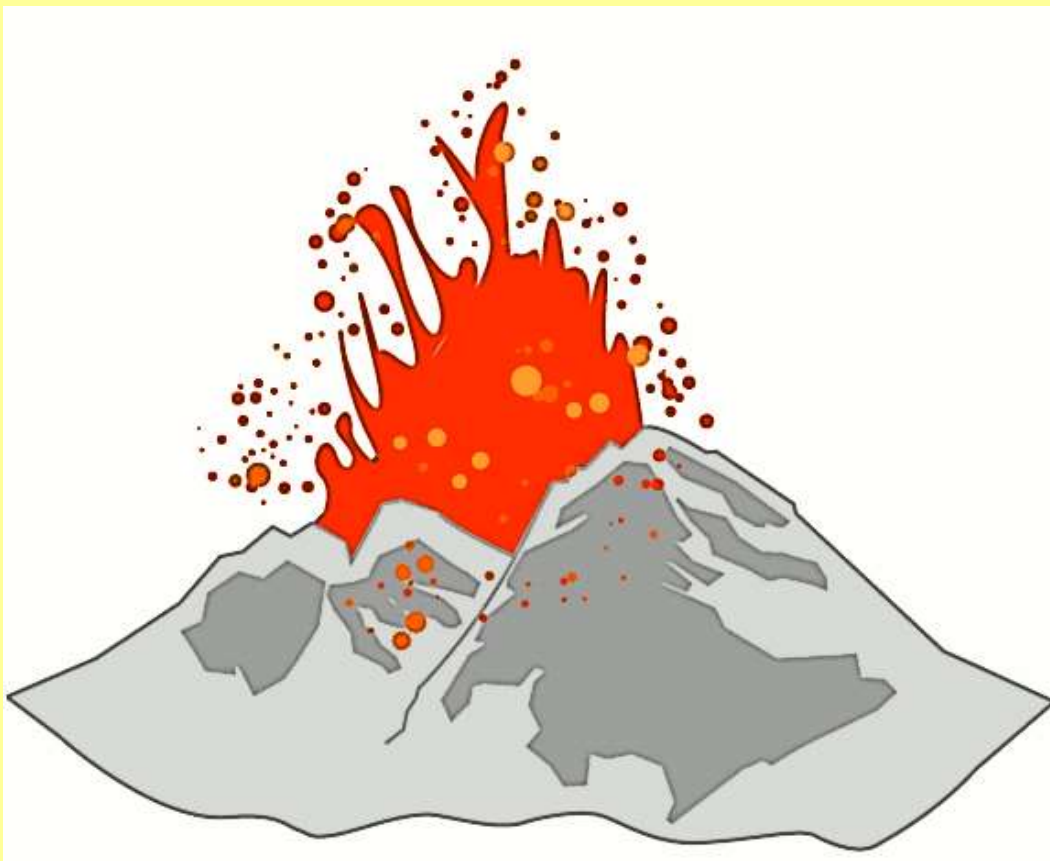


Volcano Cake and Be a Volcano Movement Activity



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Volcano Cake and Be a Volcano Movement Activity

Have you ever made an erupting volcano cake in science class? Here are directions if you would like to try. This cake has become very popular with young students. Don't be surprised if they ask to do this activity again and again!

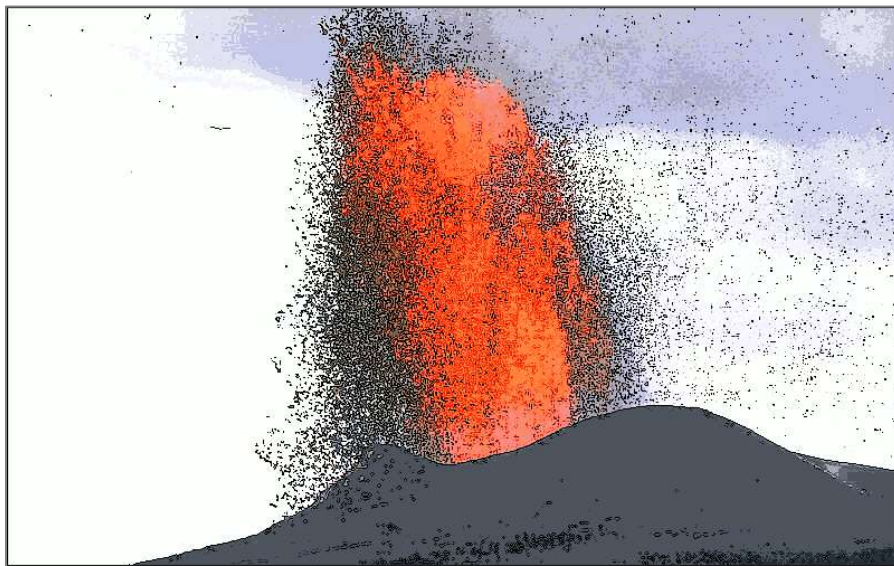
This file includes 2 sets of directions for making a volcano cake.

- The 1st set of directions includes using dry ice.
- The 2nd set of directions is for making a volcano cake without the dry ice.

Also included is a movement activity where children will pretend that they are a volcano and a volcano coloring page.

The volcano cake starts out as a plain Bundt cake (either homemade or purchased at a store). With the addition of 'special' ingredients it becomes an edible erupting volcano cake to be shared with your students.

This cake can be used at the end of a science unit as a culminating activity or as a special occasion cake for special days, etc.



VOLCANO CAKE - Dry Ice Version

It's Lava Time! Experiment with dry ice gases and create your own geologic snack!

Dry Ice Safety

CAUTION! Be careful handling and using DRY ICE!

Do not **HANDLE** with your bare hands, because the dry ice can cause "burns" or "frostbite" to the skin. The dry ice is -114 degrees Fahrenheit and is made from frozen carbon dioxide. Your refrigerator ice is 32 degrees Fahrenheit and is made from frozen water, hydrogen and oxygen. Prevent touching the skin by using cloth gloves.

Do Not **TASTE** or put it into your mouth!

Provide adequate ventilation because dry ice is frozen carbon dioxide.

Use a wooden cutting board to protect counter tops.

Do not use glass punch bowls always use plastic containers.



Be aware that sealed lids of containers can cause the gases in your containers to pop off!
Always, **DO NOT** leave the dry ice unattended around children!

After all this...despite all of the caution... **DRY ICE** is exciting for preschool to adults!!!!

VOLCANO CAKE RECIPE

Using a **BUNDT CAKE** or a cake with a hole in the middle, a pudding cake works well!

Place the cake on a large tray.

Put a plastic cup in the center of the cake.

ADD to the plastic cup:

- 3/4 cup hot water
- 1/4 cup of lemon juice
- 1/2 package of red jello (dry jello)

STIR ingredients

Then ADD small chunks of the dry ice and **OBSERVE** your cake steam and bubble like a volcano!

If you want your cake to continue **STEAMING & BUBBLING**,
add more hot water, lemon juice and/or more **DRY ICE**.

Do not allow any dry ice to land on the cake! Remember the dry ice is not edible!!!!
The cake may be messy but... so much **FUN!**

Science Facts:

Hot water reacts with the **cold** dry ice. As more steam forms, red bubbles appear like lava.

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Volcano Cake – Without Dry Ice Version

Materials:

- Bundt-shaped cake
- Small box of Jell-O (red makes a nice lava color)
- Small bowl for mixing the Jell-O
- Water
- Small bottle of lemon juice
- Small plastic cup that fits snugly in the center hole of the cake
- Baking soda
- Spoon
- Tray for the cake large enough to also hold the lava



Directions:

- 1.) Pour the Jell-O into a small bowl of hot water and stir until it dissolves.
- 2.) Place the plastic cup in the center of the cake. Make sure the cup fits snugly in the center hole or use foil to make the lip of the plastic cup flush with the top of the cake.
- 3.) Pour the Jell-O mixture into the plastic cup in the center of the cake until the cup is about half-full.
- 4.) Pour lemon juice into the plastic cup until it is almost full or about a half-inch from the top.
- 5.) **Are you ready?** Add 1 tablespoon of baking soda to the plastic cup and stir for a couple of seconds. **OBSERVE:** Do you have an **OOZING** volcano or an **EXPLODING** volcano?

Science Facts:

The lemon juice is an acid that reacts with the baking soda which is a base to produce carbon dioxide gas (CO_2). As the gas forms, it expands and pushes the Jell-O and lemon juice out of the plastic cup. The mix of gas and liquid produces the red foam, which looks like lava from an active volcano!

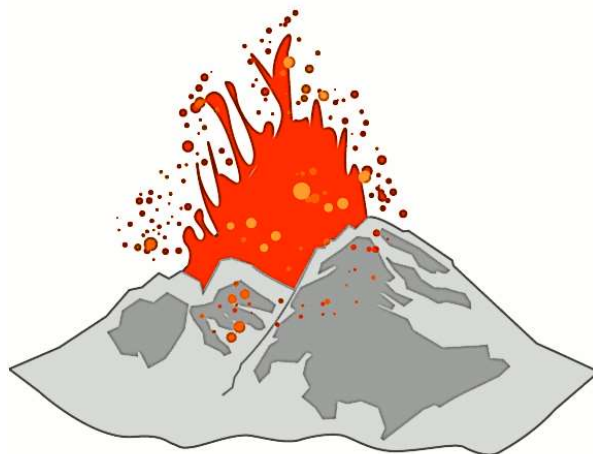
Another common volcanic eruption uses vinegar (an acid) with baking soda (a base). The lemon juice tastes better on a cake!

"Be the Volcano" Movement Activity for Pre-K to Primary Grades

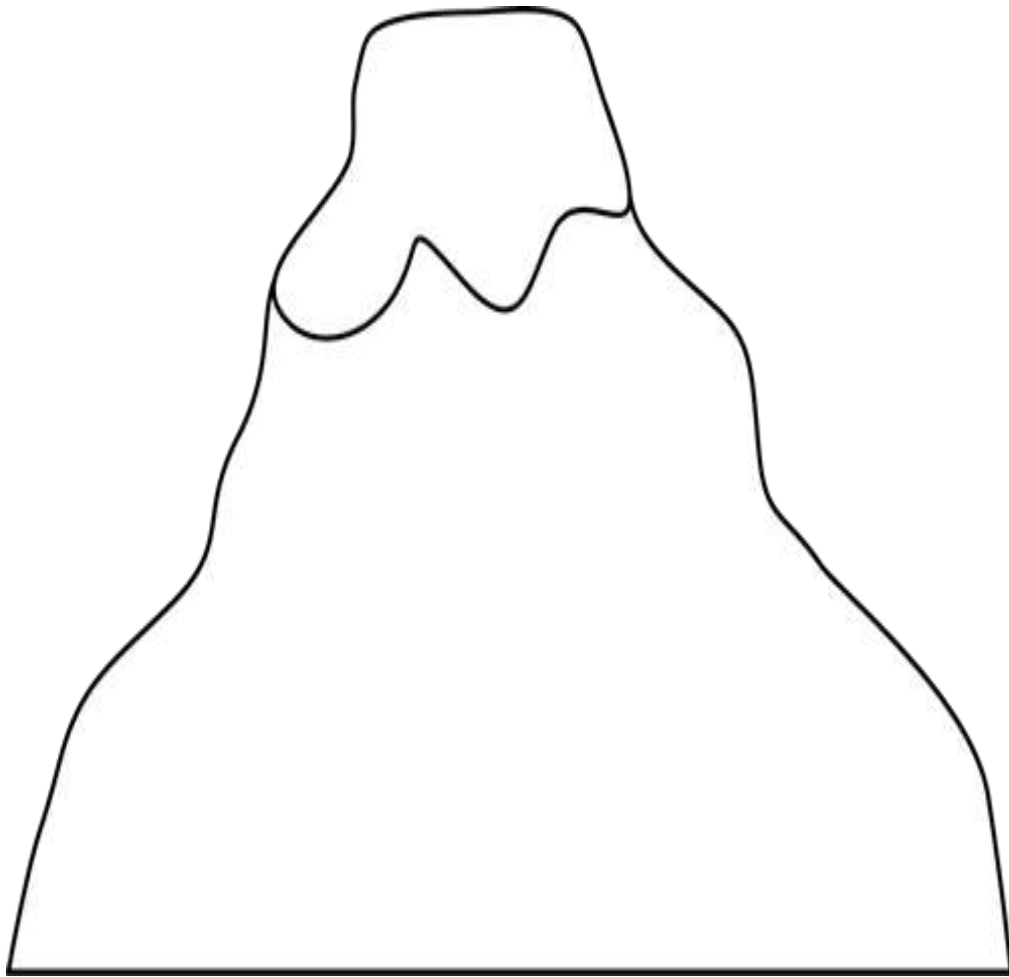
Think and Act like a scientist who knows the stages of a volcano eruption!

- Hold your arms in the shape of a mountain VOLCANO.
- Shake your body to pretend to be an EARTHQUAKE.
- Next pretend to be STEAM by using your arms coming out of the top of your head.
- Then ROCKS come out, hold your hands in a fist coming out of your head.
- Then comes LAVA, move like molten (melted) rock as it comes out of the top of your head by moving your hands in a zigzagging motion from side-to side.
- Then comes the MUD movement ... Move your hands back and forth slowly. If you lived near Mt. St. Helen mud would fill your house!
- Then comes the EXPLOSION – (the pyro-clastic flow). Be careful not to hurt your friends! ... as you explode!!!!

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Volcano



Name _____

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