



## The Science & Technology Hotline

May 2007  
Newsletter

### INTERESTING SCIENCE FACTS:

- 97.2% of the water on Earth is salt water.
- There are 1600 calories in a pint of hippopotamus milk.
- Polar Bears can run 25 miles (40 kilometers) an hour and jump 6 feet (1.8 metres) in the air.
- The silkworm moth has eleven brains.
- Polar Bears cannot be detected by infrared cameras because of their transparent fur.
- Deserts cover 1/7 of the world.
- A baby giraffe can grow one inch (2.5 centimeters) a month.
- The average person accidentally eats 430 insects in their lifetime.
- There are more than 100 chemicals in every cup of coffee.
- 40% of all plant and animal species live in the Rain Forests.
- 88% of all humans are right handed.
- More twins are left handed.
- A platypus is one of only two mammals that lays eggs and nurses their young with milk. The other is the echidna.
- Mosquitoes have been known to prefer to bite people with smelly feet.
- One person in two billion lives to be 116 years or older.
- Bats always turn left when they exit a cave.
- When a giraffe's baby is born it falls from a height eight of six feet or more without being injured.

### LOCAL IDEAS FOR THE CLASSROOM

Are funds tight, but you would still like to do something exciting with your class? Do not let this tie you down to the classroom.

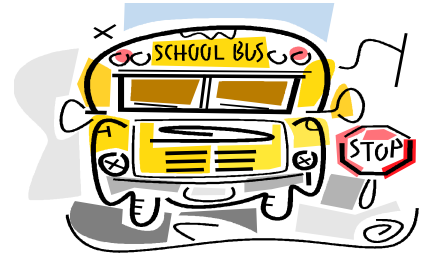
Medicine Hat has a number of great resources that teachers can utilize for the classroom.

- Arrange to have a "Scientist in the Classroom" visit your class. Praxis has volunteers that will come into the classroom in order to tie real life experiences and work with what the students are learning in their textbooks. Volunteers come from a scientist in all aspects of life. We have biologists, rock "experts", and engineers just to name a few.
- Do a pond study. Medicine Hat has a number of great ponds to collect and

observe specimens from. Spend the morning or the afternoon. Do not forget to call Praxis to request assistance from one of their volunteer Biologists and to use their Wetlands Discovery Kit in order to collect and identify specimens. You never know what you might find!

- Field Trips. You do not have to sit on a bus for hours to find interesting places to take your class. Take a fieldtrip to a chemical processing plant, a plant that manufactures soap, or how about an aviation related fieldtrip. The list could go on and the possibilities are endless. If you have an idea, call and discuss it today.

- As always if transportation costs are keeping you tied to the classroom, do not forget that Medicine Hat City Transit offers FREE rides to groups on



*Take your class outside for some learning!*

regular routes. All it takes is a little preplanning.

- Call or e-mail Praxis today to add a little end of the year excitement to your class!

### PRAXIS SUMMER CAMPS

Praxis is pleased to be holding a number of Hands on Summer Science Camps in cooperation with Medicine Hat College in July and August 2007. This year we are looking at offering the following:

- Robotics
- Scien'TWISTS
- CSI
- Down Under Discover Crawly Critters
- Gross and Disgusting Science (Boys Only)
- Spa Science (Girls Only)
- To Infinity and Beyond—Space Camp
- Dino Mites

Most of these Camps will be

held twice through the summer, so do not despair if you are away on holidays when it is offered, it may be offered when you return!

Watch for the College Continuing Studies Program that should be coming to your school in early May.

If you have any questions, please do not hesitate to contact Praxis @ (403) 527-5365.

# BUOYANCY—SINK OR FLOAT

## Materials

large clear container

water

rocks

sticks

keys

cork

paper clip

spoon

golf ball

**\*Note: you can use any assortment of objects that will float and sink.**

## Procedure

1. Fill the container with water and set on a sturdy surface.
2. Presort the objects into a pile that will float and a pile that will sink.
3. Test the objects.

## Explanation

*Buoyancy can be defined as the upward force of water that works against an object's mass, and depends on the object's volume.*

*A buoyant force is equal to the mass of the water displaced by an object. The greater the volume of an object, the greater the displacement of water, and therefore the greater*

*buoyancy.*



If you need to visualize this, think about the following: a kilogram of steel will sink but a kilogram of wood will float because the kilogram of wood has a bigger volume.

# DIVERS

## Materials

large (2 litre) pop bottle

water

eyedropper

clear glass

6. Set aside.
7. Fill the pop bottle with water.
8. Place the eyedropper in the pop bottle.
9. Observe.
10. Place the lid on the pop bottle. Make sure it is on tightly.
11. Squeeze the sides of the bottle in order to get the diver to sink, float or stop at any depth you desire.

## Explanation

This experiment displays a very old principle known as *Archimedes Principle*. This principle states *that as an object is buoyed up with a force equal to the weight of the liquid it displaces.*

## Procedure

1. Fill the glass up with water.
2. Squeeze the eyedropper and fill it with a little bit of water.
3. Place the eyedropper in the glass.
4. If it sinks, remove and add a few more drops of water into it.
5. Continue this process until the dropper just floats in the glass of water.



*Make your own Scuba Diver in a bottle!*

When you squeeze the bottle, you are increasing the pressure inside of the bottle. This pressure forces water into the eyedropper, compressing the air out. Because the eyedropper is displacing less water, its buoyancy decreases and as a result it sinks. When you let go, the pressure decreases, and there is air in the eyedropper once again. As a result the buoyancy increases and the diver will rise up to the top of the bottle.

For all of your science questions or needs, contact Praxis :  
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