



EXPLODING HALLOWEEN BAGS

Materials:

Vinegar	Small Zip Loc Bag
Baking Soda	Plastic Spoon
Food Coloring	Paper Towels
Safety Goggles	Small Cups
Measuring Cups and Spoons	

Vocabulary:

Chemical Change	Solid	Solution
Physical Change	Liquid	Mixture
Gas	Matter	Dry Ice
Endothermic Reaction	Chemistry	Sublimate
Acid	Base	

DIRECTIONS:

1. Safety first! Put on your safety goggles!
2. Draw a pumpkin face on the Zip Loc Bag with a black permanent marker.
3. Pour vinegar into a small cup. You will need about 1/4 a cup.
4. Add a food coloring, if you wish, to dye it orange.
5. Place a spoonful of baking soda on a paper towel and fold up the paper towel to make a packet.
6. Add the baking soda packet to the Zip Loc Bag.
7. Quickly pour the vinegar into the Zip Loc Bag and seal it.
8. Give the bag a gentle shake.
9. The bag will start to expand. Be sure to feel the bag so you can feel the temperature change.
10. If the bag looks like it is going to pop, you can open it to relieve the pressure or toss it on the ground and let it pop (if you are outside).
11. When the reaction is complete, you can dispose of the mixture in the sink and garbage can.



THE STEAM BEHIND THE EXPERIMENT:

The Baking Soda and Vinegar Reaction is a great example of mixtures and solutions, an acid-base reaction, a physical and chemical change, an endothermic reaction, and an experiment with the different states of matter! Baking soda is a base and vinegar is an acid. When they are mixed together they create carbon dioxide gas! A physical change is when you change the way something looks but don't actually change what it is. A chemical change is when you make something new and cannot go back to the original substance. In this experiment, the physical change occurs when you dye the vinegar. The chemical change occurs when the baking soda and vinegar mix and form carbon dioxide gas! You also work with the three states of matter: solid (baking soda), liquid (vinegar and food coloring) and gas (carbon dioxide). Finally, the experiment is endothermic. This means it absorbs heat as the reaction happens and gets colder. A mixture is two or more substances combined together in such a way that each remains unchanged. A **solution** is a specific type of mixture where one substance is dissolved into another. A **solution** is the same, or uniform, throughout which makes it a homogeneous mixture.

CONNECT WITH US ON SOCIAL MEDIA:



Scan QR code to follow account
TikTok

(727)385-8121



@SCIENCEISFORGIRLS

MakeBakeandDestroy@gmail.com



1. Open app
2. Go to QR
3. Tap to scan



@MakeBakeandDestroy

www.MakeBakeandDestroy.com



@MakeBakeandDestroy