

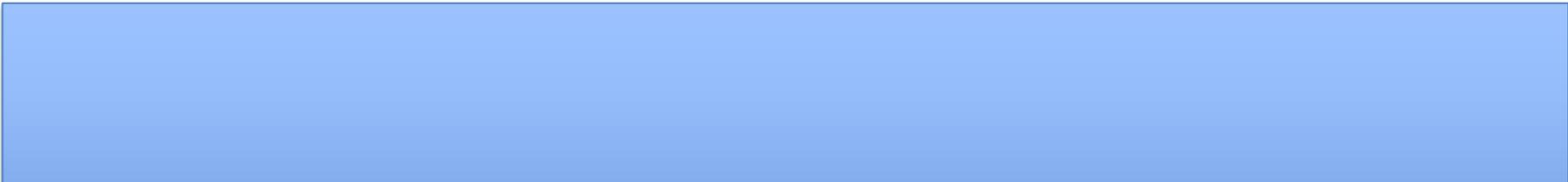
Halloween Lab Explanation

Witch Blood

- Red Cabbage Water (aka Witch Blood) is used as a pH indicator
- What is a pH indicator?
 - A chemical compound that visually changes color to show whether a solution is an acid or base
 - Example: red cabbage, litmus paper, flowers

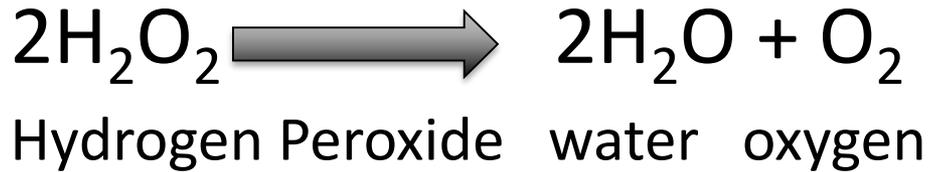


Stranger Things Mitten

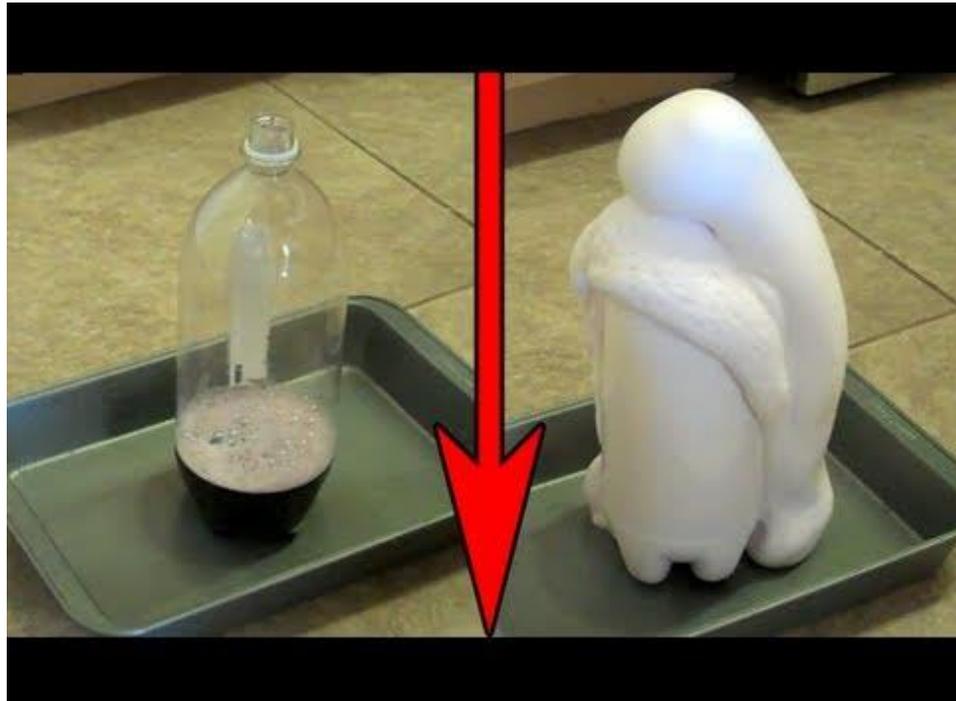
- Does a mitten give off heat? Which thermometer showed the higher temperature or did both thermometers give the same reading?
 - Both thermometers read room temperature.
 - Mittens don't give off heat. They trap the thermal energy given off by our hands – they do not generate their own heat.
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Growing a Ghost

What happened?



Which takes up
more space:
liquid or gas?



Growing a Ghost

Yeast is used as a **catalyst**. That means that **it makes the reaction happen more quickly**. In this case, it allows it to be observed. **Catalysts are not part of the reaction and are only used to change the energy required for reactions to occur**. In this case, it speeds up the reaction that would normally happen slowly to a rate that is easy to see (due to the foam).

Growing a Ghost

The soap is just an **indicator**. It is easier to see foam rather than just bubbles.

This reaction is highly **exothermic** in nature. You are **taking one substance and breaking it down into smaller parts**. Energy is released and the temperature increases.

Frankenworms

- Worms were soaked in baking soda and then added to vinegar.
- Think about the ice packs we made: What were some indicators of a chemical change?
 - Fizziness
 - Production of a gas

Exploding Cauldrons

- Alka-Seltzer tablets and water.
 - Alka-Seltzer tablets are used to help settle upset stomachs and heartburn. They are effervescent, meaning they are designed to dissolve in water and release carbon dioxide.
- What caused the lid of the film canister to pop off? The water or carbon dioxide?