

Post-trip Lesson for Solids, Liquids, Gases and the In-Between!

Life Cycle of a Snowman

Advanced Prep

1. Fill one balloon with water until it is large enough to fit in the large bowl and tie. Fill the second balloon with water until it is large enough to fit into second bowl and tie. Fill third balloon with water until it is large enough to fit in the small bowl and tie. Place a towel in the bowl and then the water balloon on top of the towel. This will make removal easier.
2. Lay something flat like a small plate on top of the balloons to create a flat surface while freezing. This flat surface will make the construction easier. Place in freezer for at least 48 hours.
3. Snowman Construction
 - a) Decide where you want your snowman and construct it there. Make sure it is a sturdy table or desk. You do not want to move it. Pick a location that will not get a lot of traffic.
 - b) Remove frozen balloons from freezer remove the latex from the largest and place it in the plastic tub.
 - c) Sprinkle a little salt on the top of the large ball and then place the medium-sized ball on top (the salt will help the ice melt a little and create a rough surface for adhesion).
 - d) Sprinkle the top of the medium ball with salt and place the smallest on top.
 - e) The cut out felt pieces will stick to the ice - may need a little salt to help.

What You Will Need:

- 3 round latex balloons
- 3 bowls (large, medium, small)
- 1 medium sized plastic tub
- salt
- felt to decorate your snowman
- electric skillet

Engagement

Have students act out with their bodies, as a group, the way molecules are in the three states of matter, like they did during the Discovery Lab.

Exploration

1. Have student's record observations of the snowman during three different times of day (morning, after lunch, end of day) making sure to label on their diagram the states of matter they observe.
2. At the end of the day, your snowman should be almost completely melted. At this time, take the remains of the ice and some of the cold water and place it in electric skillet. Turn the electric skillet on (do not let students be too close or touch the skillet). Melt the ice and bring to a boil. The students will see the evaporation process and their snowman turn to gas.

Explanation

Review with students the "life cycle" of a snowman. Ask students if they can think of any other objects or material that can change from one state of matter to another.

Other Resources

This activity adapted from the Frugal Teacher <http://www.frugalteacher.com/2011/09/life-cycle-of-snowman.html>

Next Generation Science Standards: PS1.A, 2-PS1-1.

Nevada State Science Standards: P.2.A.1, N.2.A.1

Common Core: W.2.8, MP.2