



# PRAXIS

## Welcome Back!!

I hope that everyone had an enjoyable and restful summer break. It is hard to imagine that it is over already!

The summer months were busy as I was preparing, updating and refurbishing all of the Learning Kits. They are all ready to be used in your classroom! I am pleased to see so many of the teachers utilizing these great hands on resources in the classroom. Remember to book your Learning Kit early.

### New Resources

New Learning Kits are being developed. One new title will include Digging For Dinosaurs. This Learning kit will contain books, posters, fossils, specimens" and even a mini "dinosaur" bone excavation. The other title being developed will address the Wetlands topic. More information will follow in later newsletters.

I am always looking for new ideas and suggestions as I develop new Learning

Kits so please send me your thoughts and ideas. I want to make your job easier!

Please remember to book your learning kits or other requests early in order to ensure you can use the resources when you will need them.



It is time to hit the books!

September 2003  
Newsletter

### Useful Websites:

- © **Chemistry of the Month Worksheets.** This useful website will send you a monthly worksheet to do with chemistry. I have found it useful for Science 9, Science 10, Chemistry 20, and Chemistry 30. Visit <http://www.misterguch.brinkster.net> for more information.
- © Are you teaching something new this year? This website offers valuable worksheets, website links and other information that will help all teachers. Not all of the content is Science related. Social studies, math, health and others have all been represented and archived on the website. I recommend that you sign up for their newsletter. The newsletter informs you of all the new content added to the site. Visit <http://www.surfnetkids.com> for more information.
- © Online bridge building. I personally tried this out and found it to be great. Visit <http://www.newbaybridge.org/classroom>.

## Travelling Science Exhibit

The Science Alberta Foundation traveling exhibit **Plugging In** will be coming to the Medicine Hat Public Library for the month of November.

"*Plugging In* invites visitors to help solve the energy challenges facing the town of Wattsville through colourful, hands-on activities and displays. The people of the town of Wattsville are using up electricity at an alarming rate. They currently depend on non-renewable resources for their energy needs. They

need alternative sources for that energy and to consider ways to reduce their energy consumption."

"The exhibition features a central display of the town of Wattsville. The challenge is to consider how alternative energy sources can meet Wattsville's energy needs, and to suggest ways in which individuals can decrease their use of energy."

"Five activity centres around Wattsville invite visitors to explore the en-

ergy resources offered through wind, solar, hydro and biomass sources. Each resource provides part of the answer to Wattsville's needs. A final activity centre provides useful suggestions on how individuals and families can reduce their energy consumption as well."

Details are still being worked out, but there will be opportunities to book your classes into the exhibit. Please call Praxis @ 527-5365 for more information.

## Crushed Again

### Materials

empty pop can  
hotplate  
hot water  
ice cold water  
bowl  
tongs  
potholders

### Procedure

1. Fill the bowl with ice cold water and set aside.
2. Fill the pop can 1/4 full of water and place on the hotplate.
3. Allow the water to begin to steam out of the top of the can.

4. Once the water begins to steam, carefully lift the can off of the hotplate and invert into the bowl of cold water.
5. Watch what happens.

### What is going on?

When you inverted the can into the cold water, it should have collapsed almost immediately.

By heating up the water, it changes states—from a liquid to a gas or vapor. The existing air in the can was pushed out and replaced by this water vapour.



Why does the can collapse?

By inverting the can into the cold water, you caused the water vapour to condense. When the water vapour inside of the can condensed, the pressure inside the can became much less than the air pressure outside. The change in air pressure caused the can to crush or collapse.

You may wonder why the water cold water from the bowl did not rush into the can and prevent it from collapsing. Unfortunately, the water cannot flow into the can fast enough. The air crushes it before it has a chance to fill up.

## 1 + 1 = 2 ?

### Materials

2–250 mL ( 1 cup) graduated measuring cups  
1–1 L ( 4 cup) graduated measuring cup  
250 mL water  
250 mL rubbing alcohol

### Procedure

1. Measure 250 mL of water. Set aside
2. Measure 250 mL of rubbing alcohol. Set aside.
3. Pour the water into the 1 L cup.

4. Observe and record the measure. It should be 250 mL.
5. Slowly pour in the 250 mL of rubbing alcohol.
6. Observe and record the measurement on the cup.
7. Is the measurement 2 cups?
8. Why or why not?

### Explanation

Water is full of invisible holes. It is a very unique molecule in that it is always moving. This constant movement leaves invisible spaces between the hydrogen and oxygen molecules

that make up water.

The shape of the rubbing alcohol molecules allows them to slide right into the invisible spaces between the water molecules.

This is why you will have slightly less than two cups of liquid once you mix the rubbing alcohol and water together.

Try mixing other liquids with water

**1 + 1 = 2.  
That is always  
the rule.  
What is going  
on here?**

For all of your science needs, contact Praxis :  
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