

Bursting Bags Painting Experiment

You'll get to experience a chemical reaction while mixing STEM with Art during this experiment! See how a classic baking soda and vinegar reaction can be used to create a piece of art that looks like a watercolor masterpiece.

Materials

- Food coloring, tempura paint, or chalk
- Poster board or cardstock paper
- Vinegar
- Zip-seal bags
- Tissue


Instructions

1. Set up your experiment space. Lay your 'canvas', a poster board or thick paper, on the ground in an area that can get messy.
2. Choose your coloring method. Tempura paint will have the best color payoff, followed by chalk and then food coloring.
 - a. For tempura paint powder or crushed chalk, mix it in with the baking soda before moving on.
 - b. For food coloring, mix it in with the vinegar.Mix your coloring with the appropriate medium.
3. Pour ~1/3 cup of vinegar into the zip-seal bag. Set aside.
4. Add approximately 2 tablespoons of baking soda onto a small tissue.
5. Wrap the tissue up, twisted at the top to hold the baking soda mixture.
6. ***Read ahead before moving to the next step!***



7. Take a few steps away from your 'canvas' and open the zip-seal bag just enough for the tissue to make it through. When you're ready, have someone help you. One of you will be in charge of dropping the tissue into the bag, and the other will be in charge of closing the bag as quickly as possible, and tossing it onto the 'canvas'.
8. Drop the tissue into the bag, seal the bag, and toss it onto the 'canvas'.
9. The bag will inflate and eventually cause a colorful explosion!
10. Repeat steps 2-8 with as many colors as desired until you're happy with your finished artwork.
11. Leave outside until dry. Make sure you clean up all of the zip-seal bags and tissue scraps!

How it Works



Baking soda is base and vinegar is an acid. When they mix, baking soda receives a proton from the vinegar which then transforms the baking soda into water and carbon dioxide. Carbon dioxide is a gas, which makes the remaining water bubble and fizz. The tissue is used to slow the reaction, so you have time to seal the bag and toss it onto your artwork!