

Dancing Popcorn

Ingredients:

- 1 quart-size jar
- Spoon
- Water
- 1 tbsp. popcorn kernels (or more)
- 2-4 tbsp. baking soda
- 1 cup white vinegar



Directions:

1. Fill the jar $\frac{3}{4}$ full of water.
2. Add baking soda and stir until baking soda dissolves completely.
3. Slowly add popcorn kernels 1 tablespoon at a time. Continue to add more if you want, however do not add more than $\frac{1}{4}$ cup.
4. Slowly pour in the vinegar. You may not need it all, and if you pour too much too fast you will end up with a volcano-like eruption!
5. Observe your dancing popcorn!

Here's How it Works:

- Baking soda is a bicarbonate and it's a base. Vinegar is an acetic acid, which of course is an acid.
- When these 2 combine a chemical reaction occurs. As a result of this chemical reaction, carbon dioxide gas is produced.
- When this reaction happens under water the carbon dioxide gas is trapped in bubbles which then collect on the popcorn kernels. When enough bubbles have collected the kernels begin to rise.
- When the bubbles reach the top of the jar and hit the air, the gas is released and the bubbles pop. Once a few bubbles have popped there's no longer enough gas to support the popcorn and it begins to sink.
- What makes it dance? The process repeats! As the kernel sinks, more bubbles start to collect and it rises once more. The popcorn will dance and dance until the reaction has released all the carbon dioxide.



Want to make the experiment last longer? Just add more baking soda and vinegar!