

How to Make Elephant Toothpaste

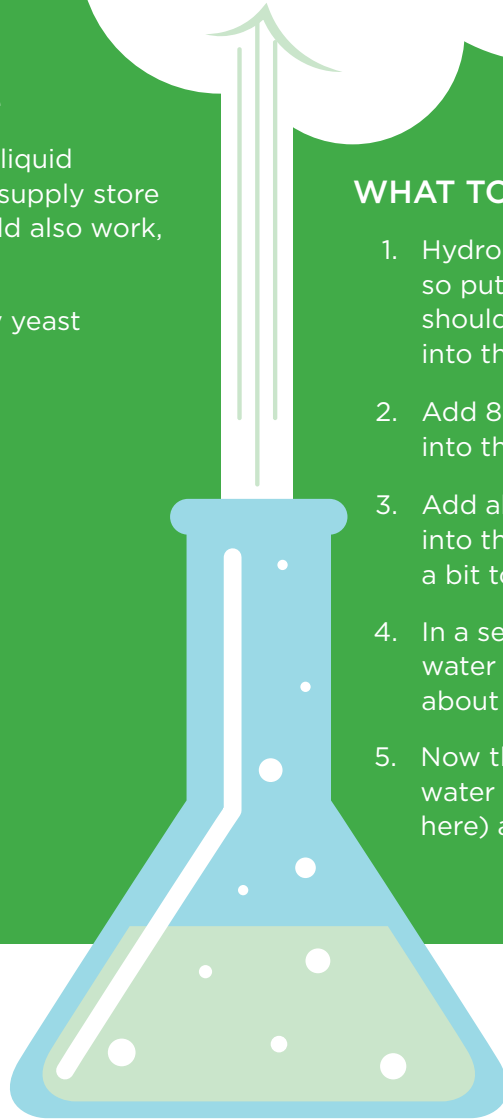
A science-based lesson plan for parents and teachers

WHAT YOU'LL NEED:

- A clean 16-oz plastic soda bottle
- ½ cup of 6% hydrogen peroxide liquid (you can get this from a beauty supply store or hair salon; a 3% solution should also work, but the reaction will be smaller)
- 1 tablespoon (one packet) of dry yeast
- 3 tablespoons of warm water
- Liquid dishwashing soap
- Food coloring
- Small cup
- Safety goggles

WHAT TO DO:

1. Hydrogen peroxide can irritate skin and eyes, so put on those safety goggles! An adult should carefully pour the hydrogen peroxide into the bottle.
2. Add 8 drops of your favorite food coloring into the bottle.
3. Add about 1 tablespoon of liquid dish soap into the bottle and swish the bottle around a bit to mix it.
4. In a separate small cup, combine the warm water and the yeast together and mix for about 30 seconds.
5. Now the adventure starts! Pour the yeast water mixture into the bottle (a funnel helps here) and watch the foaminess begin!



WHAT TO TALK ABOUT:

Why do you think it's called "elephant toothpaste" as we're not actually making real toothpaste?

The foam looks a little bit like toothpaste coming out of a tube, doesn't it? And you can imagine that an elephant would need a lot of toothpaste to brush his teeth. That's why they call this explosion "elephant toothpaste."

What's happening?

Foam forms! This happens because each tiny foam bubble is filled with oxygen. The yeast helps remove the oxygen from the hydrogen peroxide. Because it does this very very fast, it creates a lot of bubbles!

Did you notice the bottle getting warm?

This experiment created an exothermic reaction. This means a chemical reaction that makes heat.