

# Foam it! Cause a Chemical Reaction

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Topics: [Fifth Grade](#) , [Science](#)

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This experiment uses a yeast solution, liquid detergent such as Dawn, and hydrogen peroxide to produce an exciting reaction like no other! The result will send a stream of foam shooting up out of a bottle and, after a minute or so, begin turns into a moving stream that resembles toothpaste being squeezed from a tube. You may not want to use this foam to brush your teeth, but you'll certainly “foam up” your child's imagination and love of science!

## What You Need:

- 16 oz. empty plastic soda bottle
- 20 ml (0.675 fluid ounces) hydrogen peroxide (6% solution, purchased from a beauty supply store)
- 10 ml (0.3382 fluid ounces) dishwashing liquid (such as Dawn)
- Food coloring
- 1 oz. package of powdered yeast
- Small Funnel
- Aluminum foil cake pan with 2-inch sides
- Safety glasses (*Although the following activity is safe it is always good practices to have your child wear safety glasses whenever they conduct any type of activity that involves working with chemicals*)

## What You do:

1. Have your child place the empty plastic soda bottle into the center of empty aluminum cake pan and then put the funnel into the bottle's mouth.

2. Next add 3-4 drops of food coloring to the peroxide and pour the peroxide through the funnel into the bottle.
3. Add the dishwashing liquid to the peroxide in the bottle.
4. Pour the yeast mixture into the bottle and quickly remove the funnel. Have your child touch the bottle to feel if any temperature changes are taking place.

After a minute or two foam will shoot up out of the bottle, run into the pan, and eventually begin to come out in a steady stream. Encourage your child can play with the foam - it's just soap and water with oxygen bubbles! The bottle will feel warm to the touch as this is an example of an exothermic (heat producing) reaction.

Hydrogen peroxide when mixed with a liquid detergent and a catalyst (yeast) will react producing foam (oxygen gas) regardless of amounts used, so encourage your child to experiment with different amounts to see which will produced the most foam!