

No one knows when ice cream was first made. We do know that Marco Polo returned from China with recipes for frozen ices. Around 1700, ice cream in America was made by hand and eaten the same day because there was no refrigeration. A Baltimore milk dealer served the first sodas and sundaes around 1900. The first ice cream bars appeared in 1921.

Freezing ice cream depends upon cold water and not the ice itself. When ice melts it absorbs heat to change from a solid (ice) to a liquid (water). Ice feels cold because it takes heat away from your skin. In making ice cream, the ice takes the heat away from the cream because the ice wants to melt. As a result, the ice gets warmer and the cream gets colder. To "encourage" the ice to melt faster, we use salt. Therefore, the faster the ice melts the more heat it absorbs from the cream and the quicker we get "iced" cream.

Answer the following questions in FCS in your notebook.

1. In our *It's Freezing!* lab, by how many degrees Celsius was the freezing temperature of water lowered when salt was added?
2. What happened to the ice in our *Ice Cream* and *It's Freezing!* labs when we added salt?
3. In our *Ice Cream* lab, where did the ice get the thermal energy it needed to melt?
4. How did adding salt to the ice in our *Ice Cream* lab help us make ice cream?
5. Other than taste, what role do you think the sugar plays in the ice cream making process?
6. Did your liquid change to a solid at the same time as everyone else's?
7. Did the amount of rolling or shaking have anything to do with how soon your liquid turned to a solid? Explain.
8. If you froze it in half the time, how would that affect the texture? Explain.