

Day 3 Experiment

Mini Volcanoes

Materials for Building Volcano

- 16 oz. clear plastic cups, 2 per child
- 8 oz. water bottles (with caps), 1 per child
- Volcano Mountain Face pattern
- Brown or tan cardstock, 1 sheet for every 2 children
- Red Lava pattern
- Red cardstock, 1 sheet for every 2 children
- Yellow Lava pattern
- Yellow cardstock, 1 sheet for every 3 children
- Erupting Volcano Directions pattern
- White cardstock, 1 sheet for every 6 children
- 1 Flood Legend card per child (11-4-079)—Africa

Materials for Erupting Volcano

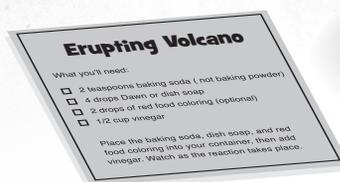
- Baking soda, 2 tsp. per volcano
- Dawn dish soap, 4 drops per volcano
- Red food coloring, 2 drops per volcano
- Vinegar, ½ cup per volcano

Tools and Basic Supplies

- Power drill (with 1-in. bit)
- Office paper cutter
- Glue sticks
- Scissors
- Funnels

Pre-Prep

1. Using a power drill with a 1-in. bit, drill a hole in the bottom of each plastic cup, 2 cups per child.
2. Remove the caps from the 8 oz. bottles. Then take each bottle and push or screw the nozzle all the way up through the hole in an upside-down cup. The necks of the bottles should be touching (or almost touching) the bottoms of the cups. (You may need to take some scissors and make 2 or 3 perpendicular cuts in the rims



of the holes to get the nozzles all the way through.) Then replace the caps.

3. Photocopy the Volcano Mountain Face pattern onto brown or tan cardstock and cut out the pieces, one per child.
4. Photocopy the Red Lava pattern onto red cardstock and cut out the pieces, one per child.
5. Photocopy the Yellow Lava pattern onto yellow cardstock and cut out the pieces, one per child.
6. Photocopy the Erupting Volcano Directions pattern onto white cardstock and cut out the pieces, one per child.

Class Time Directions for Erupting Volcano

The world before the Flood and the world after the Flood looked very different. The Flood changed the earth in big ways! Read Genesis 7:11. Scripture tells us that “the fountains of the deep broke up.” What do you think that means? Take responses. The earth’s crust, way down deep, was breaking apart, and water was bursting out. As the earth’s crust was breaking up, it was forming volcanoes! Those volcanoes that formed during the Flood would later change the whole look of the earth!

When a volcano erupts, what is it that comes out of it? Take responses. Lava! Beneath the surface of the earth flows magma (a hot rock substance). Once the magma flows out of a volcano, it changes and is now called lava. Lava is extremely hot—1,292 to 2,192 degrees Fahrenheit (700 to 1,200 degrees Celsius)! Not something you would want to be caught in! Because of its temperature, it is very destructive—everything caught in its path is

Mini Volcanoes

destroyed. When you picture a volcano erupting, do you imagine really fast flowing lava destroying everything caught in its path because there is no way for anything to escape? Take responses. **Believe it or not, most lava actually flows no more than 5 miles (8 km) per hour. That is slow enough that you could walk or jog to safety.**

Let's do an experiment to show us the lava flowing out of a volcano!

Note: At this point, you'll demonstrate the mini volcanoes. A little later, they will each make their own mini volcano to take home.

Each group (table) should have a sample mini volcano. First, remove the bottle cap. Then, using a funnel, drop 2 tsp. of baking soda into the bottle. Next, add 4 drops of dish soap and then 2 drops of red food coloring. Finally, pour in a ½ cup of vinegar and watch it erupt!

When a volcano erupts, the magma becomes lava. When that lava cools, wind and rain break it down into fertile soil. And what is made out of soil? Land! New land is born! In fact, some of the islands of Hawaii are constantly getting larger thanks to lava flows!

So think back to the Flood. The volcanoes were formed by the earth's crust breaking up and pushing around and the tectonic plates shifting. This pushing of the ground resulted in volcanoes. When those volcanoes erupted, the lava moved slowly, eventually forming new land. Some of the land we have today is partially a result of the volcano eruptions of the Flood of Noah's day! And the volcanoes we have today are remnants from that cata-

strophic event! Now let's make your own mini volcano to take home.

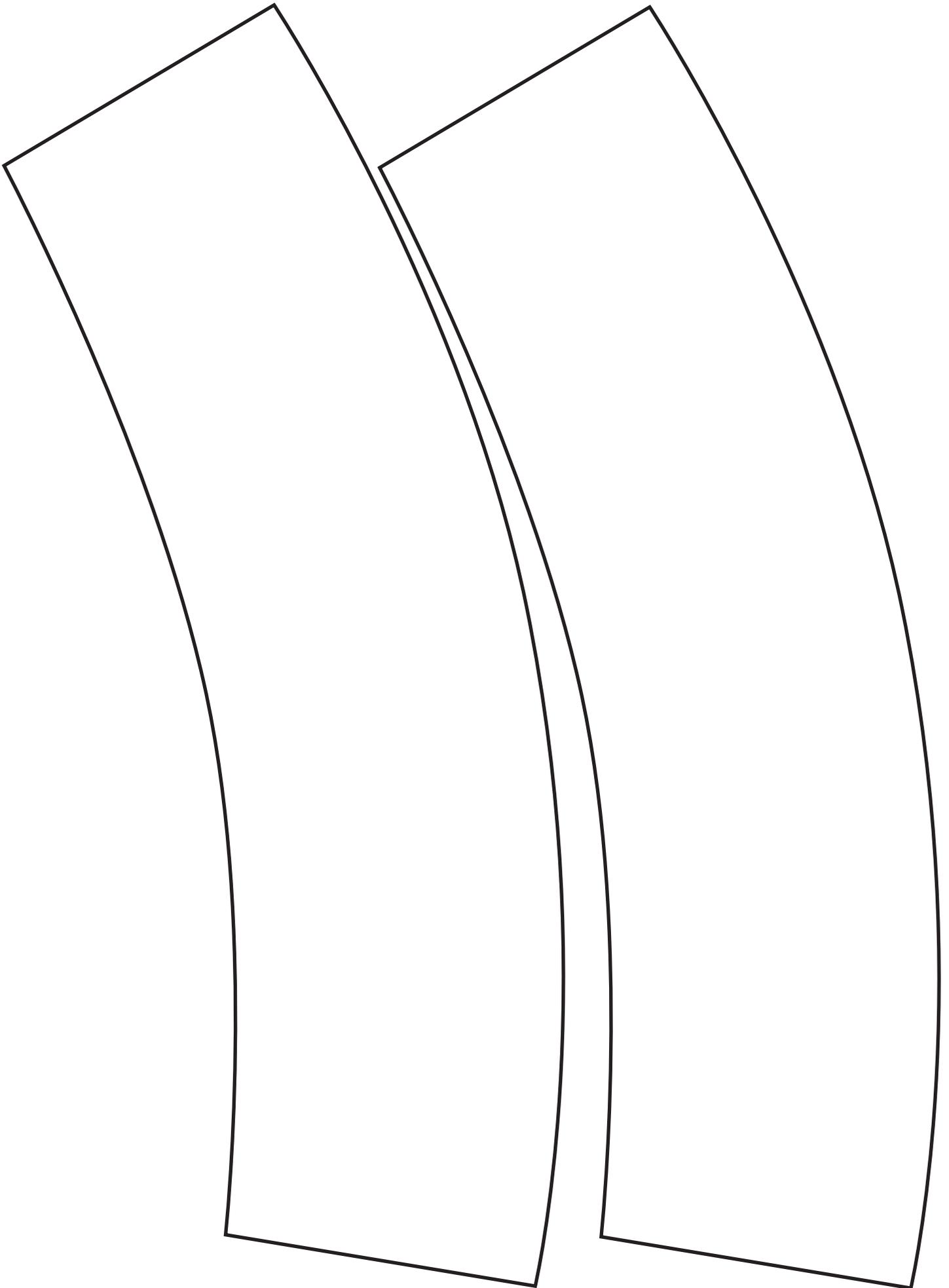
Class Time Directions for Building Volcano

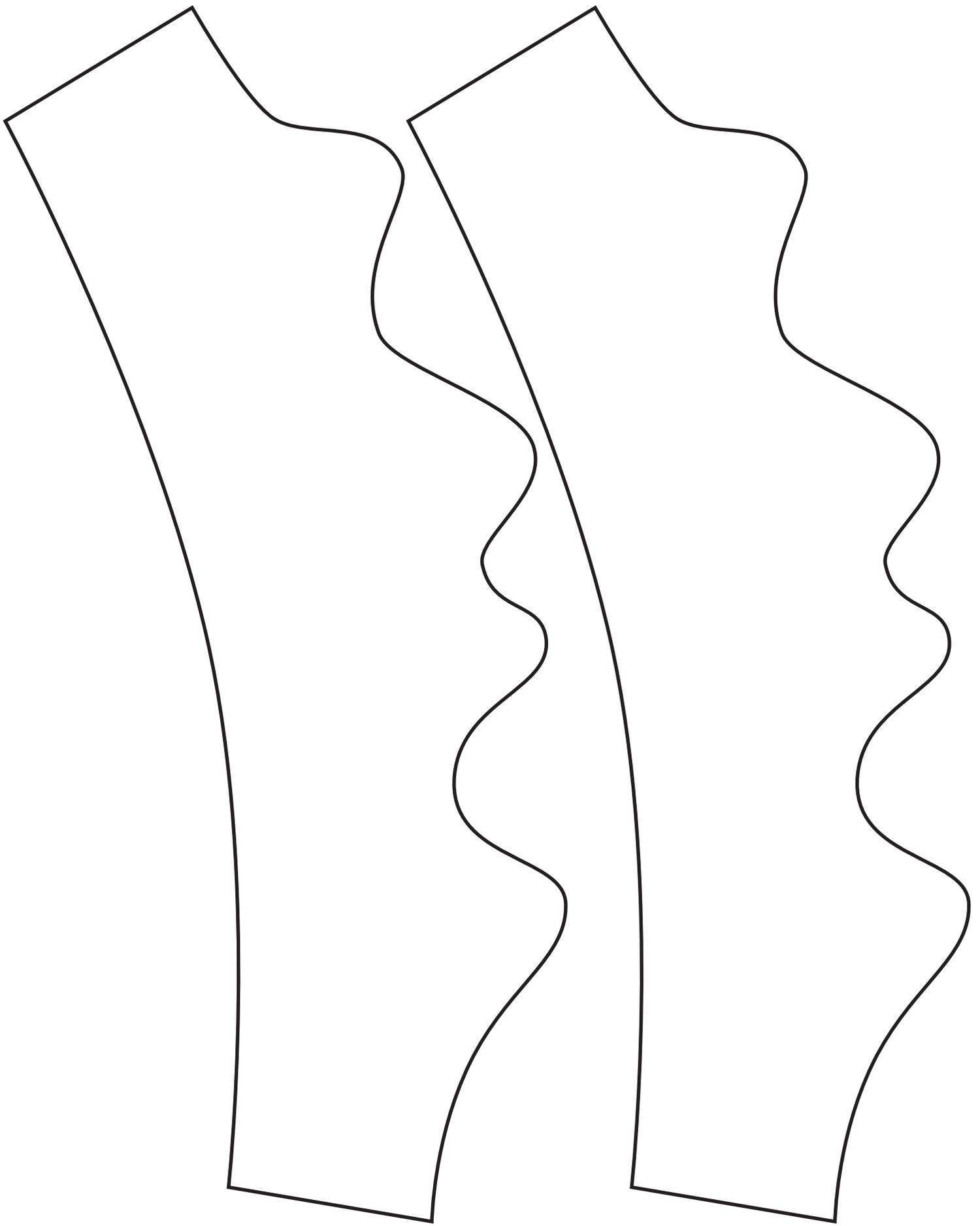
1. Apply glue stick to the brown mountain piece of cardstock. Then take the upside-down cup with the bottle and wrap it with the brown cardstock, starting at the bottom.
2. Apply glue stick to the red lava piece. Then wrap the top of the upside-down cup with the red lava piece, overlapping the brown cardstock.
3. Apply glue stick to the yellow lava piece. Then wrap the top of the upside-down cup again, directly over the larger red lava piece.
4. Remove the cap from the bottle. Then place the other plastic cup over the decorated cup and screw down so that the nozzle of the bottle emerges through the hole. Then replace the cap. Now you have a mini-volcano that's ready to operate! Make sure you take the directions card with you when you leave.

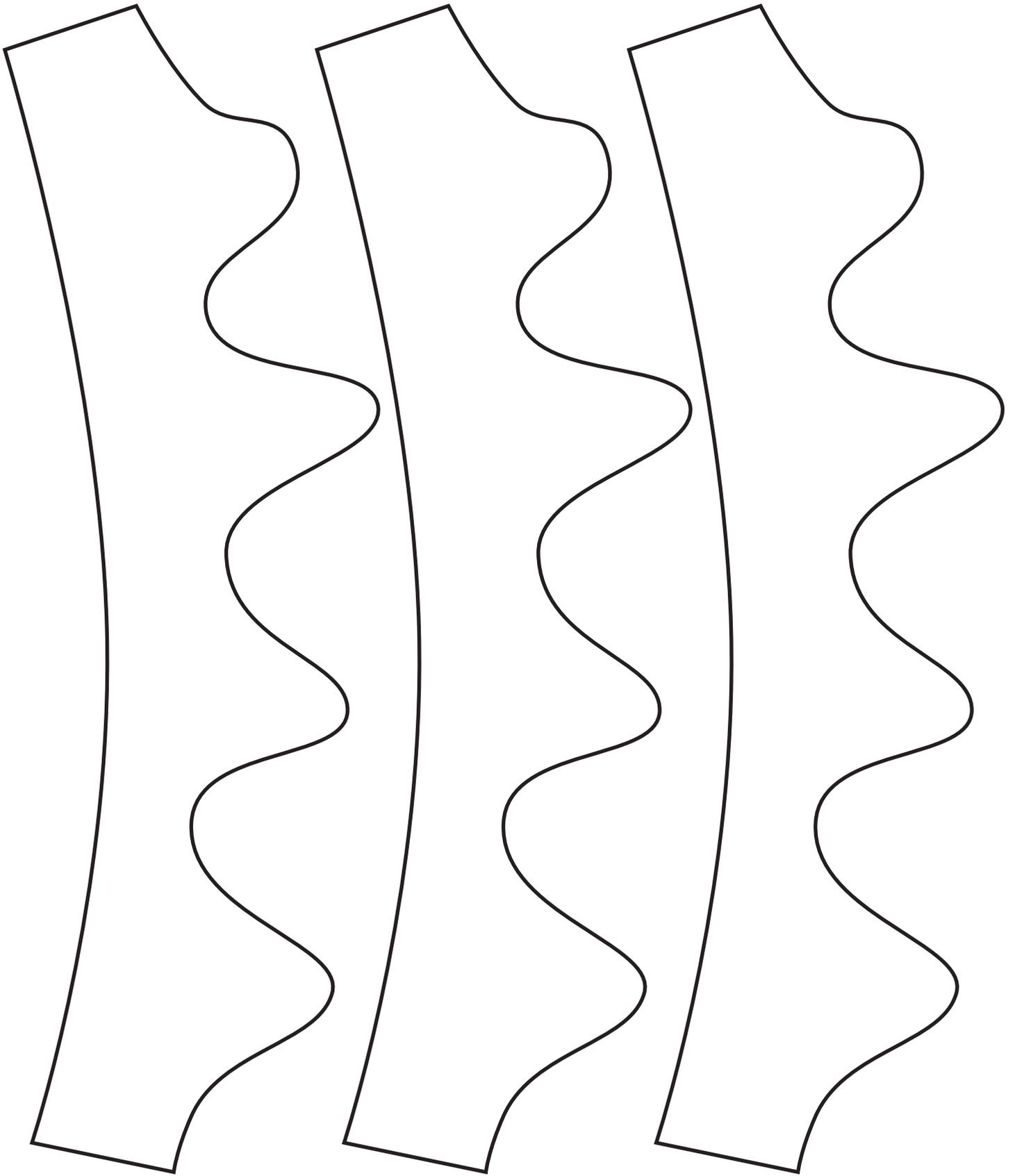
Pass out the Flood Legend card for today and remind children that the flood legends found around the world are remnants of the true account given in the Bible.

Tip Corner

- To save time and money, forgo using the Yellow Lava pattern.
- You may want to have the kids cut out their own mountain face and lava patterns.







Erupting Volcano

What you'll need:

- 2 teaspoons baking soda (not baking powder)
- 4 drops Dawn or dish soap
- 2 drops of red food coloring (optional)
- ½ cup vinegar

Place the baking soda, dish soap, and red food coloring into your container, then add vinegar. Watch as the reaction takes place.

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