

GALLERY EXPLORATION

ACTIVE LEARNING GUIDE

MIXING UP SLUSHIES WITH SCIENCE

You can mix up a slushy treat by lowering the freezing point of water! What happens when you put salt on ice? *The ice melts!* How does this work? The freezing point of water is 32°F. When water reaches its freezing point, the free-flowing liquid molecules form into organized crystal structures forming solid ice! Salt disrupts the formation of ice because when it hits even a little bit of liquid on the surface of the ice, it breaks up into two ions – sodium and chloride – these ions move between the liquid molecules, pushing them apart and disrupting their ability to form links and turn into ice. This is called Freezing Point Depression! The trick is that there must be at least a little bit of liquid for salt to do its work, so using salt to melt ice is generally only effective at temperatures above 16°F. The super COOL thing about using salt to lower the freezing point of water is that you can use it to create a yummy treat!

What You Need to Make a Science Slushy:

- 2 Quart-size Freezer Bags
- Cup of Water
- Singles Drink Mix
- Ice
- ¼ Cup of Ice Cream Salt
- Cloth

WATER SCIENCE



How to Make a Science Slushy:

1. In one quart-size Ziploc freezer bag, put ¼ cup of ice cream salt and fill about half full of ice
2. In the second quart-size Ziploc freezer bag, pour in 1 cup of water and ½ of a packet of drink mix
3. Seal the bag with water and drink mix and place it inside the bag with ice and salt. Seal the bag with ice and salt
4. Wrap the bag with a cloth to protect your skin from getting too cold and shake the bags for several minutes
5. After a few minutes, carefully pull the drink mix bag from the ice and salt bag to see if the water is turning into icy slush
6. Continue shaking until the drink mix reaches the level of slush that you desire
7. When ready, take the slushy bag from the salty ice bag and wipe the salty liquid from the bag. Pour into a cup or eat the slushy directly from the Ziploc bag. Enjoy!