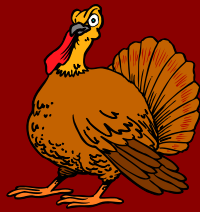


SCIENTIST OF THE MONTH

- Neils Bohr
- B. Nov. 7, 1882
- Atomic Physicist
- Awarded a Nobel prize in 1922 for his work on atomic structure
- Began studying physics in university because of a science fair type contest
- Worked on the top secret "Manhattan Project" during WWII
- Disagreed with the nuclear arms race. Advocated for a peaceful use of nuclear energy
- Has two elements from the periodic table named in honour of him:
 - Bohrium
 - Halfnium
- His son went on to win a Nobel Prize in physics



Bohr debating quantum physics with Einstein. 1922 -Wikipedia



Praxis: The Science and Technology Hotline

"An expert is a man who has made all the mistakes which can be made, in a narrow field." - Niels Bohr

Family Science Olympics

Come and join Praxis and the Medicine Hat branch of APEGGA for the kick off event of National Science and Technology Week.

The Family Science Olympics is a fun filled day that will please, intrigue and inspire scientists of all ages.

Join us from 10 am—3pm at the Taylor Science wing of Medicine Hat High School for 10 super fun activities.

Each station will have a door prize draw you can enter once you have finished the event. Complete at least 8 stations for a chance to win the grand prize of the My Delta My Dino package donated by the Delta Bow Valley Hotel, Calgary, AB (valued at over \$200).

This year will have all new

activities, so if you have attended in previous years, please come out again for a new experience. All activities can be completed by people of all ages.

For a more information contact Praxis at 403-527-5365 or check out our website: , www.praxismh.ca.

Each "family" must have at least one person over the age of 18 to participate.



A family participating in the Family Science Olympics 2009



Grand Prize:

1 night's accommodation:
Delta Bow Valley Hotel
Family Pass to the Calgary Zoo
Donated by: **Delta Bow Valley Hotel** Calgary, AB

What: Family Science Olympics

When: October 16, 2010
10 am—3 pm

Where: Medicine Hat High School - Taylor Science Wing
Come in the 5th Street entrance

Why: Because everyone will have a great time

If you or someone you know is interested in volunteering for this event please contact Karly at Praxis: 403-527-5365.

OPERATION THOTH

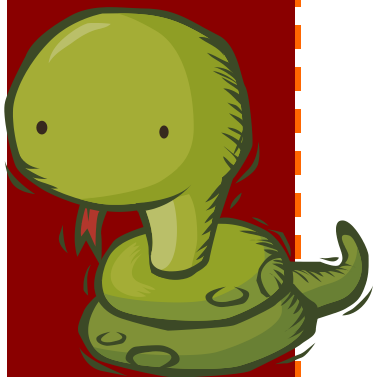


December 3, 2010
Medicine Hat High School

Operation Thoth is a project organized by Praxis to expose grade nine boys to career opportunities in science, math and technology. As the counter-point to the successful Operation Minerva, Operation Thoth is a day-long conference to encourage boys to consider these careers and to realize the scientific, mathematic and technological career opportunities in Medicine Hat.

The purpose of Operation Thoth is to develop an understanding in boys of the importance of completing science and math courses in high school for achieving careers in these areas. The conference involves job shadowing with male role models, innovative workshops/displays, and formal/informal group discussions. For more information contact Karly 403-527-5365.

Glow Sticks and Snakes

Adapted from www.thenakedscientist.com

What you'll need:

- Glow stick
- Dark area
- Heavily salted ice water (mostly ice)

Procedure:

1. In a dark room, snap the glow stick and look at it. Notice the swirls of light forming.
2. Shake the glow stick to distribute the glow
3. Once the entire stick is glowing, dip 1/2 the stick in the ice water and hold for 1 minute.
4. Remove glow stick and compare the frozen end to the non-frozen end.
5. See what happens when you warm up the frozen end

What's going on?

The glow stick is made up of two tubes. The inside one contains hydrogen peroxide and is nestled in the outer tube filled with a chemical called Cyalume and a dye.

When you snap the glow stick, the inside tube breaks and the chemicals come in contact with each other. This produces a very unstable product with lots of energy. This energy reacts with the dye and is released as light.

When you cool down the glow stick, you are taking energy out of the system. This slows down the unstable product and the glowing stops.

How is this related to snakes? Because snakes are cold-blooded, they do not control the temperature of their bodies. When it gets cold outside, the snakes slow down just like the molecules in the glow stick. This is why you will see snakes "sunning" themselves on rocks. They are absorbing heat to speed up the chemical reactions in their bodies.

Up Coming Events

October 15—24: National

Science and Technology Week

October 16: Family Science

Olympics - MHHS 10am-3pm

October 20: Praxis General

Meeting - Room 704 MHHS 7pm

November 17—20: ATA Science

Conference, Edmonton

December 3: Operation Thoth

January 28: Operation Minerva

Science Kits

Many kits are still available for this year. Please contact Praxis to book yours today.

For all your Science needs contact Praxis

P. 403-527-5365

F. 403-528-6570

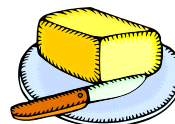
E. praxis@praxismh.ca

www.praxismh.ca

Volunteers Required: If you or someone you know has science, math or technology knowledge and are enthusiastic about sharing that knowledge in a classroom setting please contact Praxis for volunteer opportunities: **403-527-5365** or **praxis@praxismh.ca**

We currently require volunteers for these areas: Waste and our World and Fluid Dynamics

I can't believe it's butter



A fun Thanksgiving inspired experiment.

What you'll need:

- Clean marble
- Large jar (glass or plastic) with a tight fitting lid
- Heavy cream

Procedure:

1. Leave the cream at room temperature for 12 hours.
2. Place the heavy cream and the marble in the jar. Screw on the lid.
3. Shake the jar. It will take a while.
4. After a while the marble won't move around much. At this point drain off the buttermilk
5. Rinse the butter. Put some water in the jar, shake slightly and drain.
6. Remove the marble and pack the butter into a jar.
7. Spread on bread and enjoy.

What's going on?

Leaving the cream out for 12 hours helps to allow the fat molecules to separate from the liquid. Suspended in the heavy cream are lots of milk fat droplets. Shaking the container helps the fat droplets smash against the jar and each other causing the fat to clump together to form a solid mass of butter. Adding the marble helps get more fat out of the cream. The liquid left over is the buttermilk, and is different from the buttermilk you buy from the store.

Extension:

Heavy cream has a very high fat content, which is why it's so great to use in this experiment. Try using different types of cream to see which works best; light cream, whipping cream, coffee cream. Compare the length of time it takes and the amount and taste of the butter.

Founding Member of:



Don't forget you can always get an extra copy of the newsletter off our website, or we can email you the newsletter directly