

Praxis “Making Science Fun”

Classroom Chemistry – Elephant Toothpaste

Can you create “Elephant Toothpaste”?

Materials:

- 3% Hydrogen Peroxide
- Food colouring
- Measuring cup & spoons
- Pkg of yeast
- Dish detergent
- Warm water
- 2L plastic bottle



Procedure: (Remember to be sure to have your parent’s permission and they have time to watch and help you.)

- Do this outside to make cleanup easier.
- Pour ½ a cup of hydrogen peroxide into the 2L bottle.
- Add a good squirt of detergent and swish it around. Add food colouring to the solution.
- Add 1 tablespoon of yeast to 3 table spoons of very warm water; mix it well.
- Pour the yeast solution into the pop bottle and quickly move out of the way.

What's happening?

The foam looks like giant toothpaste squeezed out of a tube an elephant might use. Don’t put it in your mouth. It contains detergent and hydrogen peroxide.

Hydrogen Peroxide is like water with an extra oxygen atom. It’s fairly stable but the yeast acts as a catalyst, it speeds up the reaction and helps the oxygen escape. The oxygen is trapped as bubbles in the detergent solution and creates the foam.

If you feel the bottle afterwards you’ll notice it’s warm. When a reaction gives off heat we say it is exothermic (**exo** means as in leave like an **exit** sign and **thermic** as in **heat** like in a **thermometer**.)

Extension:

The brown bottle you get in a store is 3% hydrogen peroxide but you can get 6% (20 Volume) & 12% hair developer from hair salons. The higher the % the stronger the reaction. If you place a drop of food colouring on the inside of the top in a couple places you’ll create strips. This experiment with videos may be found at <http://www.using-hydrogen-peroxide.com/elephant-toothpaste.html>

This activity is based on our “Classroom Chemistry” kit that is currently under development. Our teaching kits (described on our website) are loaned out FREE to provide classroom teachers and parents of home schooled children an opportunity to explore Science in interesting ways. Please consider volunteering as one of our classroom speakers or allow your business as a field trip location.



The next major event Praxis will be involved with are the [Summer Camps for Kids](http://www.praxismh.ca/MHCsummercamp.html) put on by Medicine Hat College. Praxis developed and supplies the kits used at both the Medicine Hat and Brooks camps. For more information check out <http://www.praxismh.ca/MHCsummercamp.html>.

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PRAXIS, “Making Science Fun”. Contact Praxis at praxis@praxismh.ca, www.praxismh.ca, Tweet or follow us @PraxisMedHat, or friend us on Facebook. Address: c/o 200 7th Street S.W., Medicine Hat, AB, T1A 4K1 Phone: 403-527-5365, Fax: 403-527-6570.