

Puffy Paint

Instructions:

1. In one bowl mix $\frac{1}{2}$ cup of flour, 1 $\frac{1}{2}$ teaspoons of baking powder, and $\frac{1}{2}$ teaspoon of salt. Slowly add water to the mix and stir until you have the consistency similar to pancake batter. In the second bowl, repeat the same process but omit the baking powder. Once again match your mix to the consistency of pancake batter.
2. Spoon the mixture from your first bowl into a plastic sandwich bag. Add half of one color of food coloring. Seal the bag and mix the color around until the mixture is evenly colored. Cut one corner tip of the plastic bag. Squeeze the paint onto a paper plate to create your painted design. Repeat as needed for additional colors.
3. Repeat step 2 with your mixture from the second bowl on a different paper plate. Compare the plates and predict what you think will happen once the paint is heated in the microwave.
4. Place each plate in the microwave for 45 seconds. Compare the heated designs. What is different about the painted plates?

Materials:

Flour
Baking powder
Salt
Water
Food Coloring
2 Paperplates
4 ziplock bags
Scissors*
2 Bowls*
Spoon*

Project extensions:

Create your own puffy paint recipe. What happens if you had more or less baking powder to the recipe?

What's the STEAM behind it?

Baking powder is a chemical leavening agent which causes batter to rise when baked. Many types of baking powder are "double acting". The first reaction occurs when you mix the baking powder with a liquid and carbon dioxide is released causing bubbles. A second reaction takes place when heat is applied to the baking powder.

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