

# CRYSTAL CAVE

## Wisconsin's Longest Show Cave Educational Program

### Make Your Own Volcano!

#### You will need:

- ~ Sand or soil
- ~ 1/2 cup vinegar
- ~ Large tub – or do this outside!
- ~ 3 tablespoons dishwashing liquid
- ~ Several drops red food coloring
- ~ Jar/bottle with thin neck
- ~ 1/2 cup baking soda



#### Directions:

Put the baking soda in the jar and add the dishwashing liquid. Place the jar in the middle of the tub. Pile sand or soil around it to make a volcano shape. Mix the food coloring with the vinegar. Pour this into the jar.

#### It's an eruption!

Real volcanoes are not made from baking soda and vinegar! However the principle is similar: liquid is being pushed out of a confined space under pressure. Volcanic rock such as lava from a volcano is very hard rock. It has become liquid as a result of the melting of rocks below the Earth's surface. Volcanic rocks such as basalt are called igneous rock, formed when melted minerals cool down and harden. Granite is the most common igneous rock but does not erupt onto the earth's surface like lava - instead it rises upward in the earth and cools before it reaches the surface. It is very hard and where erosion has worn away the overlying rocks it can be quarried and used for buildings and for monuments and gravestones. It is a gray or pink colored rock with large crystals formed as the rock cooled slowly.

#### Is there a volcano nearby?

Take a wander around your neighborhood with an adult and look at what the houses are made from. Old houses are the best. It is likely that in order to save money transporting stone around the country they were built from stone found not too far away. It is common in Scotland to find that special buildings such as churches, old schools and other public buildings are built from local sandstone (usually red or off white) or granite (gray or pink). Modern houses are more often built with brick and concrete.

Take a magnifying glass and have a close look at the building stone, some will have small sandy grains and others larger crystals. Some may have interesting patterns - if you take a rubbing using paper and crayons you may be able to see patterns in the rock - all these clues tell us about how the rock was made.