

Join Raynee Randolph
and Sherida Helms
as we explore
"Minerals in the Home"



Rockhound Blues

By Rhena A. V. South

Rockhound, Rockhound,

we work all day.

Finding, carrying, studying rocks!

Well, here is what we say!

Quartz, Citrine, etc. We just love rocks.

They are cool. So don't be a fool.

We don't ever want to be rocked out.

Brother and Sister

By Rhena A. V. South

Amethyst, Amethyst, we are dancing.

Looking for it. It is so purple.

Apply some heat. Ka-boom!

Citrine appears.

They are brother and sister.

Wow, I like rocks!

MAGS Explorer is published monthly by and for the youth members of the Memphis Archaeological and Geological Society. Please send your comments and articles to Editor Mike Baldwin, 367 N. Main St., Collierville, TN 38017 or rockclub@earthlink.net. Youth can give articles, artwork, poems, puzzles, experiments, or stories to Raynee Randolph or Sherida Helms.

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Everything is made from something

If you can see it, touch it, taste it, smell it, or hear it,
it's from our natural resources.

Rocks in your mouth

The minerals found in toothpaste clean your teeth and keep them healthy. The cleaning is done with abrasives (from rocks) that rub the plaque away. Abrasives are minerals like silica, limestone, aluminum oxide (also used in sandpaper) and various phosphate minerals.

Fluoride, used to reduce cavities, comes from a mineral called fluorite. It is sometimes changed into stannous fluoride (tin fluoride). In 1945, research began on the benefits of fluoride in preventing tooth decay. Today, researchers attribute up to a 40% reduction in cavities to water fluoridation.

Most toothpaste is made white with titanium dioxide (also found in the creamy center of Oreo cookies). Titanium dioxide come from minerals called rutile, ilmenite, and anatase. Titanium oxide is also used to make white paint.

The sparkles in some toothpaste come from mica, a mineral common in many rocks. The toothbrush and tube holding your toothpaste are both made of plastics that come from petroleum (petrochemicals) and other minerals.

Today, more than 150,000 US dentists use about 13 tons of gold each year (more than 70 pounds every day) for crowns, bridges, inlays and dentures. A typical crown may contain between 62% and 78% gold.

In the olden days . . .

- Toothbrush was wool moistened with honey or a twig with the end smashed and softened first by biting on it.
- Toothpaste was powdered bones of mice.
- Toothpicks were porcupine quills.
- Teeth didn't last very long

Reference: [A Brighter Smile From Mining](#); Mineral Information Institute; Denver, Colorado; www.mii.org; 09 February 05.

Obsidian

By Rhena A. V. South

My Aunt Betty and Mr. Bill live in Washington. They know that I like rocks. They sent me some obsidian from the Cascade Mountains. The Cascade Mountains are a range of volcanic mountains that run North to South across Washington State, Oregon and the northern portion of California. It includes Mt. Baker, Glacier Peak, Mt. Rainier, Mt. Washington, Mt. Adams, Mt. St. Helens, Mt. Hood, Mt. Shasta and many others.

Obsidian is a natural volcanic glass and is not a mineral. It is formed when lava cools very quickly. On the Mohs hardness scale it is a 7. It can be black, blue, mahogany, golden and peacock. The most common color is black. Since it is a type of glass it has no crystal structure like quartz. Because of this when it breaks it will make sharp edges. Native Americans used obsidian to make weapons and tools.

<http://geology.about.com/library/bl/images/blobsidian.htm>

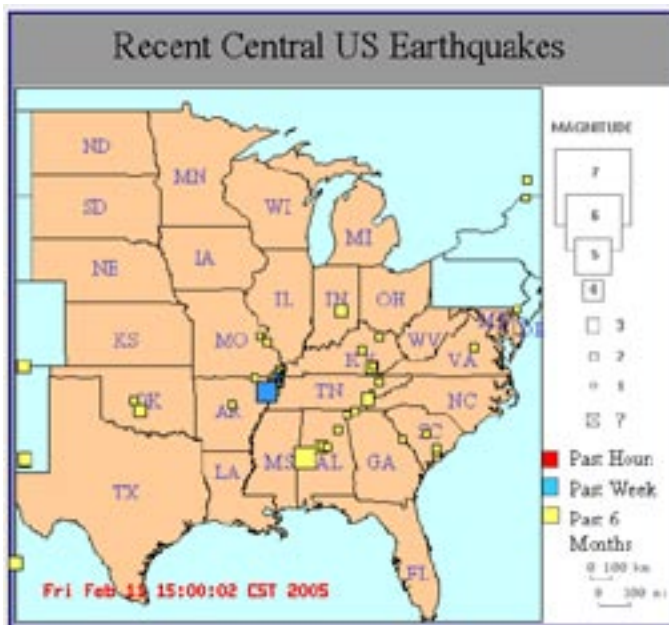
http://www.unconventionallapidarist.com/Stone_Information_Obsidian-p-1-c-582.html

Did You Feel the Earthquake?

By Mike Baldwin

Did you feel the earthquake on Thursday, February 10, 2005? I did! I work at International Paper on Poplar Avenue, near I-240 in Memphis. At about 8:05 this past Thursday I was working at my desk, when I felt the arms of my chair vibrating beneath my elbows. It didn't last very long--just about three seconds--but I could tell it was not normal. I went next door to one of my fellow workers and asked if she had felt the tremor. She did not, but in just a few minutes, I got a call from my wife and an email from a friend, both telling me that there had just been a 4.0 earthquake near Jonesboro, Arkansas. That was the one I felt.

I went online to the University of Memphis Earthquake Center, and they already had a map like the one shown here posted on their homepage. I even got to fill out a form, telling them that I had felt the quake. The Earthquake Center uses information from people like you and me to help determine how an earthquake affects our area.



This map is from the University of Memphis' Earthquake Center website. Check the site often for the latest earthquake information. <http://folkworm.ceri.memphis.edu/recenteqs/>

The earthquakes displayed on this map were detected and located by the combined seismographic networks of the U.S. Geological Survey, National Seismic Network and University of Memphis, CERl Seismic Network; the Saint Louis University Earthquake Center the South Carolina Seismic Network and other participants in the Advanced National Seismic System-Central and Southeast Region.

Seismic signals are sent in real-time by radio and land lines from over 600 remote seismic stations in the region to one or more of the four centers. Real-time computer systems at each center continuously monitor the Earth for the occurrence of earthquakes. For information about earthquakes, visit <http://folkworm.ceri.memphis.edu/>