

Frosty the Snowcan!

In a previous activity, a decrease in temperature caused water vapor (a gas) to change its state to liquid water. Lets see what happens if you decrease the temperature even more!

Materials:

- Empty metal food can
- Masking tape
- Metal or wooden spoon
- Ice
- Salt
- Teaspoon

Procedures:

1. Place 3 heaping teaspoons of salt in the bottom of the can. Fill the can about halfway with ice.
2. Add another 3 heaping teaspoons of salt.
3. Add more ice until the can is almost filled and then add another 3 teaspoons of salt. Hold the can near the top and mix the ice/salt mixture with a spoon for about 1 minute and remove the spoon.
4. Wait about 3-5 minutes and look at the outside of the can. What do you notice?



Think about this ...

In the last activity, you were asked to think about what happens when water vapor goes high into the sky and gets cold. What do you think happens when the temperature gets even colder? How does the activity you just did help you answer this question?

Where's the Chemistry?

In this activity, the water vapor was already in the air and condensed on the outside of the cold can. This made the water vapor change state from a gas to a liquid. But the can was very cold and some of the water changed state from a liquid to a solid (ice).



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The American Chemical Society develops materials for elementary school age children to spark their interest in science and teach developmentally appropriate chemistry concepts. The *Activities for Children* collection includes hands-on activities, articles, puzzles, and games on topics related to children's everyday experiences.

The collection can be used to supplement the science curriculum, celebrate National Chemistry Week, develop Chemists Celebrate Earth Day events, invite children to give science a try at a large event, or to explore just for fun at home.

Find more activities, articles, puzzles and games at www.acs.org/kids.

Safety Tips

This activity is intended for elementary school children under the direct supervision of an adult. The American Chemical Society cannot be responsible for any accidents or injuries that may result from conducting the activities without proper supervision, from not specifically following directions, or from ignoring the cautions contained in the text.

Always:

- Work with an adult.
- Read and follow all directions for the activity.
- Read all warning labels on all materials being used.
- Wear eye protection.
- Follow safety warnings or precautions, such as wearing gloves or tying back long hair.
- Use all materials carefully, following the directions given.
- Be sure to clean up and dispose of materials properly when you are finished with an activity.
- Wash your hands well after every activity.

Never eat or drink while conducting an experiment, and be careful to keep all of the materials used away from your mouth, nose, and eyes!

Never experiment on your own!

For more detailed information on safety go to www.acs.org/education and click on "Safety Guidelines".

