

HOW TO:

Make Elephant Toothpaste

Items Needed:

A clean 16 ounce plastic soda bottle
(or any other container)
1/2 cup 20-volume hydrogen peroxide liquid
(20-volume is a 6% solution, ask an adult
to get this from a beauty supply store or
hair salon)
Dry yeast
Warm water
Liquid dish washing soap
Food coloring
Small cup
Disposable gloves

Approximate time to complete: 10 minutes

Skill Level: Intermediate

Budget for materials: \$5.00



Project Instructions:

Safety

Make sure to wear safety goggles, as the reaction can occur quickly. Plus hydrogen peroxide can irritate your skin, so be careful when performing this experiment. The foam produced is water, soap, and oxygen so you can clean it up with a sponge and pour any extra liquid left in the bottle down the drain.

Directions

1. Hydrogen peroxide can irritate skin and eyes, so put on safety goggles and ask an adult to carefully pour the hydrogen peroxide into the bottle.
2. Add 8 drops of your favorite food coloring into the bottle.
3. Add about 1/2 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. Pour the yeast water mixture into the bottle and watch!

What's Happening:

This activity is a demonstration of a chemical reaction that is activated by a catalyst (a helper). A catalyst speeds a reaction, and in this case hydrogen peroxide rapidly decomposes into water and oxygen. In this reaction, the yeast acts as a catalyst and speeds up the reaction of decomposing hydrogen peroxide (water & oxygen) which, combined with soap, creates a huge amount of foam. If you notice the bottle gets warmer as the reaction starts to occur.

This is called an exothermic reaction- that means that the reaction not only created foam, but also it created heat.

