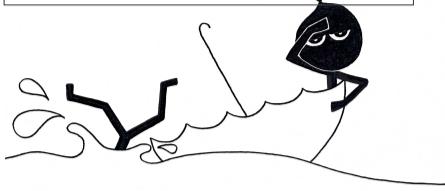


After many days on the river, Derring started doing tricks and, of course, fell out of the umbrella.

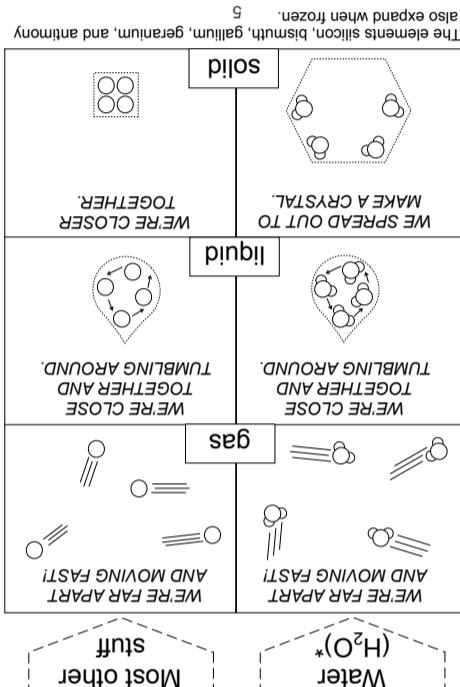


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The shape of the crystal that water molecules form is a hexagon. And this is why snowflakes are six-sided.  
The shape of the crystal that water molecules form is a hexagon. And this is why snowflakes are six-sided.  
Water expands when frozen. This structure, they have to spread out. This perfectly matched. To make this lattice positive and negative sides are up in a crystal structure so that their positive sides line up. When water freezes, the molecules line up in a crystal structure so that their positive sides line up. This is why ice expands when frozen.

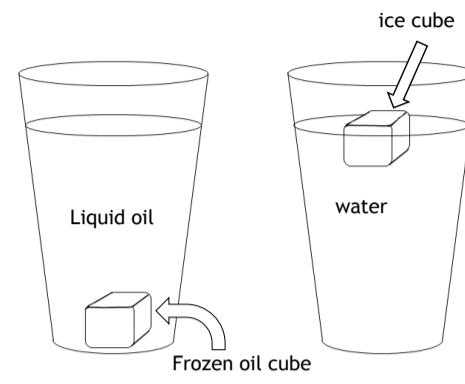
**When frozen, water EXPANDS.**

## SCIENCE MOM'S Guide to WATER, Part 4

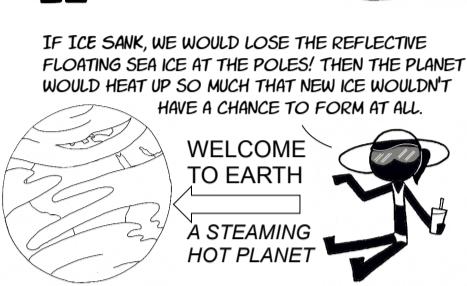
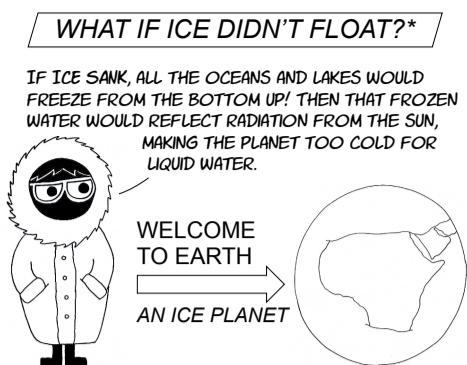


Ice floats in liquid water, but the OPPOSITE happens for most other substances!

To see the "regular" way solids behave, place a frozen cube of oil into a cup of liquid oil. It will sink straight to the bottom.



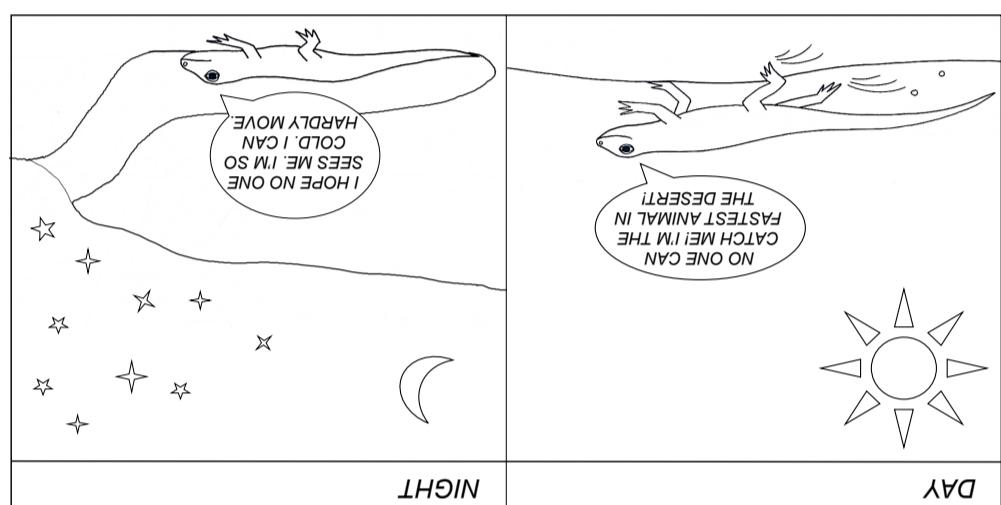
1



\*Scientists don't agree on what would happen.

2

Turn down the temperature, and you turn down the speed.  
**MOLECULES BEHAVE THE SAME WAY.**



To understand how liquids turn into solids, it helps to remember something about reptiles: They move fast when they're warm, and are sluggish and slow when cold.

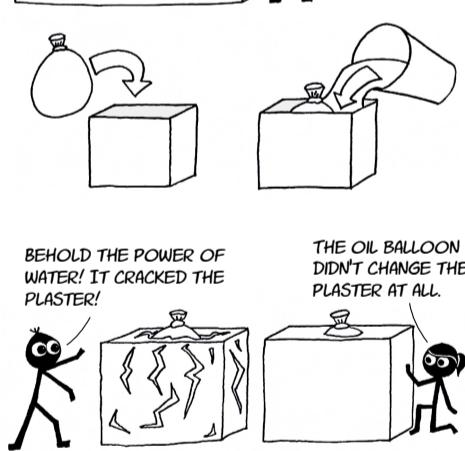
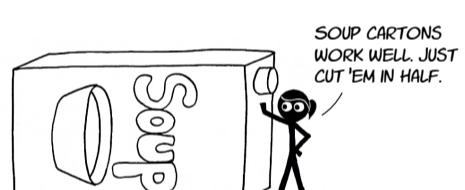
## 1. Frost Wedging

### Materials:

- Water
- Oil
- 2 identical containers
- Plaster of Paris or gypsum
- Balloons
- Freezer

### Method:

- Fill one balloon with water and one balloon with oil (optional).
- Prepare containers for plaster, for example, by cutting a small cardboard container in half.
- Place balloons in containers.
- Mix plaster & water according to directions and pour it in the containers around the balloons.
- Let dry and then freeze. Remove containers and observe.



8

## 2. Magic Slushy

### Materials:

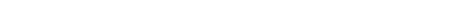
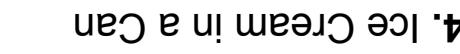
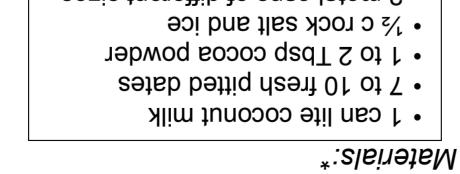
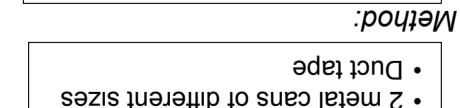
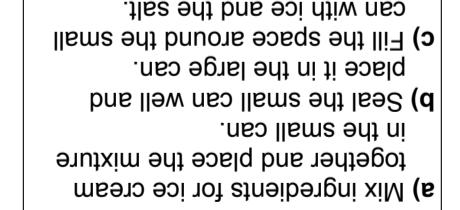
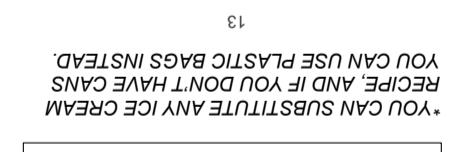
- Bottles of carbonated soda
- Freezer
- Cup and spoon

### Method:

- Place the bottle of soda in the freezer for 3 hours. (YOU MAY WANT TO PLACE SEVERAL IN THE FREEZER AND TAKE THEM OUT AT 30 MINUTE INTERVALS ONCE THEY'VE BEEN IN THE FREEZER FOR AN HOUR. THE CORRECT TIME TO REACH THE "SUPER COOLED" STATE WILL VARY BY FREEZER.)
- Remove soda and be careful not to bump or jar it too hard. Open lid slowly and pour soda into an ice-cold cup. If it is super-cooled, it will freeze into a slushy as it is poured.



9



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A

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