



ELEPHANT TOOTHPASTE IN A PUMPKIN

VIDEO URL

https://youtu.be/3_AQgONHuNs

TIME

10-15 minutes

MATERIALS NEEDED

- 1 carved pumpkin
- 2 packets active dry yeast
- 6 tbsp warm water
- 1 c hydrogen peroxide
- Food coloring
- Dish soap
- Spoon
- 2 cups/containers
- Large basin
- Safety goggles

OBJECTIVES

- Create a foaming, chemical, exothermic reaction
- Carry out the decomposition reaction of hydrogen peroxide

MODIFICATIONS

- Try containers of different shapes and sizes (bottle, cylinder, etc.) to see how that impacts the experiment
- See what happens if you add more (or less) of each ingredient

LESSON

1. Place pumpkin inside large basin.
2. Measure out 6 tbsp of warm water and place in a cup.
3. Add 2 packets of yeast to warm water and stir with spoon.
4. Set aside for 30 seconds to activate the yeast.
5. Measure out 1 c of hydrogen peroxide and pour into second cup or cylinder.
6. Add a few squirts of liquid dish soap to hydrogen peroxide.
7. Add 5-10 drops of food coloring to hydrogen peroxide.
8. Swirl cup to mix and place cup inside pumpkin.
9. Put on safety goggles.
10. After 30 seconds has elapsed, pour the yeast mixture into the hydrogen peroxide mixture and watch the reaction occur.



RELECTION

- What chemical changes did you see in this experiment?
- What physical changes did you see in this experiment?
- What do you think would happen if we used a different container for this experiment? A tall container with a narrow neck?
- What do you think would happen if we used more dish soap?

ADDITIONAL RESOURCES

Original Elephant Toothpaste Experiment Instructions:

- <https://sciencebob.com/fantastic-foamy-fountain/>
- <https://www.scholastic.com/parents/kids-activities-and-printables/activities-for-kids/math-and-science-ideas/home-science-experiments-elephants-toothpaste.html>

WHO WE ARE

4-H began over 100 years ago, and has since grown into the largest youth development program in the nation. 4-H prepares young people to be leaders in their community and around the world through hands-on experiences alongside their peers and caring adults. 4-H delivers research-based programming around positive youth development. In Indiana, 4-H can be found in all 92 counties as delivered through Purdue Extension. Community clubs, afterschool programs, school enrichment, camps/workshops, and special programs are all ways youth across Indiana can be involved with the 4-H program. For more info, visit extension.purdue.edu/4h.