

Rock Hound Kids



Quarry

The Place for Kids
who love Rocks!

Newsletter



Pebbles

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My Visit to Mammoth Cave

This summer for my birthday, we went on a vacation to Mammoth Cave National Park in Cave City, Kentucky. We had a lot of fun and even took our dog Dingo with us. He had a blast trying to chase all the squirrels in the park, and going on walks with us on the many trails through the park. While Dingo had fun with the squirrels, I was jumping for joy. Every where I turned there were either rocks or signs pointing to places to buy rocks, people were even selling rocks and geodes on their front lawn!

Cave City as the name entails, has lots and lots of caves. There are signs on every street corner trying to get you to visit Bob's Cave and such. Well, ok, not on every corner, and I don't think that there is a Bob's Cave, but that is what it seems like. Even though there are many caves in the area, most people who come to Cave City are only there to visit one very special cave.

Authorized as a national park in 1926 it was not fully established until 1941. Back then, only 40 miles of passageways had been mapped of Mammoth Cave. I say back then, because now 350 miles have been surveyed and many geologists estimate that there may be as much as 600 miles of passageways yet to be explored. Because of its length Mammoth Cave has earned the title of being the longest cave system in the world, a part of the reason it gets its "mammoth" name. Though large, Mammoth Cave doesn't have much else. I had been excited about seeing all sorts of cool formations, like stalagmites and cave bacon, but Mammoth Cave has only a few of these things.

The reason Mammoth Cave doesn't have a lot of cave formations is because of the rocks that make up the ceiling. If the ceiling is made of shale, few formations will form because it prevents the ceiling from leakage and from collapsing. I visited Diamond Caverns, and it had many formations because the majority of its ceiling is made of sandstone, which allows water to pass through it, depositing the minerals it contained in the process forming stalagmites and such. So, if you want to see more formations, Mammoth Cave might not be the cave for you. But I had a lot of fun, though I was a bit bothered by the stairs and heights of the cave and I'm sure that any of you rock hound kids would enjoy visiting Cave City and Mammoth Cave National Park.

*This article was written by
Jessy Chekal*



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Mammoth Cave and Diamond Caverns Photos

I was going to put the article and the photos together but I didn't have room so I hope you don't mind a whole page of them instead.



The sign to the Mammoth Cave park.



A pile of REALLY big rocks, and I mean big.

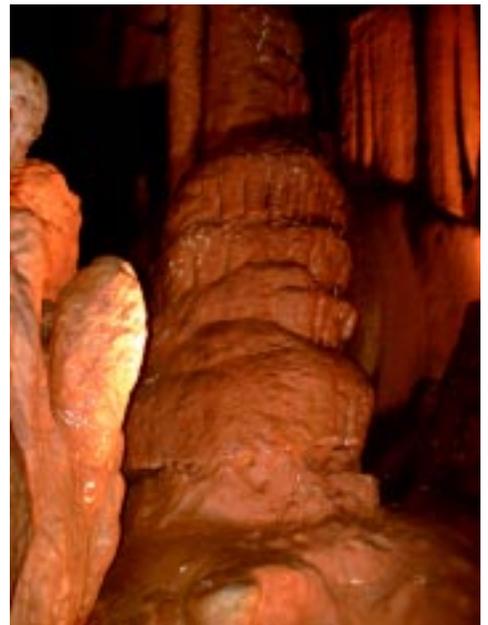


Above: Some hanging cave bacon.

Below: A display at the closest store to the park.



*Above: An altar made of cave rocks. Some people actually got married there!
Right: A large column.*



Rock of the Month

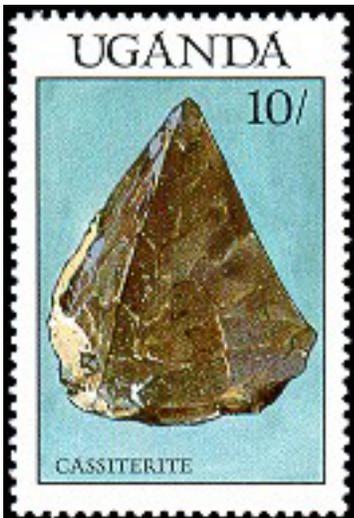
Cassiterite



Chemical Composition: SnO₂

Hardness: 6-7

Cassiterite is the main ore of the metal tin. It is black to brown in color, and is also known to be red-orange and yellow. Cassiterite may be a metal ore, but it is unusual because it often doesn't look like one. Crystals are translucent and shiny, not metallic like most metal ores. In fact cassiterite is regarded by jewelers as a semiprecious gemstone, prized for its hardness and ability to hold a good polish. However, most cassiterite gems have flaws that affect their color, and thus their price.



Cassiterite takes its name from many sources, including the Greek word for tin and the term "cassiterides" which was a name given to the British isles in pre-Roman times. Tin mixes nicely with other metals to form alloys, copper and tin make bronze, while lead and tin form pewter. It was this discovery made by ancient people that started the bronze age of history, changing the way the world worked.

Most cassiterite is found in Llallagua, Bolivia, and Cornwall, England. Until the 19th-century, these areas were the most important sources of the metal, with mines that had been operating for thousands of years. Today, west Africa and southeast Asia supply most of the world's tin. It

is mined from clastic sedimentary deposits, but that isn't where cassiterite forms. This mineral forms in very hot hydrothermal veins, as well as in metamorphic rocks.

Did you know???

When pure tin is bent rapidly, it makes a peculiar squealing noise called the "tin cry".





Ask Jessy

QUESTIONS ABOUT GEOLOGY

Send your questions about geology, rocks, minerals and collecting to Jessy and she'll pick one or two questions a month to answer for you!

Email Jessy Questions at Jessy@Rockhoundkids.com



Sherri of Michigan was wondering "Jessy, who made the hardness scale, and why do we need it anyway?"

The Mohs Hardness scale was devised by the French geologist, Friedrich Mohs, in 1812. It works by having ten minerals in a list from softest to hardest which you test other minerals against. So, let's say you have a mineral, but you don't know what it is. By using the scale you can find out its hardness helping you identify it and, here's how it works. Your mineral can scratch the mineral calcite which is number 3 on the scale meaning that it is harder than it, while fluorite which is number 4 on the scale can scratch your mystery mineral, so your mineral would be 3.5 on the scale.

This is only one way to help identify a mineral, you have to take into account the other physical properties of a mineral like luster and shape. Hardness is the easiest to use because most specimens of the same mineral will have the same hardness no matter where it comes from. Even though this is a wonderful system, you should know that the Mohs Scale is strictly relative and not absolute. What that means is that fluorite at 4 is not twice as hard as gypsum at 2; nor is the difference between calcite and fluorite similar to the difference between corundum and diamond. They have sensitive equipment that can find the absolute hardness of a mineral, but it's easier to remember and use the Mohs Hardness Scale. Here is the two scales, Mohs and Absolute, so you can see the difference between them.

Mohs

1. talc
2. gypsum
3. calcite
4. fluorite
5. apatite
6. orthoclase
7. quartz
8. topaz
9. corundum
10. diamond

Absolute

- talc - 1
- gypsum - 3
- calcite - 9
- fluorite - 21
- apatite - 48
- orthoclase - 72
- quartz - 100
- topaz - 200
- corundum - 400
- diamond - 1600

Mohs Hardness Scale



So, I hope that I have answered your questions, if not please tell me and I'll see what I can do.

Email Jessy Questions at
Jessy@Rockhoundkids.com

What's the difference?

So, you're asking yourself, what the heck is the difference between a cavity, a vug, a geode, or a nodule? Well here's your answer!

A cavity is defined as any open space in rock. It does not matter what is in it. ALL open spaces in rocks are cavities.

So what's a vug? A vug is a cavity but one that has crystals growing inside of it. If there's no crystal, then it can't be called a vug. It HAS to be crystallized in order for it to be called a vug. All vugs are cavities but not all cavities are vugs!

So then, what's a geode? Well, a geode is special type of vug which is first lined with a layer of the chalcedony variation of quartz (commonly known as agate). Then, the crystals grow on top of the chalcedony but they MAY OR MAY NOT be recognizable. Point is, if there is no chalcedony, then it can never be a geode!

And last but not least, what's a nodule? A nodule is a cavity that is completely filled with chalcedony. There may be crystals that are not recognizable. A common example is a Thunder Egg.

I hope this helps clarify all the confusion on which is which.

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A dugout geode.



A rhodocrosite vug.



Two halves of a quartz geode.



A vug by the Red Cloud Mine.

Cool Web Links



www.nps.gov/macaca

Being the official site of Mammoth Cave National Park, it has lots of info about the cave and lots of ideas to help you plan a trip there. The section labeled nature and science doesn't have much about geology, (too bad) but it does have some interesting facts about other things. Also, it has a frequently asked questions page, and a photo and multimedia gallery.

www.diamondcaverns.com

This is a very nicely done site. Now this web site does talk about the geology behind the forming of the cave, as well as info on how and who found the cave. It also has some nice pictures. They think that Diamond Caverns might be connected to Mammoth Cave, but they're not sure.

www.caves.org

The National Speleological Society finds its home here. There is a lot of info on every thing about caves. They have Awesome pictures, sound recordings, a forum and more.

www.goodearthgraphics.com

This will take you to the Virtual Cave, a neat part of the site about caves including really cool pictures. The rest of the site deals more with a business for creating sites. But when going to the home page and to the category, images, look around a bit and you may find more interesting pictures too.

www.rockngem.com

One of my favorite rock magazines is the Rock'n'Gem. The site about it is cool too, you can submit a design to the many facets column or enter the craftsman of the month. Not only about rocks, it also has lots of articles on lapidary and jewel crafting. You can also check out older issues of the magazine as well.

If there are any websites you feel should be mentioned send them into

SubmitALink@Rockhoundkids.com

TheHomeschoolshop.com

Brings to you

Shell Study Kit

My little sister just started a new company at naturestudykits.com and I wanted you all to know.

Dream Cove brings you 15 lovely specimens to examine, a booklet on collecting and basic study ideas, a common name collecting chart, a beautiful mystery shell to identify and a "mermaid's purse" of goodies to drift through and share with others.



To find out more about it [Click Here](#)

Check out my brand new Blog!!! www.rockhoundkids.wordpress.com