



Praxis

The Science & Technology Hotline

March 2003

Reminders

DON'T FORGET TO BOOK YOUR LEARNING KIT

- The end of the year is fast approaching. Are you looking for something interesting to do with your students, but do not have the time to put it together? This is where Praxis can help. Praxis has numerous learning kits available to sign out.
- At this time of the year, the Easter Kit may be of particular interest to you. It contains everything you need to do a few hands on science activities as well as handouts,

worksheets and more!

- Call (403) 527-5365 to book your kit.



Make science fun and hands on!

CALL FOR REGIONAL SCIENCE FAIR JUDGES

- There still is a need for individuals to help judge at the Regional

Science Fair. It is always a rewarding opportunity to see the young scientists in action!

- Most of the judging is done by noon.
- Light refreshments are provided in the morning as well as lunch if you are able to stay that long.
- You only have to volunteer for as much as you can do. All help is greatly appreciated.
- If you are interested in helping out on Saturday, April 5, please contact Praxis @ (403) 527-5365 for more information.

Interesting Facts:

- *The aurora australis or southern lights occur at the south pole. They are caused by the collision of the solar wind with the Earth's atmosphere. In Canada we see the northern lights.*
- *The Earth is magnetic. It has magnetic poles, and fields.*
- *Approximately 71% of the Earth is covered by water. Most of this water is in the oceans.*
- *Earth is the only planet with liquid water.*
- *The Earth is approximately 4.6 billion years old.*
- *The Earth is not completely round.*
- *It takes 365 days, 5 hours, 48 minutes and 46 seconds for the Earth to do one complete orbit around the sun.*
- *March 21 is the first day of spring in the Northern Hemisphere.*
- *Earth has a core, crust and a mantle.*

APEGGA Teacher Awards

The deadline is fast approaching for the 2003 APEGGA Teacher Awards.

“Every year APEGGA recognizes exceptional elementary, junior and senior high school teachers through the Teacher’s

Award program..”

There are fourteen awards available throughout the province. The recipients receive a \$1000 school prize.

Recipients of this award are chosen for their superior

teaching skills and ability to inspire learning in math and science. Tell us how does your teacher make science cool?

The deadline is March 31. Call Praxis @ (403) 527-5365 for a nomination package.



Magic Mud

Materials

cornstarch
clear glass or cup
water
spoon
measuring cups

Procedure

1. Measure out $\frac{1}{2}$ cup (50 mL) of cornstarch.
2. Place the cornstarch in the clear glass.
3. Measure $\frac{1}{4}$ cup (50 mL) water.
4. Slowly add the water to the cornstarch in the glass, stirring constantly.
5. The mixture will be a thick liquid. **Do not add any more water.**
6. Take out a spoonful

of the mixture and place it in the palm of your hand.

7. Touch the mixture with the index finger of your other hand.
8. Observe what is happening.
9. When you touched the mixture with your finger, it should have turned hard instantly.
10. Remove your finger from the mixture.
11. What happens?
12. The mixture should have turned into a liquid again.

Explanation

In this experiment you mixed two different states of matter, a solid and a liquid. Normally when you mix these two dif-

ferent states of matter, you will end up with a solution. This is not what happened here. In this experiment you made a **colloid**, a special kind of mixture. The cornstarch did not actually dissolve in the water; it was **suspended** in the liquid, water.

Colloids are special in that they can change form when they are under pressure. When you touched the mixture in your hand, you exerted pressure on the mixture. The pressure pushed the cornstarch molecules so close together that the mixture turned into a solid. Once you take your finger off of the mixture, it turns to a liquid once again.



Is science really magic? Or can magic be explained with science?

Stuck Up

Materials

skim milk
baking soda
vinegar
water
hot plate
measuring cups
measuring spoons
paint brush
paper
strainer or sieve
pan or beaker
wooden spoon
bowl
Jar with a lid

Procedure

1. Measure out 2 cups (472 mL) of milk into the pan.

2. Measure 6 tablespoons (90 mL) of vinegar into the milk.
3. Stir everything together.
4. Place on the hotplate, turn the hotplate on to low.
5. Stirring constantly, heat the milk until it starts to turn lumpy.
6. Pour the contents into the strainer and discard the liquid.
7. Pour the contents in the strainer into the bowl.
8. Allow the lumps (curds) to cool and dry.
9. Add 6 tablespoons (60 mL) of water to the curds. Stir well.
10. Add 4 teaspoons (20 mL) of baking soda. Mix well.

11. Pour the mixture into a jar. Place the lid tightly on the jar.
12. Allow the mixture to sit for one day.
13. You just made glue!
14. Use a brush to brush on the glue anywhere you would normally use glue.

Explanation

There is a protein in milk called casein. When you added the vinegar to the milk, it formed curds (lumps) and whey (liquid). The casein is the curd or lump that separated from the whey or liquid mixture. This glue is as sticky as the glue you would purchase in the store. The difference is that the glue you would purchase in the store is made from chemicals instead of milk which allow the glue stay fresh longer.



Over the years, glue has been made from flour, honey, tree resin, tar, egg whites, animal bones ... just to name a few.

For all of your science needs, contact Praxis :

p/f: (403) 527-5365

e: mhpraxis@telusplanet.net

w: <http://www.telusplanet.net/public/mhpraxis>