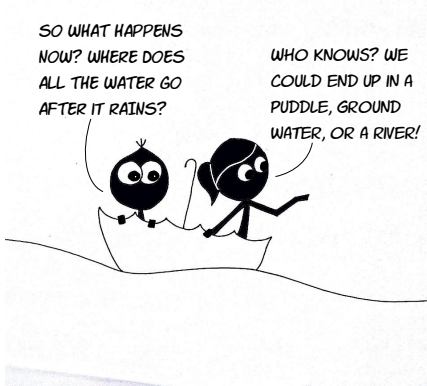
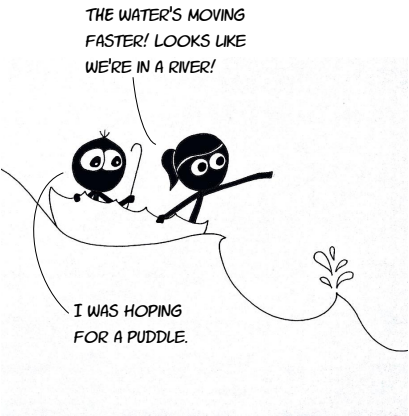
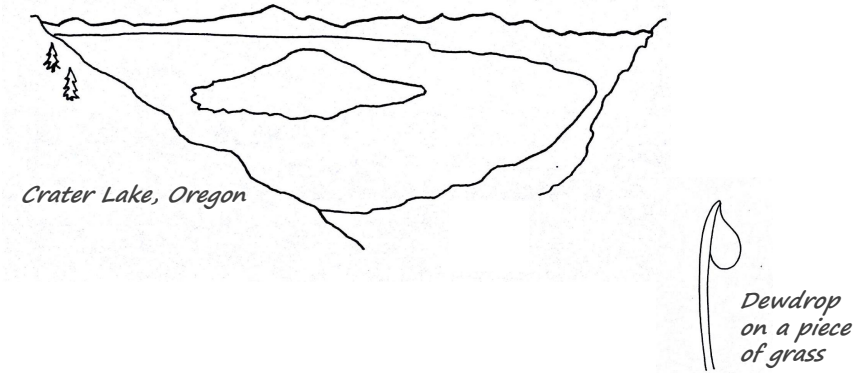


SCIENCE MOM'S
Guide to WATER **Part 2**

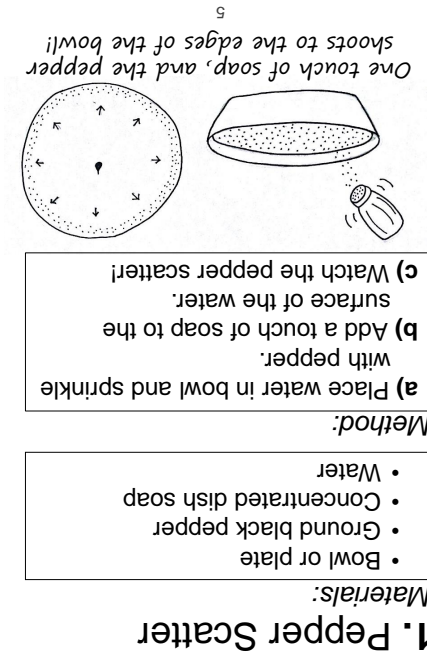
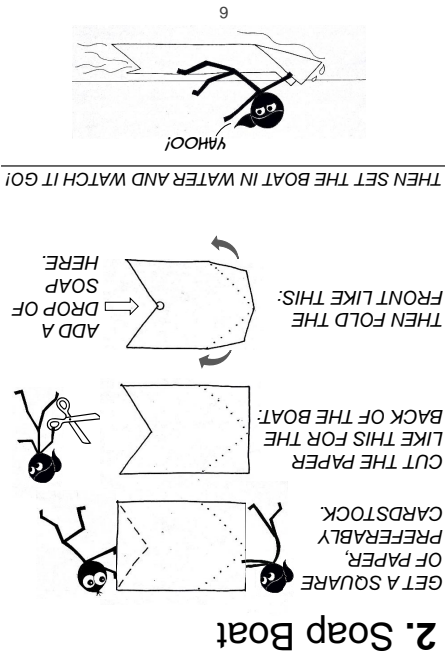


Think of a big lake versus a dewdrop. Pretty big difference in size, right?



The dewdrop is SUPER small compared to the lake. But a water molecule (the smallest bit of water you can have) is MUCH smaller than a dewdrop.

A single drop of water has more than 1,000,000,000,000,000,000,000 water molecules! That huge number with 21 zeros is called a sextillion, and it is a TRILLION TIMES BIGGER than one billion.



LET'S TALK ABOUT BIG NUMBERS

Name	How many zeros	How long to count that high*
Million	6 (1,000,000)	11 days
Billion	9 (1,000,000,000)	31 years
Trillion	12	31,704 years
Quadrillion	15	31 million years
Quintillion	18	31 billion years
Sextillion	21	31 trillion years
Septillion	24	317 trillion centuries
Googol	100	Don't be ridiculous!

GOOGOL? ISN'T THAT THE NAME OF AN INTERNET SEARCH ENGINE?

THAT'S WHAT I SAID.

NO, YOU SAID GOOGOL.

HUH?

JUST GOOGLE GOOGOL AND YOU'LL FIGURE IT OUT!

*Assuming a rate of counting one number per second. A computer could count at this speed, a person would need to take *much* longer.

3. Floating Pin

Materials:

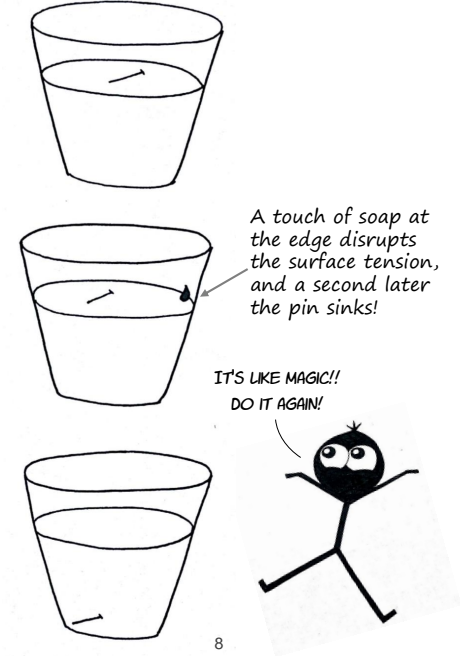
- A small pin or needle
- Bowl or cup
- Concentrated dish soap
- Water

Method:

a) Fill bowl or cup with water and carefully place pin on surface. *Hint: tweezers may help. The pin must be flat with the surface of the water. It will sink if it comes in at an angle.*

b) Add a touch of soap.

c) Watch the pin sink!



4. Floating Paperclip

Materials:

- Paper clip
- Tissue paper or paper towel
- Cup or bowl
- Water

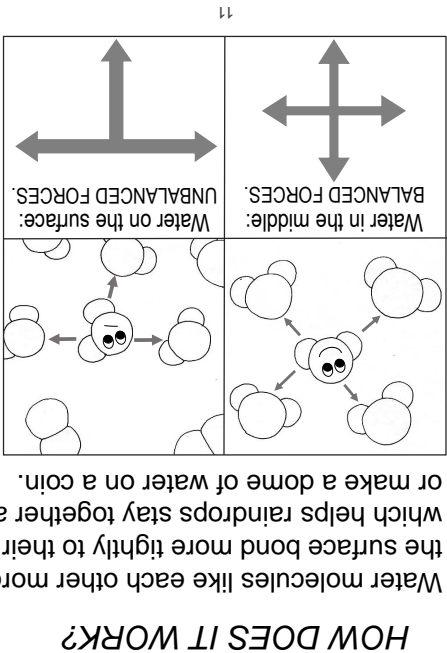
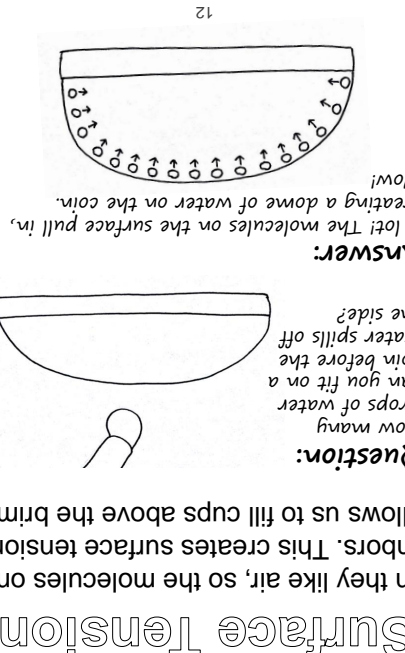
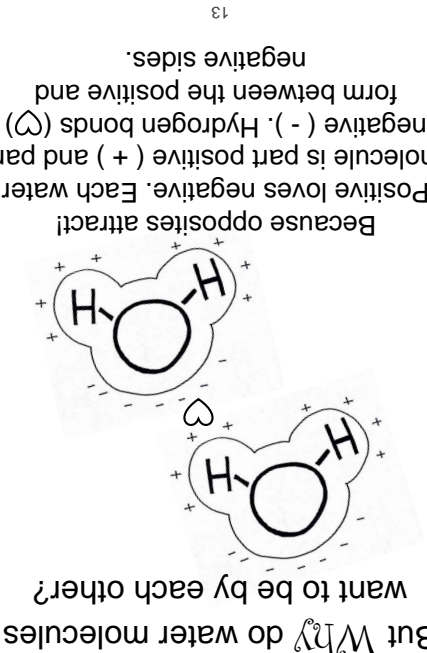
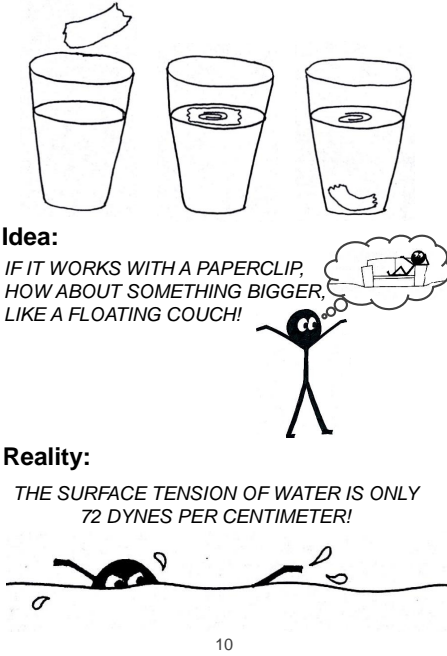
Method:

a) Fill the cup with water and gently place a piece of tissue paper on the surface.

b) Carefully place a dry paperclip on the tissue.

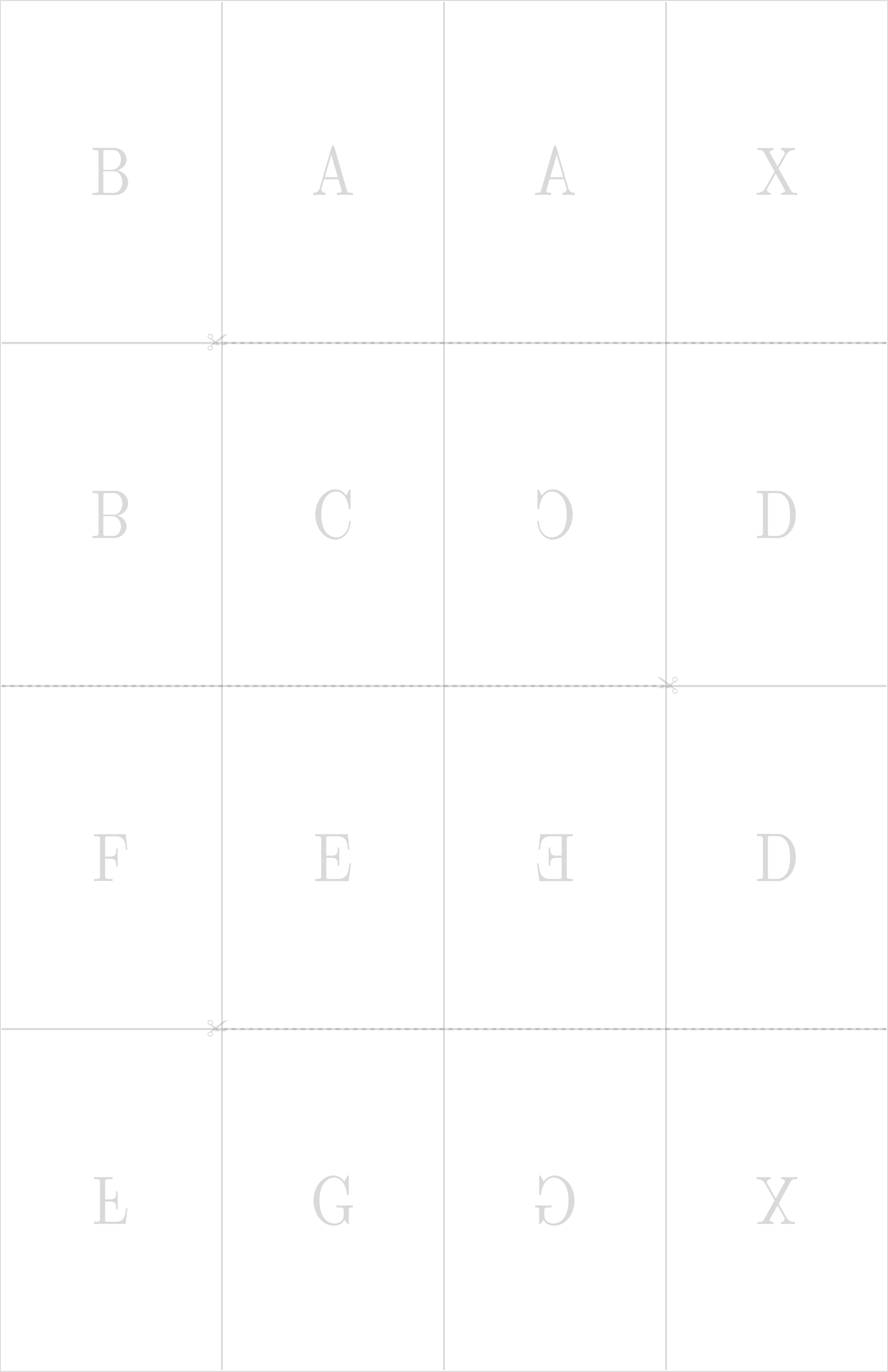
c) The tissue should sink. If it doesn't, give it a gentle push downward.

Tip: be sure that the cup and water are not soapy.



HOW DOES IT WORK?

Surface Tension.



B

A

A

X

B

C

C

D

F

E

E

D

E

G

G

X