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Science in the Kitchen ~ Easy Experiments for Kids

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Jonny and Jefferson Wake and Kyle Bennett measure out Hydrogen Peroxide Photo Jennifer Wake

A strand of uncooked spaghetti or a long match 2. Start your experiment:

What is a chemist? Someone who works with chemicals, right? Perhaps you imagine a person in a white lab coat holding a bubbling test tube. Can you imagine a person in a kitchen stirring a pot on a stovetop too? Working in the kitchen is also working with chemicals, with lots of great experiments, explanations, and yes, even explosions! Here's a cool experiment that you can try at home. You'll need an adult around as this project involves fire! It won't explode, but you'll still get some exciting results.

1. Gather these supplies:
Baker's yeast
(available from the grocery store)
Hydrogen peroxide
(you can get this from the
drugstore)
Measuring spoons and
measuring cup
A tall glass
A source of fire
(matches or lighter)

Pour one ounce (1/8 cup) of hydrogen peroxide into the glass. Add 1 teaspoon of the baker's yeast and swirl the glass a little to mix the two ingredients. Do you see bubbles rising? You have just created a chemical reaction! A gas is forming. What is it? To find out, light the spaghetti strand or long match on fire. While it is still burning, lower it into the glass, and hold it just above the mixture. Be sure not to get it wet.

3. What happened?

Did you see the flame get bigger? Hydrogen peroxide will break down naturally over time, turning into oxygen and water. The yeast acts as a catalyst. A catalyst is something that speeds up chemical reactions. Oxygen is necessary for things to burn and the released oxygen gas in your foaming mixture made the flame burn better. Bet you didn't know you could make oxygen in a kitchen!

Alternative Method

If you or your parents don't want to deal with fire in this experiment, you can still enjoy the chemical reaction of the mixture foaming. (You may want to do this experiment in the sink as it can get messy.) Add a small squirt of dishwashing soap and a couple of drops of food coloring to the hydrogen peroxide before you put in the yeast. You'll get great foam!

Jonathan Winter has been a science teacher at Lafayette Elementary School in Lafayette since 2001. He lives in Moraga with his wife, children, numerous pets - and he experiments frequently in his kitchen.

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