



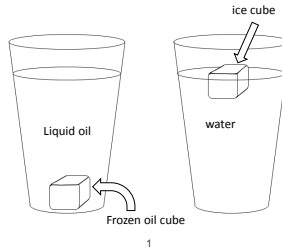
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## SCIENCE MOM'S Guide to WATER Part 4

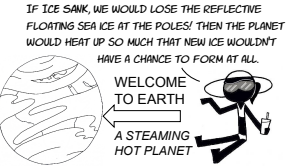
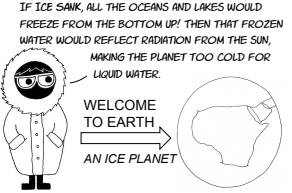


Ice floats in liquid water, but the OPPOSITE happens for most other substances!

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.



### WHAT IF ICE DIDN'T FLOAT?\*



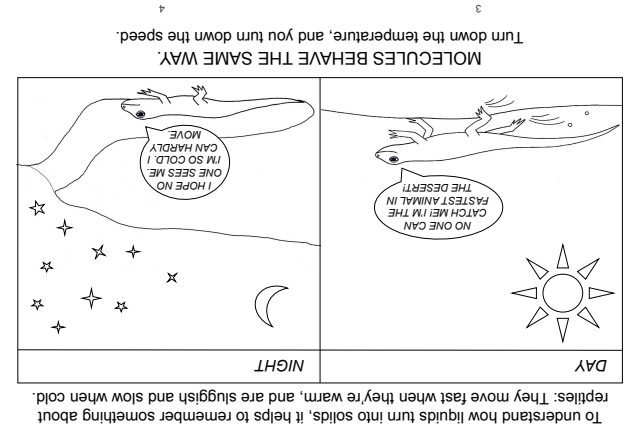
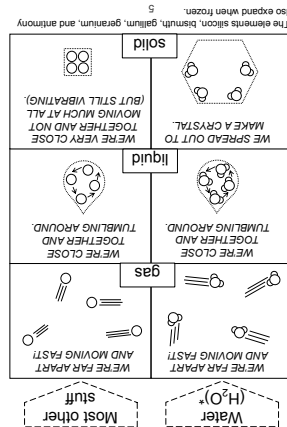
\*Scientists don't agree on what would happen.

The shape of the crystal that water molecules form is a hexagon, and this is why snowflakes are six sided.



When water freezes, the molecules line up in a crystal structure so that their positive and negative sides are perfectly matched. To make this lattice structure, they have to spread out. This is why ice expands when frozen.

EXPANDS when frozen.



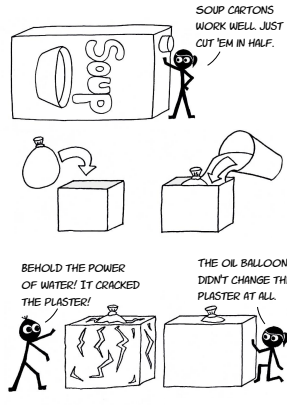
## 1. Frost Wedging

### 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.



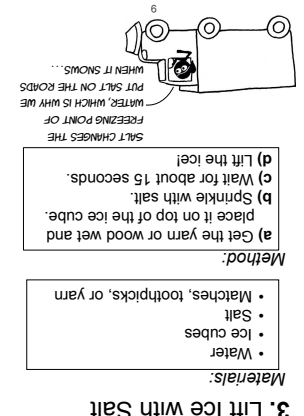
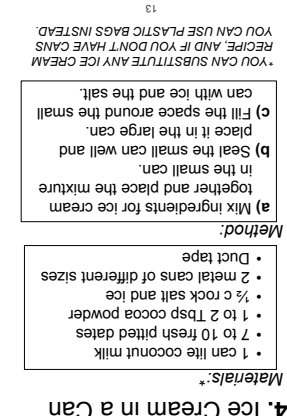
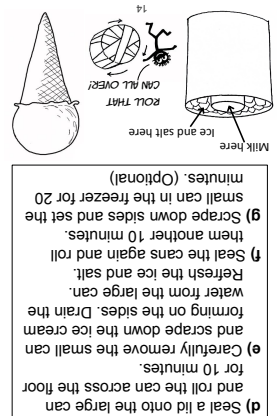
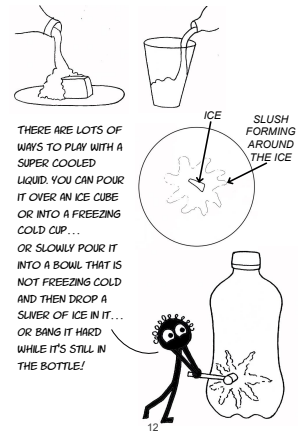
## 2. Magic Slushy

### 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.



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