

# ICE CREAM IN A BAG

MOVING AGRICULTURE TO THE CLASSROOM



## Supplies:

- Sealable Plastic Bags: sandwich and gallon
- Cream (Half & Half, you could also use milk) (1/2 cup)
- Sugar (1 tablespoon)
- Vanilla (1/4 teaspoon)
- Ice
- Rock Salt

## Procedure:

1. Divide students into pairs.
2. Each student received a sandwich bag and a gallon size bag.
3. Place **½ cup cream, 1 tablespoon sugar and ¼ teaspoon vanilla** in the sandwich bag. Press air out of the bag and seal it securely.
4. Fill the gallon size bag with ice cubes. Add **¼ cup rock salt** (table salt will work but not as well)
5. Place the smaller bag into the larger bag and seal up the whole thing.
6. Knead the bags for about 5 minutes or until ice cream forms.
7. If the mixture is till soupy after 5 minutes, the temperature may not be cold enough. Drain the excess water, add more salt and ice, and knead until firm.
8. Now the best part, eating up all that hard work.

**Makes about 1 scoop of ice cream.**

## Who invented ice cream?

- Legend has it that the Roman emperor, Nero, discovered ice cream. Runners brought snow from the mountains to make the first ice cream. In 1846, Nancy Johnson invented the hand-cranked ice cream churn and ice cream surged in popularity. Then, in 1904, ice cream cones were invented at the St. Louis World Exposition. An ice cream vendor ran out of dishes and improvised by rolling up some waffles to make cones.

## What does the salt do?

- Just like we use salt on icy roads in the winter, salt mixed with ice in this case also causes the ice to melt. When salt comes into contact with ice, the freezing point of the ice is lowered. Water will normally freeze at 32 degrees F. A 10% salt solution freezes at 20 degrees F, and a 20% solution freezes at 2 degrees F. By lowering the temperature at which ice is frozen, we are able to create an environment in which the milk mixture can freeze at a temperature below 32 degrees F into ice cream.