Title: Erupting Volcano
Recommended for: 4-5 Year Olds

Objectives:
Children
• Fine motor
• Follows direction
• Making predictions

Adults
• Fine motor
• Decision making
• Volume discrimination

Materials Needed: Recommended for small groups of 2-3 children and 2-3 elders.

• Flour (6 cups)
• Salt (2 cups)
• Oil (4 tablespoons)
• Water (2 cups)
• 2 liter plastic soda bottle (empty)
• Baking pan/sheet
• Warm water
• Red food coloring
• Liquid dish soap (6 drops/1 tablespoon)
• Baking soda (2 tablespoons)
• Funnel
• Vinegar
• Hot water
• Vinegar

Methods:
Facilitator Preparation
1. Purchase or collect all ingredients.
2. In a large bowl, add all the dry ingredients. Add ½ the water and ½ the oil, gradually adding more to make the dough smooth and firm.
3. Place the bottle upright on the baking pan (or a piece of wood). Add the dough around the bottle to mold into a mountain shape. Do not cover the opening. Let it dry overnight if possible.
   a. Option: Participants may be able to prepare the materials the day before the activity.

Intergenerational Participants
1. Introduction -- pair each elder with a child and sing the hello song.
2. Have the group begin by watching a volcano erupt on youtube.
   a. http://www.youtube.com/watch?v=R0Zbj7S22zs
3. Place one volcano mountain in front of each IG pair.
4. Place the ingredients (food coloring, dish soap, baking soda, hot water, and vinegar) in front of the adult (measure ingredients out if the adults are unable to do so themselves).
5. Place the funnel in front of the child.
6. Have the child hold the funnel very still on top of the bottle.
7. Ask the adult to fill the bottle/volcano half full with hot water (very warm, not boiling).
8. Have the adult add the food coloring (5-10 drops).
9. Have the IG pair mix the dish soap with the baking soda and then add the mixture to the volcano.
10. Have the adult slowly pour in the vinegar.
11. Watch the eruption!
12. Discuss what made the volcano erupt. Discuss active volcanoes that exist today.
13. Clean up and sing the goodbye song.

**Helpful Websites**

**Special Considerations**
- All participants have smocks on to protect clothing from eruption.
- Make sure the adults are able to have a steady hand to pour the ingredients into the bottle.
- Advise participants not to ingest ingredients.

**Getting To Know You**
- Ask IG pairs to discuss places they have traveled to see spectacular things, such as, a volcano, mountain, coral reef in ocean, etc.
- Ask IG pairs to discuss what other things the cooking ingredients are used for.

**Encouraging Interaction**
- Have IG pairs discuss what makes a volcano erupt.
- Have the IG pairs work together to put the ingredients inside of the volcano.
  - Option: If one person is better at holding the funnel still have them hold the funnel.

**Extension Opportunities**
- Discuss dinosaurs and theories of extinction.
- Discuss famous volcanic eruptions, more than 600 active volcanoes exist on our planet, show pictures.
- Travel activities about places to go and see in the world.