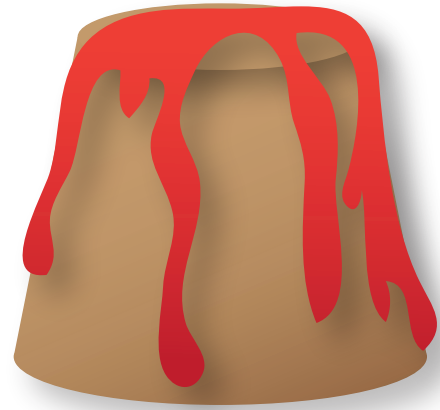


Volcanic Crayons

The Earth is made up of tectonic plates, floating on a layer of molten magma. Try this activity to find out what happens when the magma heats up!

Collect

- 5 oz. paper cup
- One wax crayon
- Plaster of Paris
- Mixing bowl
- Spoon
- Water
- Aluminum foil
- Shallow, heat-proof pan
- Stove or hot plate
- Hammer (optional)



Prepare the volcano

1. Peel the paper off of the wax crayon, break it into thirds, and set the pieces aside.
2. Place the plaster in the mixing bowl and slowly add small quantities of water until you reach ketchup consistency. Stir until well mixed.
3. Hold the crayon pieces in the middle of the paper cup (so that they are touching the bottom of the cup) and carefully pour the plaster mixture into the cup until it just covers the top of the crayons.
4. Allow your volcano to dry completely; this may take a few days.



Heat it up!

5. When the volcano is dry, tear away the paper cup from around the plaster and turn the volcano over so that the small end is up.
6. Gently scratch away any plaster covering the top of the crayon pieces.
7. Wrap a single piece of aluminum foil around the bottom of the volcano, leaving the top exposed. Place the volcano in the pan, foil-side down.
8. Pour water into the pan until it is about 1 inch below the top of the foil. Then place the pan on the stove and bring the water to a boil.
9. As the water heats up, observe what happens to your volcano as the crayon inside heats up. This may take a few minutes.

What's happening?

As the wax crayon heats up, it starts to expand. As it expands it causes pressure to build up inside the plaster. When the pressure gets too high, the wax is forced out of the plaster. Real volcanoes have very thick magma and gases trapped underneath the Earth's surface. When pressure builds up inside a volcano, the magma is forced out as lava. Once your volcano has 'erupted' and cooled completely, unwrap the aluminum foil. Use a small hammer to help you split your volcano in half and take a look inside. Can you identify the main vent, magma chamber, and lava flow in your volcano?

What do you think would have happened if there wasn't a hole in the top of the Plaster of Paris to allow the wax to come out? Do you think this could happen with a real volcano?

