

## Featured Activity of the Month: Foaming Frosty Snowpeople

Celebrate the season while learning a little bit of chemistry along the way. This activity from National 4-H can be done in a variety of settings- virtual and in person. Learn about STEM concepts through making snow creations with your group members! Real snow not required!

Materials List from 4-H.org

<b>Materials:</b> -Baking soda -Vinegar -Water -Dish soap -2 bowls or similar sized containers -Measuring cup (1 cup size) -Tablespoon -Teaspoon -Sticky note and pen or pencil -Optional: small plastic beads for decorating	<b>Directions:</b> 1) Measure one cup of baking soda into each bowl. 2) Add three tablespoons of water to each bowl. This will turn the baking soda powder into a moldable form. 3) Into one of the bowls, pour one teaspoon of dish soap. Using a sticky note, label the bowl that contains the soap. 4) For each bowl, thoroughly mix the contents and then work them with your hands into a moldable, dough-like ball. If they're not holding together well enough, you may need to add more water. Add just a few drops at a time, so you don't add too much. 5) Then form the dough balls in each bowl into a figure of your choice: A snowman, a snow dog — it's up to you! Then, add some decorations – beads, buttons, googly eyes, that's your choice, too. 6) Once you've admired your handiwork, it's time to destroy it! Fill your measuring cup with vinegar. 7) Now, pour the cup of vinegar over your first sculpture (the one without the soap) and observe the results. 8) Refill the measuring cup with vinegar, pour it over the other snow creature with the soap, and watch what happens.
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This activity is from the National 4-H "4-H at Home for the Holidays" series (<https://4-h.org/wp-content/uploads/2020/11/4H-At-Home-Holiday-Activities-Foaming-Snowmen.pdf>).

### Example Activity Plan

**Anchor:** Ask your group members, "Who has made a snow person before? What did you make and how did it turn out? Has anyone made a snowperson *inside* before?"

**Add:** Have group members follow the steps to make snowpeople and have a different person read the "Did you Know" after each step (<https://4-h.org/about/4-h-at-home/holidays/snow/>). Ask your group, who has heard the terms acid and base before? Where did you hear them? What would baking soda be? What would vinegar be?

**Apply:** As you create your snow people, make sure to show and tell! Show off snow creations before and after destruction. Ask your youth, what would happen if you did this with only soap or lemon juice instead of vinegar, what do they think would happen?

**Away:** Choose from the following questions to reflect upon this activity:

1. Did the two doughs feel similar or different?
2. Did the mixture with the dish soap react differently to the vinegar than the one without? Why do you think it reacted that way?
3. If you have any lumps remaining in your containers, what happens when you pour water over them? If you hold some of the residue in your hand over a bowl and pour more vinegar over it, how does it feel?

Check out other at-home activities from National 4-H (<https://4-h.org/about/4-h-at-home/holidays/>)!