

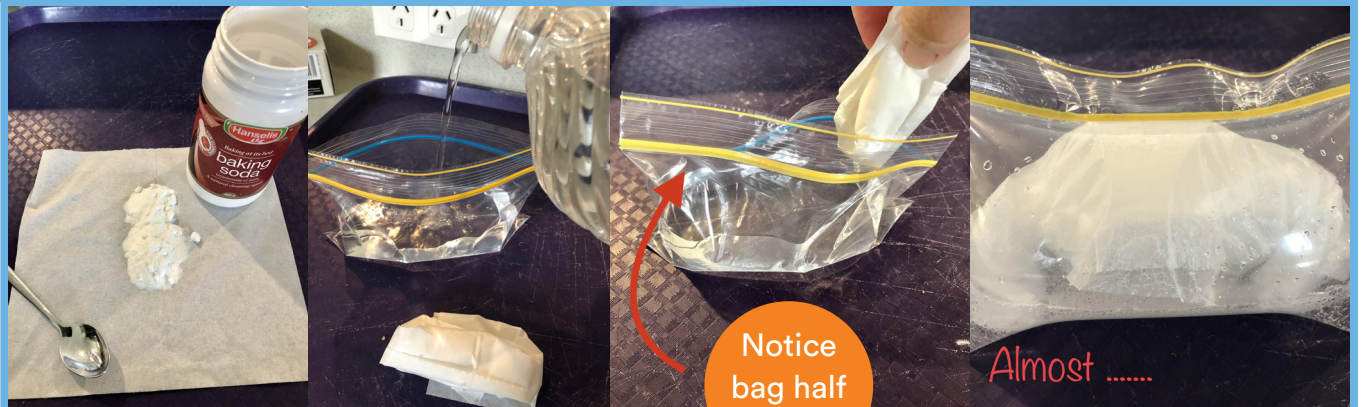
Baking Soda Bomb

What you need:



- 1 snaplock bag
- 2 teaspoons of baking soda
- ½ cup of vinegar
- 1 tissue
- Tray

Instructions:



- Place the baking soda in the middle of a tissue and wrap it up.

- Add the vinegar to the snaplock bag and seal part way.

- Drop the baking soda tissue into the bag and seal the bag fully.

- Place on a tray so you don't make a mess!

Notice bag half sealed

Almost

Baking Soda Bomb

Results:

Can you see what is happening? Describe this to an adult, film your result or write it down in a notebook. Time how long it takes for the bag to explode.



WHY do you think it is doing this?

The Science Behind it:

Vinegar from your pantry's scientific name is acetic acid. It is a mild acid.

Baking soda (sodium bicarbonate) is a base.

When the two substances mix they create an acid base reaction and produce carbon dioxide gas. This is why we can see the bubbles. We use the tissue to simply slow the reaction down so you have time to seal shut your snaplock bag.

Gas molecules are a state of matter that have no fixed shape or volume, instead they move around trying to spread out evenly and fill up the bag. Once the bag is too full with the gas molecules, they will start colliding with one another and try to escape. Eventually, they will POP the seal of the bag open. This is similar to when you over inflate a balloon.

Act Like a Scientist:

Repeat this experiment and watch

- What would happen if you used citric acid instead of vinegar? Try dissolving 2 teaspoons of citric acid in 1 cup of water and repeat the experiment. Does the same reaction occur?
- Does it react quicker with warm vinegar?
- Would you get a louder boom if you used a larger snaplock bag?

