

Baking neutralize the acid and base properties,

[Science](#), [Chemistry](#)



BAKING SODA AND VINEGAR+POP ROCKS AND SODA My project is going to be about how things react with others. It is going to be about how ketchup reacts with baking soda or how pop rocks react with soda (coke, dr. pepper). The reason I am doing this project is because I like blowing things up on a small scale. I am doing 4 different reactions: pop rocks and soda, baking soda and vinegar, ketchup and baking soda, mentos and soda. Each experiment, I am doing 5 times. This is the science behind the pop rocks and soda experiment: so pop rocks has the same ingredients as regular candy.

Yet they also have another secret ingredient and that is carbon dioxide gas. The carbon dioxide gas is put in with the pop rocks. So the people that make the pop rocks heat them up to a very high temperature the pressurize, while that is happening they take the carbon dioxide gas and pressurize that into the pop rocks. That gives them the exploding sensation when you put them in your mouth. So when you put a whole bunch in carbonated water such as soda it makes an explosion. Candy is made off mostly the same ingredients.

Like milk, sugar, nuts, gelatin stuff like that to make it sweet and taste.

There are many different types of candy: chocolate, candy canes, candy corn, gummy bears, gummy worms, there is all sorts of candy. There are also many candy factories like hursey's, M, pop rocks, Nestle, Tootsie roll, Blow pop, Jelly Bean, Jolly Rancher.

There are many candies and many candy brands. This is the science behind the ketchup and baking soda experiment: so the ketchup has vinegar in it and we all know vinegar reacts with baking soda. Baking soda is a bicarbonate (NaHCO_3) and vinegar is an acetic acid (HCH_3COO). So when

ketchup(vinegar) reacts with the baking soda it makes an acidic reaction. An acidic reaction is caused when a acid and a base are placed together , they react to neutralize the acid and base properties, producing a salt.

The H(+) cation of the acid combines with OH(-) anion of the base to form water. The compound formed by the cation of the base and the anion of the acid is called a salt. (<https://www.thoughtco.com/equation-for-the-reaction-of-baking-soda-and-vinegar-604043>) Chemical reactions are formed when two molecules combine with each other and make the molecules change. There are bonds and there are molecules. A bond is a pull between atoms that makes the design of chemical compounds.

A molecule is a unit of an element that makes up the element. (<https://chem.libretexts.org/...Chemistry>.

.. Chemistry.../12%3A_The_Chemical_Bond) (www.middleschoolchemistry.com/lessonplans/chapter6/lesson1) (<http://www.dictionary.com/browse/molecule?s=t>)

The history behind chemical reactions. Antoine Lavoisier's full name is Antoine-Laurent de Lavoisier, he was a french nobleman and chemist who was named " father of modern scientist. A chemical reaction is a process were one or more substances, the reactors, are converted to one or more different substances, the product.

$\text{NaHCO}_3 + \text{HC}_2\text{H}_3\text{O}_2$ is baking soda + vinegar.

NaHCO_3 is baking soda. Na is sodium. H is hydrogen.

CO is carbon dioxide. 3 is the number of atoms. $\text{HC}_2\text{H}_3\text{O}_2$ is vinegar.

<https://assignbuster.com/baking-neutralize-the-acid-and-base-properties/>

HC is hydrogen and carbon. H is hydrogen. O is Oxygen. $\text{NaHCO}_3 + \text{HC}_2\text{H}_3\text{O}_2$. $\text{NaHCO}_3 + \text{HC}_2\text{H}_3\text{O}_2$ is the equation for baking soda (bicarbonate) + vinegar (acetic acid). That makes a base chemical reaction. An acid base reaction is a type of chemical process which has one or more hydrogen ions which is H^+ . Between species that may be neutral such as water or electrically charged such as ammonium, hydroxide, or carbonate. History of candy: candy dates back all the way to 2000 BC (Before Christ).

It was made with honey and fruit or nuts. Sugar candy was made by the indians in 250 AD (After Death). Cavemen also made candy out of honey by drying it and making it into taffy like candy. So candy has been around for a long time. Candy was mainly for the wealthy because sugar was very expensive. (<http://www.candyhistory.net/candy-origin/first-candy/>)

Uses of baking soda and vinegar. Baking soda and vinegar uses: unclog drains, clean pans, clean washing machine, freshen towels, stains off iron, dishwasher cleaner, toilet cleaner, deodorize outside of toilet. It can be used to make volcanoes. Interesting facts about baking soda. So baking soda has a melting point of 122 degrees fahrenheit.

Baking soda's IUPAC ID (International Union of Pure Applied Chemistry Identification) is sodium hydrogen carbonate. The molar mass (the mass given to a chemical element or chemical compound) of Baking soda is 84.007 grams. It is soluble (property of a solid, liquid, gas) in water. (<https://pubchem.ncbi.nlm.nih.gov/compound/Sodium-bicarbonate>)

<https://assignbuster.com/baking-neutralize-the-acid-and-base-properties/>

nih. gov/compound/516892) Baking soda and vinegar reactions are acid-base chemical reactions. Acid and bases react with each other because baking soda is a bicarbonate or sodium hydrogen carbonate and vinegar is an acetic acid. When Baking soda and vinegar mix together it makes carbon dioxide.

Which makes an Acid-Base reaction. ([http://scifun.chem.](http://scifun.chem.wisc.edu/HomeExpts/FIZZFOAM.html)

[wisc.edu/HomeExpts/FIZZFOAM.html](http://scifun.chem.wisc.edu/HomeExpts/FIZZFOAM.html)) There are many different types of experiments with baking soda and vinegar.

You can do volcanoes. There are fine motor activities. You can make snow kind of with them. You can do colorful science reactions. There are balloon experiments. There is an exploding bag thing with it.

You can do rockets. <https://preschoolinspirations.com/vinegar-baking-soda-science/>