

Snow Day Science

Experiment with making snow 5 different ways. Try one or try them all!

Materials:

- Mixing bowls
- Measuring cups
- Tablespoon measure
- Mixing spoon or fork
- Table covering
- Gloves (optional)
- Baking soda
- Conditioner
- Lotion
- Cornstarch
- Water

Directions:

1. Prepare your workspace by covering your surface with a tablecloth or newspaper
2. For the following combinations, mix the two ingredients together in a bowl and record your observations on the next page.
 - What happened when you mixed them? What did it feel like? What did it look like? What did it sound like?

Try other combinations and see what happens! Which one was your favorite?

Experiment 1 - 1 cup baking soda, 3-4 tbsp shaving cream (add one tablespoon at a time)

Experiment 2 - 1 cup baking soda, 4-5 tbsp water
(one tablespoon at a time)

Experiment 3 - 1 cup baking soda, 3-4 tbsp conditioner

Experiment 4 - 1/4 cup shaving cream, 1/4 cup cornstarch

Experiment 5 - 1/4 cup cornstarch, 1/4 cup lotion

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What are we learning?

These 5 experiments show examples of both chemical and physical reactions. A physical reaction can be reversed, while a chemical reaction cannot. The reaction between baking soda and shaving cream is a chemical reaction as the baking soda reacts with the acidity of the shaving cream. This type of reaction is endothermic, meaning it absorbs heat and therefore feels cold to the touch. Water dissolves baking soda in the second experiment, a physical reaction. The third experiment is a physical reaction, not a chemical reaction, since the conditioner disperses the small baking soda particles to create a fluffy snow. The fourth reaction creates a Non-Newtonian fluid, which means it has properties of both a solid and a liquid depending on the amount of pressure applied, and was created through a physical reaction between the particles of cornstarch and the foamy cream. The cornstarch and lotion create a physical reaction as cornstarch particles are suspended in the lotion, creating a cloud like texture. Try combining other ingredients to see what kinds of snow and reactions you can create!

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Use this sheet to write down your observations. Use the blank rows to try your own combinations and see what happens!

Materials	Predict! What do you think it will look like?	Observe! What happened? What did it look like? What did it feel like?
Baking soda + shaving cream		
Baking soda + water		
Baking soda + conditioner		
Shaving cream + cornstarch		
Cornstarch + lotion		

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