Making Ice Cream

Basic Ingredients:
- 1 cup milk
- 1 cup of half & half

For vanilla flavor:
- 2 Tablespoons sugar
- 2 French vanilla coffee creamers

For chocolate flavor:
- 4 Tablespoons of Chocolate Nesquik

For strawberry flavor:
- 4 Tablespoons of Strawberry Nesquik

Procedure:
1. Place 1 cup of milk and one cup of half & half into a small ‘zip lock’ bag.
2. Choose your flavor and add flavor ingredients from the list above. Mix well.
3. Record the temperature of liquid mixture.
4. Close small bag tightly! To avoid contamination, double bag it using another small bag.
5. Place small bag(s) inside a large ‘zip lock’ bag along with 6 cups ice.
6. Add one cup table salt to the ice. Mix in well.
7. Close large bag.
8. Massage bags. Use mittens, heavy gloves, or a towel around your hand to avoid transferring body heat to the bags.
9. Keep massaging the bags until the ice cream is solid.
10. Remove and wipe off small bag.
11. Record the final temperature of the solid ice cream mixture.
12. Record the temperature of the ice and salt mixture.

Data:

Initial temperature of ice cream mixture __________________
(just starting)

Final temperature of solid ice cream __________________
(when ready to eat)

Temperature of ice and salt mixture __________________

Questions: (Answer on the back.)
1. Explain what happened to the ice cream mixture.
2. Explain the role of salt in this activity.
3. Describe what would have happened if salt was not added to the ice.
4. Why doesn’t ice cream freeze at 0° C?
5. What role did massaging have in this process?