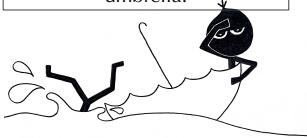




After many days on the river, Derring started doing tricks and, of course, fell out of the umbrella.



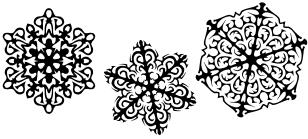
SCIENCE MOM

— JENNYBALLIF.COM —

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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 it freezes.

When frozen. EXPANDS

1. Frost Wedging

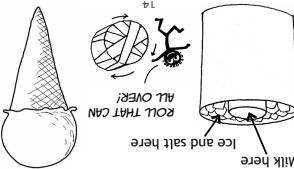
Materials:

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

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.

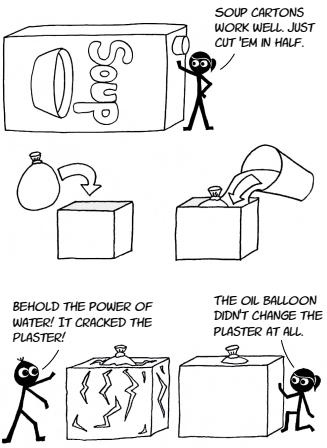
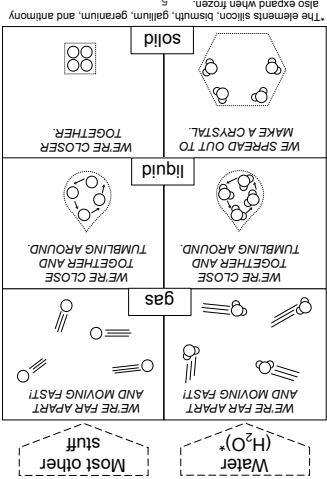
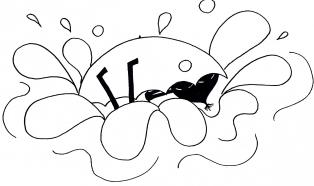
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- (d) Seal a lid onto the large can and roll the can across the floor for 10 minutes.
- (e) Carefully remove the small can and scrape down the ice cream forming on the sides. Drain the water from the can.
- (f) Seal the cans again and roll them another 10 minutes.
- (g) Scrape down sides and set the small can in the freezer for 20 minutes. Seal the cans again and set the small can in the freezer for 20 minutes. (Optional)

SCIENCE MOM'S Guide to WATER, Part 4

SPLASH!

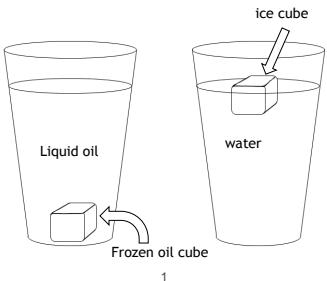


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- BEHOLD THE POWER OF WATER! IT CRACKED THE PLASTER!
THE OIL BALLOON DIDN'T CHANGE THE PLASTER AT ALL.

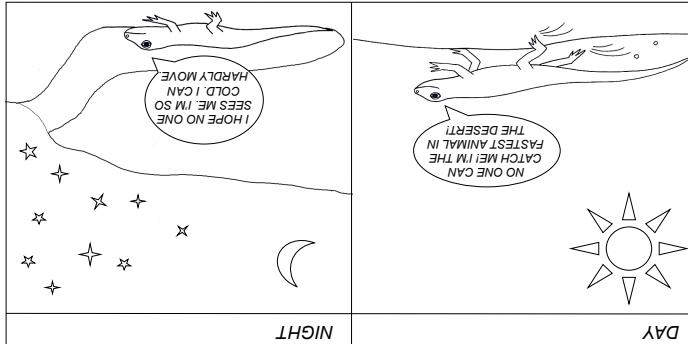
Ice floats in liquid water, but the OPPOSITE happens for most other substances!

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

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.

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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- (a) Mix ingredients for ice cream together and blend the mixture in the small can.
- (b) Seal small can well and roll together and seal the can.
- (c) Fill the space around the can with ice and seal the small can with ice and seal the salt.
- (d) Sprinkle with salt. If you try to pick up the ice too early, then it won't work.

- BEHOLD! THE POWER OF THE FREEZING POINT! WHICH IS WHY WE PUT SALT ON THE ROADS WHEN IT SNOWS...!
- (a) Get the yarn or wood wet and place it on top of the ice cube. (b) Sprinkle with salt. If you try to pick up the ice too early, then it won't work.

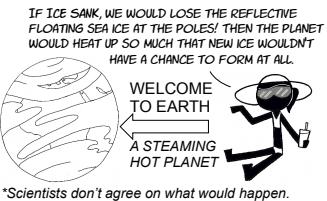
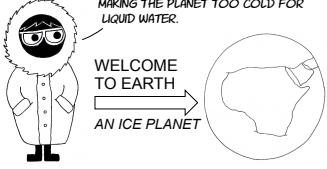
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- Materials:
 • 1 can little coconut milk
 • 7 to 10 fresh pitted dates
 • 1/2 cup cacao powder
 • 1 to 2 Tbsp cocoa powder
 • 2 metal cans of different sizes
 • 1/2 cup salt and ice
 • 1 can little coconut milk
 • Seal the cans again and salt
 • Roll the cans across the floor for 10 minutes.
- (d) Seal a lid onto the large can and roll the can across the floor for 10 minutes.
- (e) Carefully remove the small can and scrape down the ice cream forming on the sides. Drain the water from the can.
- (f) Seal the cans again and roll them another 10 minutes.
- (g) Scrape down sides and set the small can in the freezer for 20 minutes. Seal the cans again and set the small can in the freezer for 20 minutes. (Optional)

- Materials:
 • Salt
 • Ice cubes
 • Water
 • Matches, toothpicks, or yarn
 • Milk
 • Salt cubes
 • GONGS TO BE GONE TO BE
 • THE FREEZING POINT OF WATER.

WHAT IF ICE DIDN'T FLOAT?*

IF ICE sank, all the oceans and lakes would freeze from the bottom up! Then the frozen water would reflect radiation from the sun, making the planet too cold for liquid water.



*Scientists don't agree on what would happen.

3. Lift Ice With Salt

B

A

A

X

B

C

C

D

F

E

E

D

E

G

G

X