February 2011

THE PRAXIS SOCIETY: SOUTH EASTERN ALBERTA'S SCIENCE OUTREACH NETWORK

Important Information

Science Fair

It's not too late to help your students begin a science fair project. If you require any help on anything science fair related from choosing a topic to registering for the Southeastern Alberta Regional Science fair, call Praxis. We would be happy to answer your questions.

We also have a database of volunteers that would love to help you with your project by being a mentor. Give us a call and we can help match you with a mentor that can give you project specific tips.

Southeastern Alberta Regional Science Fair

March 26, 2011

Medicine Hat College

Opens at 9 a.m.

Online registration for the science fair is currently available and will be open until one week before the fair (March 19, 2011).

We are looking for judges for the Regional Science Fair as well as school-wide science fairs throughout the year. If you are interested in becoming involved in science fair as a judge or a committee member, please contact Praxis at 403-527-5365 for more information.

South Eastern Alberta Teachers' Convention

The 2011 SEATC will be taking place on February 24 &25 at the Medicine Hat College. Praxis will be there, so come visit us and check out some of our hands-on learning kits and learn about some of our other programs.

Learning Kit Makeover

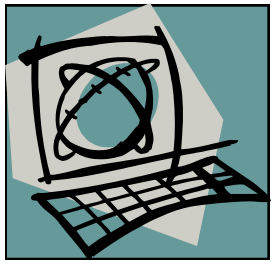
With spring right around the corner, we at Praxis have decided to give some of our kits some well deserved TLC. The makeovers include adding new materials and activities as well as replacing some of the well-loved materials.

We are starting this process with the grade 2 Boats and Buoyancy kits. If you have used one of our kits and enjoyed it, but thought it might be a little worn, or could use some additional activities, please call us and we will make those kits priority.403-527-5365

New Year, New Look

If you have been checking our website recently, you might have noticed some big changes. The new year rang in a new website design that is more easily navigated and includes some new information.

We will be posting the Science Smarts newspaper articles on the website after they have been featured in the Medicine Hat News on Saturdays. If you want the previous articles for science activities in class, there is also a column archive, organized by month for you to peruse.



Also included on the website are photos and curriculum links for all our learning kits as well as information on our other programs.

Check our website often as we are constantly updating our information and programs online. Let us know what you think of the new design!

www.praxismh.ca

Engineer of the Month: George Ferris

- B. February 14, 1859 in Illinois
- Obtained a civil engineering degree from rensselaer polytechnic institute
- Started his career with the railroad and was very interested in bridge building and design
- Built the ferris wheel for the 1893 world expo to be held in Chicago
- Cost $400, 000 to originally build
- Original Ferris Wheel could hold 2160 people
- The Ferris Wheel carried 2.5 million passengers before being demonished in 1906
- George Ferris passed away in 1896 from Typhoid Fever

Upcoming Events

February 14-16: MHC student for a day program

February 21: Family Day Fun at Police Point Interpretive Center

February 24 & 25: South Eastern Alberta Teachers' Convention—MHC

March 26: South Eastern Alberta Regional Science Fair—MHC

April 2011: Operation Thoth

April 22: Earth Day

What affects a person's heart rate?

February is heart month. Here is an activity that can jump-start discussions in either your science or health class.

Materials:

- Homemade stethoscope or fingers
- Timer
- Partner
- Something to make loud noises

Directions:

1. Match up with a partner.
2. Find your partner's pulse either by placing the Homemade Stethoscope on his or her chest or my placing your fingers on the inside of their wrist. **It is important you do not use your thumb, as you will be able to feel your pulse and your partner's pulse at the same time.
3. Count how many heart beats you hear in 20 seconds. Write down this number and multiply it by 3 to find your partner's heart rate (beats per minute). You can also count heart beats for 1 minute.
4. Use the noise maker to make a sudden and unexpected loud noise and immediately begin counting your person's heart rate again. Did the loud noise change your partner's heart rate?
5. Change this experiment by making the loud noise and checking your partner's heart rate at different times after the noise, to see how this changes his/her heart rate. (30 sec, 1 minute, 3 minutes after the noise). Also, try doing this experiment with other people, to see if everyone's heart rate changes after hearing the loud noise.

Discussion:

Our heart rate fluctuates throughout the day depending on how much blood our body needs. When we are resting our heart rate is fairly low because it doesn't take a lot of effort for your heart to pump blood throughout your body. This isn't the case when we are exercising and so our heart rate increases.

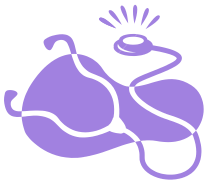
When we are scared or pushed into our "fight or flight" response by stress, our heart rates also increase. This happens when you are frightened just in case the scary thing is life threatening. By increasing your heart rate, you are preparing your body to run away from danger or to stay and fight the danger away. It's one of the ways the different systems of your body work together to keep you alive.

You can try different "stresses" on your body to see how they affect your heart rate. Test your heart rate before writing a big exam or after running up three flights of stairs.

2011 APEGGA Teacher Awards

- Nominate an outstanding Math or Science teacher
- Your school could win $2000 to further science and math education
- Recipients are chosen for their superior teaching skills and ability to inspire learning in math or science
- Deadline is March 31, 2011
- More information at www.apegga.org/members/Awards/taward.html

Homemade Stethoscope



When doctors want to listen to your heart or lungs they will use a stethoscope to amplify the sound of your heart. Here we learn how to make our own.

Materials:

- 2 funnels; 1 small one, 1 large one
- Small diameter hose
- Electrical tape
- Utility knife
- Another person

Directions:

1. Measure 50 cm of hose and carefully cut with the utility knife
2. Put one funnel into the open end of the hose and tape in place with electrical tape
3. Do the same thing with the other funnel in the other open end of the tubing.
4. Hold the large funnel against the other person's chest while holding the small funnel against your ear.

Now you have a very basic stethoscope. Try counting the number of heart beats you hear in one minute to find out your partner's heart rate. **Make sure you don't let anyone talk into the end of it if you are holding it up to your ear!**

For all your Science needs contact Praxis

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

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Founding Member of:

ALBERTA science LITERACY ASSOCIATION

School Address Label