

# ICE CREAM IN A BAG



SUPPLIES (makes 1 serving):

- ½ cup of half and half
- 1 tbs. of sugar
- ¼ tsp. of vanilla
- 2 quart sized sandwich baggies
- 1 gallon sized sandwich baggie
- ½ cup of salt (large rock salt works best)
- 5 or 6 cups of ice
- gloves and a small towel(optional)
- sprinkles (optional)

## Procedure

1. Measure out sugar and vanilla and half and half into a quart sized sandwich baggie.
2. Squeeze out as much air as you can and seal the baggie.
3. Place the baggie inside the other quart sized baggie for extra protection.
4. Place the doubled up baggie into the gallon sized baggie and add the 5 cups of ice.
5. Add the ½ cup of salt to the gallon baggie and seal it.
6. Now it's time to shake! Shake the baggie for about 5-10 minutes and the cream should begin to solidify. (You may need to add an additional cup of ice while shaking if the ice melts too quickly.)
7. Check the small baggie to determine the consistency.
8. Once you're satisfied with the consistency of the ice cream cut a corner off the baggie and squeeze the ice cream out into a bowl like soft serve ice cream.
9. Add some sprinkles for extra fun!

## The Science Behind Ice Cream in a Bag:

The salt added to the ice lowers the melting point of the ice, just like it does when we add salt to roads in the winter. In order for the ice to melt, however, it has to absorb heat from its surroundings like the ice cream in the bag. The ice pulls the heat away from the ice cream to melt which allows the ice cream to freeze.

Ice cream is also a compound. Once all the ingredients of the ice cream are mixed together they are bound together. The ingredients are chemically combined and cannot be separated by physical means like a mixture. To separate the ingredients in a compound there would have to be another chemical reaction.