

# 12 Days of Winter Break

## Sticky Ice Experiment

### What You Need:

- piece of string
- three small bowls
- water
- ice
- salt

**Objective:** Lift an ice cube using only string and salt.

**Science concept:** Salt's effects on the freezing point of water.



Photo from playdoughtoplato.com

### Instructions:

1. Fill one bowl with a little water, one with ice, and one with salt.
2. Place a few ice cubes in the water bowl. Try to pick up an ice cube with the string.
3. Introduce the salt. Observe what happens when salt is sprinkled on an ice cube.
4. Place the string on the ice and sprinkle salt over the string. Now wait!
5. After about a minute, carefully lift the string slowly.
6. After the first "magical" attempt, repeat the experiment and discuss the science behind the sticky ice.

### What's happening?

The salt sprinkled on the ice causes it to start melting. Water freezes at 32 degrees Fahrenheit but when salt touches the ice, it lowers the freezing point to much lower than that. In order for the ice to melt, it absorbs heat. The heat that it absorbs comes from the water near the ice cube. Some of the water becomes so cold that it freezes, and the string becomes trapped, allowing you to lift the cube out of the water.

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