

Curiosity Labs™ by Merck:  
**Elephant toothpaste**

**in this experiment, you will learn...**

- What a **chemical reaction** is
- How scientists determine if a chemical reaction has occurred

**Share your results and tag us! #SPARKCuriosity**

# Curiosity Labs™ by Merck: Elephant Toothpaste

## SUPPLIES

- Hydrogen peroxide (3%-9%)
- Food coloring
- Hot water
- Graduated cylinder or empty water bottle
- Liquid soap
- Yeast
- Small cup

## Instructions

### STEP 1

Add 6 tsp. (30 mL) hydrogen peroxide into the graduated cylinder or water bottle.

### STEP 2

Add 2¼ tsp. (11 mL) of hot water into the small cup.

### STEP 3

Add ¾ tsp. (10 g) of yeast to the hot water and mix it up.

### STEP 4

Let the yeast and water set for at least 30 seconds.

### STEP 5

Add a few drops of soap to the hydrogen peroxide in the cylinder.

### STEP 6

Add 3-4 drops of food coloring to the hydrogen peroxide in the cylinder.

Have the food coloring run down the side of the cylinder for a cool effect.

### STEP 7

Add the yeast mixture to the cylinder.

## FUN FACTS

Scientists study physical changes and chemical changes.

A physical change is when the shape or form of something changes; such as ice melting.

A chemical change is when something new is formed; such as combining flour, eggs and oil to make a cake.



## WHAT HAPPENED?

The mixture exploded creating “elephant toothpaste”! This is an example of a chemical reaction.

The yeast helped the reaction go much faster. The oxygen that was released as a result of the chemical reaction became trapped in the soap bubbles. So much oxygen was trapped, that it produced foam.

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