

Gas and colors!

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



Gas and Colors! With the variety of chemistry project topics it is often difficult to choose what to do. Let me help you out. You want something that is easy to do, is virtually guaranteed to work but that will show the judges away with your incredible chemistry knowledge. This is one of those projects... The project What happens during a chemical reaction? The hypothesis When a chemical reaction happens, the original substances change to form different products. The experiments - What a gas! - Showing your true color. Why these experiments? In What a gas! you will visually see that a gas is produced from the chemical reaction. In Showing your true color you will use natural substances to show that the pH changes. By combining these two experiments, you will show that not only is a gas produced, but the reaction results in a change in pH. In this project you actually have a choice of chemistry project topics! Doing either one of the experiments mentioned above will probably be good enough, but if you really want to impress the judges, you can combine the 2! Combining the experiments Combining the experiments is easy. Before you add the baking soda to the vinegar, simply add some of the colored water as described in Showing your true color to the vinegar. You may need to repeat the experiment a couple of times until you are happy with the colors. I am going to leave that to you — it is all part of playing around with science until you have the right answer! Conclusion As explained in the conclusion of the experiment, in What a gas! carbon dioxide is produced. This is what blows up the balloon. The color change in the red cabbage water is a natural indicator. It shows there is a change in pH from acid to alkaline. Therefore, the hypothesis stated above is correct! “ Beef up your project” Now to really impress the judges! How about

including the chemical reaction equation in your write up and display...

$\text{CH}_3\text{COOH} + \text{NaHCO}_3 \rightarrow \text{CH}_3\text{COONa} + \text{H}_2\text{O} + \text{CO}_2$ or in words... acetic acid (vinegar) + sodium bicarbonate (baking soda) \rightarrow sodium acetate + water + carbon dioxide What a gas! As chemistry science fair project ideas go — this one is a gas. No really - I mean it — you get to blow up a balloon with gas that is formed from a chemical reaction. And you can do all this with normal stuff you find in your mom's kitchen — but please, get her permission first...