



Project Exploration creates transformative learning opportunities for youth underrepresented in the sciences --particularly students of color and girls -- by equipping them with the skills, practices, and mindset needed for a lifelong pursuit of learning. STEM@Home makes activities around science, technology, engineering, and math accessible and fun to do at home. This STEMbook activity, resources, and more are available at www.projectexploration.org/stemathome.

In this activity, you will:

learn about volcanos and will get to build your own. Watch out for the eruptions!



Supplies Required:

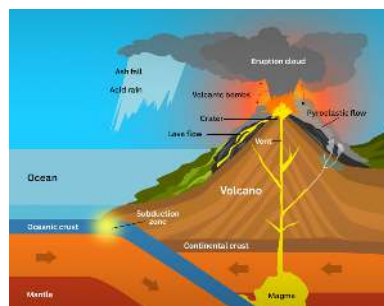
- 2 to 3 lemons
- Food Coloring
- Baking Soda
- Knife
- Tray or plate
- Spoon or fork

Video

Watch the video to help you make your volcano: <https://tinyurl.com/tae9tdm>

Overview

The eruption of a volcano is one of the most powerful forces on our planet. Volcanoes erupt when molten rock called magma rises to the surface. Magma is formed when the earth's crust, or mantle, melts. Melting may happen where tectonic plates are pulling apart or where one plate is pushed down under another. If the magma is thick, gas bubbles cannot easily escape and pressure builds up as the magma rises. Once the pressure becomes too great, the molten rock pushes up through earth's crust and erupts!



Instructions

1. Make sure you are working with an adult!
2. Stand back and make sure your face is not close to the eruption!
3. You'll need 2-3 lemons with the top layer cut about $\frac{1}{2}$ -1 inch, cut the tip off the bottom.
4. Take a spoon/fork lift up the inside of the lemon.
5. Drop droplets of food coloring.
6. Sprinkle baking soda inside the lemon.
7. Take lemon pulp and squeeze the juice inside the lemon.
8. Observe and record your observations!

Additional Resources

Think About It! What made the volcano erupt? What happens to the eruption if you change the amounts of baking soda and vinegar? Research volcanic eruptions around the world!

1. Track live and active volcanos around the world here: <https://tinyurl.com/j3gyjev>
2. Learn more facts about volcanos here: <https://tinyurl.com/yyvxqoal>
3. Learn more about layers of the earth here: <https://tinyurl.com/tgk7kyy>

Share It Out

Share your volcano erupting with your family and friend via social media! We want to see what's happening!

Share on social media: record the volcanic eruption your produce on social media. Share your eruption using the hashtags:

#DIYLemonVolcano
#ProjectExploration
#StemAtHome

Share via PE's website: Students who complete STEM@home activities and share what they learned with the PE team via our website will earn points which can be traded in for cash prizes at the Explore Store. Your project number is 212. Learn more at www.projectexploration.org/explore-store

Join PE's character contest!

Design a STEM character who will lead kids through activities and be featured on our website and in our STEMbooks. Cash prizes will be awarded to the top 3 finalists. Learn more at: www.projectexploration.org/character-contest.



Call or text us for help: 312-772-6634

www.projectexploration.org