

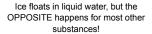
After many days on the river, Derring started doing tricks and, of course fell out of the umbrella.



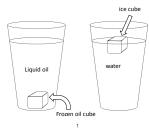
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To see the "regular" way solids behave, place a frozen cube of oil into a cup of liquid oil. It will sink straight to the bottom.



WHAT IF ICE DIDN'T FLOAT?*

IF ICE SANK, ALL THE OCEANS AND LAKES WOULD FREEZE FROM THE BOTTOM UP! THEN THAT FROZEN WATER WOULD REFLECT RADIATION FROM THE SUN,

MAKING THE PLANET TOO COLD FOR WELCOME TO EARTH,

TE TOE SANK WE WOULD LOSE THE REFLECTIVE WOULD HEAT UP SO MUCH THAT NEW ICE WOULDN'T HAVE A CHANCE TO FORM AT ALL



*Scientists don't agree on what would happen

is why snowflakes are six sided. molecules form is a hexagon, and this I DE SUSDE OF THE CRYSTAL THAT WATER

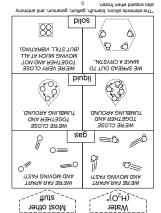




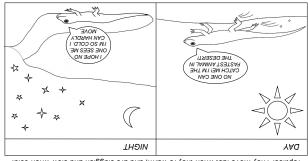


is why ice expands when frozen. structure, they have to spread out. This bettectly matched. 10 make this lattice their positive and negative sides are line up in a crystal structure so that When water freezes, the molecules

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



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

1. Frost Wedging

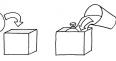
Materials:

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

Method:

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





THE OIL BALLOON DIDN'T CHANGE THE OF WATER! IT CRACKED

2. Magic Slushy

Materials:

- · Bottles of carbonated soda
- Freezer
- · Cup and spoon

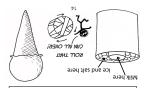
Method:

- a) Place the bottle of soda in the freezer for 3 hours, (YOU MAY WANT TO PLACE SEVERAL IN 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.)
- b) 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.



OR INTO A FREEZING COLD CUP. OR SLOWLY POUR IT INTO A BOWL THAT IS NOT FREEZING COLD AND THEN DROP A SLIVER OF ICE IN IT WHILE IT'S STILL IN





minutes. (Optional) small can in the freezer for 20 a) Scrape down sides and set the f) Seal the cans again and roll them another 10 minutes. Refresh the ice and salt. water from the large can. torming on the sides. Urain the and scrape down the ice cream e) Carefully remove the small can .cor iu minutes.

and roll the can across the floor d) Seal a lid onto the large can

4. Ice Cream in a Can



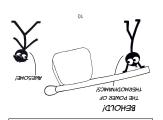
c) Fill the space around the small place it in the large can. p) Seal the small can well and in the small can. together and place the mixture a) Mix ingredients for ice cream

• Dnct tabe

- $\frac{1}{2}$ c rock salt and ice 2 metal cans of different sizes • 1 to 2 Thep cocoa powder
 - . V to 10 tresh pitted dates J can life coconut milk

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The trick is to get the timing right: if you try to pick up the ice too early or too late, then it won't work.





d) Lift the ice! c) Wait for about 15 seconds. b) Sprinkle with salt. place it on top of the ice cube. a) Get the yarn or wood wet and Nethod:

· Matches, toothpicks, or yarn

seano eou .

Water

Materials:

3. Lift Ice with Salt

В	A	A	X
В	C		D
F	E	E	D
E	G	Ð	X