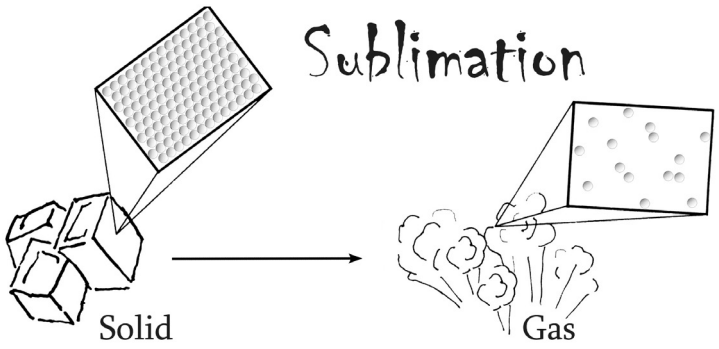
Dry Ice Exploration

Introduction



Dry ice is frozen carbon dioxide, the same chemical that can be found in our atmosphere. It is able to keep things very cold because its temperature is around -109.3°F (-78.5°C). What makes dry ice unique is that fact that it readily sublimes at standard atmospheric pressure and temperature. In other words, in our normal conditions this material changes from a solid directly into a gas, skipping the liquid phase. Dry ice also has three times the cooling power per volume of regular ice. Due to these two facts, this chemical is often used in transporting materials that need to stay refrigerated over a long period of time.

Activities

1. Dry Ice in Water — Fill a clear plastic cup halfway with water. Place a chunk of dry ice in the cup and observe what happens.

Observations

_____

_____

_____

_____

_____

_____

2. Dry Ice with Soap — Fill a clear plastic cup halfway with water and add 2 TBSP (30 mL) of dish soap. Mix well before adding a chunk of dry ice in the cup and observe what happens.

Observations

_____

_____

_____

3. Disappearing Ice — Select two small, but equal pieces of dry ice and regular ice. Place each piece on a separate plate and set the plates aside. After 45 to 60 minutes check the two plates and observe what has happened.

Observations

Conclusions

I learned that dry ice: