

# Ice Cream Activity

## Objective:

Practice investigating colligative properties.

## Materials:

- milk
- (2) measuring cups
- (2) teaspoons
- (2) tablespoons sugar (white)
- (2) freezer bags
- (2) plastic, cylindrical jars with lids
- rock salt
- clear cups
- spoons
- vanilla extract

## Procedure:

1. Place one cup of milk, two tablespoons of sugar, and one-half teaspoon of vanilla extract into a small freezer bag.
2. Eliminate as much air as possible from the bag, and seal it completely.
3. Place some crushed ice in the bottom of a plastic, cylindrical jar.
4. Pour a generous amount of rock salt over the ice.
5. Place the closed freezer bag containing the milk-sugar-vanilla mixture on top of the ice in the plastic jar.
6. Cover the bag with more crushed ice and pour more salt over it. Make sure that the jar is filled to the top with ice. Secure the lid, creating a water-tight seal.
7. Sit at a table facing your lab partner. Roll the jar back and forth between the two of you until the mixture turns solid. This will become evident when the air bubbles inside the freezer bag stop moving. If too much ice melts before that happens, add more ice and salt, and continue rolling.
8. Open the jar and remove the bag. Scoop out the contents, dividing them equally between the two polystyrene cups for you and your lab partner. Enjoy your ice cream!