

Play-Doh Venus Volcanos

Volcanic features are abundant on Venus. They include wide lava plains made from “lava flows,” lava channels, and several different types of volcanos. Scientists suspect that some volcanos are still active; however, clouds from volcanic eruptions cannot be seen with our instruments. Scientists examine the volcanic features using radar maps of the surface; the low amount of erosion and the few craters suggest that many of these volcanos are young.

Get ready to get messy! In this activity, you and your child are going to make lava flows on Venus!

What You Need:

- ✘ Cardboard dinner plate
- ✘ 3 balls of Play-Doh, each a different color and each about the size of your child’s fist
- ✘ Empty small cup with the upper half cut off, or soda bottle cap
- ✘ 2 teaspoons baking soda
- ✘ ½ cup of vinegar
- ✘ Paper towels
- ✘ Tape or glue
- ✘ Scissors
- ✘ Crayons
- ✘ Clear plastic straws
- ✘ Images of volcanos on Venus



What to Do:

- ✘ Tape the small, empty cup in the middle of the plate to represent the caldera (central depression where magma erupts). Make sure the cup opens upward and is taped securely.
- ✘ Pour a very small amount of baking soda into the cup.
- ✘ Time for the eruption! Add a small amount of vinegar to the baking soda – this will react with the baking soda and cause it to fizz and flow out of the caldera.
- ✘ Mark the edges of the “lava flow” on the plate with a crayon, then, use a paper towel to wipe up the vinegar.
- ✘ Next, put a thin layer of Play-Doh completely covering the area that the “lava flow” covered. This is your first (and oldest) lava flow.
- ✘ Repeat the above steps to create more lava flows using different colors of Play-Doh.
- ✘ When your child is finished, invite them to sample the layers. Have them “core” the volcano layers using the clear plastic straw.

Parent Prompts:

Which lava flow is the oldest – happened first? Youngest? How do you know?

Did the flows occur with one perfectly on top of the other?

How do earlier flows affect where later flows go?