



The Science & Technology Hotline

April 2003

Rocks and Minerals Trivia:

- Rocks can be classified as Igneous, Sedimentary or Metamorphic.
- Petrology is the science of rocks.
- The hardest rock is diamond. It has a hardness rating of 10 on the Mohs Hardness Scale.
- Talc is so soft that it can be scratched with your fingernail. It has a hardness of 1 on the Mohs Hardness Scale.
- The largest diamond discovered was 3106 carats.
- Diamonds are minerals composed entirely of carbon.
- Fools Gold is Iron Pyrite. Real gold is much softer and heavier.
- A geode looks like a rock, but it is a hollow stone. If you were to crack it open, it would be full of crystals.

Easter Break Science Programs

Praxis is pleased to be working with the Medicine Hat Public Library this Easter Break.

to participate in hands on science activities about weather.

Services @ 502-8526 to register.

Weather Wise Science Programs will be offered on Tuesday, April 22 OR Wednesday, April 23 from 2-3. At the MHPL in the Reading Castle.

Children ages 6-9 are invited

Parents must register in person or by phone beginning **April 15**. Please note that group sizes are limited.

Please call Medicine Hat Public Library Children's



Important Reminders

Science Essay Challenge

Time is running out for the Science Essay Challenge 2002/2003.

Please encourage your Junior and Senior High students to submit a paper on a topic related to science or technology. The paper only needs to be 350 words.

If chosen as the monthly winner, the student will receive \$200 and their essay published in the Medicine Hat NEWS.

All monthly winners will also be eligible to win the \$1000 grand prize awarded at the end of the school year.

Learning Kits

Do not forget about the **Easter Science Learning Kit**. This kit is full of hands on activities that focus on the theme of Easter. All of the materials (except perishables) are contained in this kit. All you have to do is choose one of the many activities provided and get started exploring science. It could not be any easier!

There is still time to book the Learning Kits this school year. Book early to avoid disappointment.

The Learning Kit Titles include:

- Buoyancy
- Electricity
- Evidence & Investigation

- Insects and Creepy Crawlies
- Levers and Gears/ Building Things
- Magnetism
- Rocks and minerals
- Sky Science
- Weather

Also available:

- Thanksgiving Science
- Halloween Science
- Christmas Science

Although these kits contain the specific holiday information and science designed to fit with the specified holiday, they are appropriate to use all year.

Many of the experiments contained in the Learning Kits are great when you are short of time, or for that something extra!

Mysterious Ping Pong Balls

This experiment may be a bit confusing.

When you apply a force to something, you expect the object to move in the direction that you applied the force. For example, if you push a car forward, you would expect it to roll forward. These expectations are called the **Laws of Motion**.

In this experiment these Laws will be defied! Or will they! Investigate for yourself.

Materials

cone shaped cup
ping-pong ball

scissors

Procedure

1. Cut the tip off of the cup. You will now have a funnel.
2. Drop the ping pong ball into the funnel.
3. Tilt your head back.
4. Hold the funnel directly over your head and blow into the small end.
4. The objective is to blow the ball out of the funnel.
5. Blow hard and steady.
6. Make sure you

wash the ball off with hot soapy water before the next person uses it.

What is going on?

It should have been impossible for you to blow the ping-pong ball out of the funnel. The passage of air around the ball makes it jump and bounce, but not fly out of the funnel. This is because the fast moving air flows around the ball instead of pushing it upwards. The ball tends to jump up (even higher at times than the rim of the funnel) but won't jump out either side of the home-made funnel.



How can this be happening?

Blow Me Away

I am sure that everyone has watched the weather on the daily news and seen the letters "H" and "L" scattered all over the weather map.

In this experiment you are going to investigate the difference between a "Low" and a "High" pressure system.

Materials

two ping pong balls
tape
string
ruler
scissors

Procedure

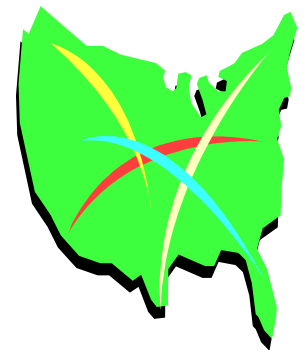
1. Measure and cut two 30 cm pieces of string.
2. Tape one ping pong ball to each piece of string.
3. Make sure that the balls can hang freely.
4. Tape one ball on the 12 cm mark on the ruler.
5. Tape the second ball on the 18 cm mark on the ruler.
6. Hold the ruler in front of your mouth.
7. Blow between the gap in the balls.
8. Watch what happens.

Explanation

The ping pong balls should not have separated, they should have attracted one another.

This is how a low pressure system works. By blowing between the two balls, you created a low pressure system. The pressure was lower than the surrounding air.

This difference in pressure caused the surrounding air to push inward. Because the ping pong balls were in the way, they were pushed into the stream of flowing air



How does a low pressure system work?

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