



## “Ice Cream!”

### Topic(s)

- Freezing point of water<sup>1</sup>: Need salt to help the ice cool the ice cream down faster
- Phase changes<sup>1</sup>: Ice has to absorb energy from the environment (your hands) to melt
- Foams (gas dispersed in a liquid)<sup>1</sup>: Half of the volume of ice cream is made of air without it ice cream would be a frozen ice cube
- Taste: Fat component in milk mostly contributes to the rich taste of ice cream
- Stabilizers<sup>1</sup>: Holds unfrozen portion of the water together so that it does not move throughout the ice cream and become coarse and icy

### Materials

Milk, sugar, ice, salt, large and small ziplock bags some newspaper, vainilla extract, teaspoon

### Procedures<sup>2</sup>

Each student gets a small bag and each will add:

1 teaspoon of sugar

2 oz. of milk

A dash of vanilla extract

- 1) Add the sugar and the milk in a bag; seal it and squish everything around to mix it up.
- 2) Put 3 or 4 of the students’ bags into a large bag filled halfway with ice and with 5 oz. of salt
- 3) Wrap the big bag up in newspaper so that it looks like a tootsie roll
- 4) Two students take one end each and shake the “tootsie roll” for about 5 min

1 <http://www.foodsci.uoguelph.ca/dairyedu/findsci.html>

2 <http://teachers.net/lessons/posts/454.html>