Cork rocket experiment essay sample

Science, Chemistry



Objectives: To show student how chemical reactions can react with one another to create totally new compounds. Liquids and solids can combine to create gasses with practical and fun applications.

Materials: A litre-bottle, Cork (if cork doesn't fit into bottle, either cut it, or place paper towels around it so it will fit snugly into neck of bottle), Paper Towels, Streamers (or anything light and dangly, paper is okay if it is in strips. This is purely decorative), thumbtack (to attach streamers), 1/2 cup of water, 1/2 cup vinegar, 1 teaspoon baking soda, and outdoorsy place.

Lesson: This should be presented as a chemistry experiment. Ask the kids what a chemical reaction is? Did they know they can make gasses out of liquids or solids? What happens if they put things like baking soda and vinegar together? If they don't know, tell them the two create a gas when combined. What's gonna happen if you combine the two chemicals in a confined area? Where is the gas gonna want to go? Is it just gonna stay in the bottle?

Procedure:

- 1. First, decorate your cork rocket. (this step is aesthetic) Put the streamers on however you like, attaching them by thumbtack on the broad end (the side that will remain outside the bottle)
- 2. Put water and vinegar into the bottle
- 3. Cut a 4×4 in (approx) square of paper towel. Put the teaspoon of baking soda in the middle. Roll the baking soda inside and twist the ends so it ends up looking like a hard candy. Basically, the baking soda needs to be

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completely enclosed in the paper towel, and it needs to be narrow enough to enter the bottle.

4. Be very very careful of eyes. Making sure opening of the bottle is not pointing to anything, and is preferably outside, quickly place the paper towel of baking soda into the bottle, then place the cork into the neck of the bottle. Just WAIT a bit... and the cork will shoot off into the air.

For the Wizards: Without getting too technical, Vinegar is an acid (acetic acid, actually) and Baking Soda is a carbonate (which has CO2). When you but these two together, they release carbon dioxide which is a gas and will try to spread and go into the atmosphere. Since this reaction happens in a closed bottle, it will put pressure on the cork, which will eventually fire out like a rocket.