

Rock-N-Roll Ice Cream

Brief Description

Learn how ice cream is made while making your own homemade ice cream.

Objectives:

The student will be able to:

- Understand how the freezing point of water is affected by salt.
- Describe the process of making ice cream.

Materials Needed:

- One large (2lbs. 7oz.) coffee can with lid or one large freezer bag
- Two baby food jars or one small freezer baggie
- One pint half-and-half or light cream
- ½ cup sugar
- 1 teaspoon vanilla
- 6 or 7 cups crushed ice
- ¾ cup rock salt

Preparation:

- Have all of the ingredients set up and ready to mix.

Background:

Ice cream freezes at – 6 degrees C (21degrees F.) Ice cream can be made in the classroom with the understanding that the freezing point of water is actually lowered by adding salt to the ice between the bag or baby food jar walls. Heat energy is transferred easily from the milk through the plastic bag to the salty ice water causing the ice to melt. As it does so, the water in the milk freezes, resulting in ice cream.

Florida Fact: There are more than 130 dairy farms in Florida.

Activity

1. In the baby food jars or small freezer bag, combine half-and-half, sugar and vanilla.
2. Stir well. Put lid on tightly or seal tightly.
3. Place a thin layer of crushed ice on the bottom of the larger coffee can or large freezer bag and sprinkle with 1 tablespoon of rock salt.
4. Place the baby food jars inside of the larger can or small freezer bag inside the larger freezer bag. Pack the area between the jar and the can or small freezer bag and large freezer bag with crushed ice and rock salt- using 2 tablespoons of rock salt for every cup of crushed ice.
5. Place lid on larger can or seal larger bag.
6. Roll or shake back and forth for 10-15 minutes. (Protect countertop or floor with a towel or roll on cement floor.)
7. Lift out baby food jars or small freezer bag and carefully remove lids or open.
8. Scrape down sides and stir all the ice cream together. If the ice cream is too soft; repack large can with fresh ice and rock salt; replace lid or seal.
9. Continue rolling can or shaking baggie for a few more minutes or until ice cream is firm.

Makes about five, ½ cup servings.

Extensions:

Freezer Bag Ice Cream (Appendix, page 61)

Let's Make Butter

Deliah, the Bag Puppet

Evaluation:

Have the students write a short essay describing the process of making ice cream.

