



## Operation Minerva Conference

### What Is Operation Minerva?

Operation Minerva is a project organized by a committee of community professionals working in the math, science and technology fields. The purpose of Operation Minerva is to develop awareness in young women of their own abilities as well as the career opportunities that exist in these fields. The conference involves job shadowing with women role models, innovative workshops/displays, and formal/informal group discussions.

### Goals of Operation Minerva

- To encourage girls, in grade nine, to consider science, math and technology related careers, especially those that represent non-traditional careers for women.

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- To dispel, in the minds of students "scientists" myths and stereotypes and to show that science and technology can be interesting.
- To show the work of women in science, technology and mathematics.
- To allow participants a "fun" experience in an effort to enhance and develop such attitudes towards courses and careers in science, technology and mathematics.

### Registration

This year's Conference is scheduled for Monday, January 29, 2007. The day will consist of mentoring and hands on science workshops. If your school has



Operation Minerva

**Every year approximately 50 girls from southeastern Alberta and Saskatchewan participate in this**

not received an invitation and you have grade nine girls that you think would benefit from this one day Conference, please contact Praxis at (403) 527-5365 or e-mail [praxis@praxismh.ca](mailto:praxis@praxismh.ca). Space is limited, so please call early.

## FREE Classroom Enrichment Assistance

Just a reminder that Praxis offers a variety of FREE services. In addition to our extensive list of Curriculum Learning Kits, Praxis also offers the following services:

### Volunteers In The Classroom

⇒ Volunteers come from a variety of occupations and backgrounds, but you can be certain they will do an excellent job in

presenting to your students. We have professionals that will do presentations on Rocks and Minerals (Grade 3), Astronomy (Sky Science) (Grade 6, just to name a few.

### Curriculum Relevant Fieldtrip Assistance.

⇒ Want to get out of the classroom and experience something different, but

still have it curriculum specific? Praxis can help. We assist teachers in arranging fieldtrips that show the students that what they are learning in the classroom has a practical application in real life. Call Praxis today @ (403) 527-5365 with your specific request. Remember to allow as much time as possible when booking.

### Free Giveaway

Partners FOR Saskatchewan River Basin have generously donated **five** wonderful little learning kits entitled "Click on Climate Change". These Kits contain:

- ◆ Leader's Program Setup.
- ◆ Leader's Field Guide which contains all of the information that you need to conduct the fieldtrip activities.
- ◆ 5 click on Climate Change Log-books.
- ◆ Idling is Killing Our Environment Pamphlets.
- ◆ Think Idling Is Harmless Pamphlet.
- ◆ Click on Climate Change Photocopy masters.
- ◆ 5 information Files Workbooks.
- ◆ Most of the necessary materials to complete the enclosed activities.

Some of the activities Include:

- ◆ Monitoring The Greenhouse Effect.
- ◆ Viewing The Weather.
- ◆ Carbon And Water Keepers.
- ◆ Zoom In On The Soil System.
- ◆ Zoom In On An Ecosystem.
- ◆ Earth Options.
- ◆ Energy Audit.

This Kit would be useful for all grades, but particularly Grade 4 Waste and Our World Unit or the Grade 5 Weather Watch Unit .

Cubs, Scouts, Beavers, Girl Guides and community Groups may also find this useful for already organized science investigations and fieldtrips.

**THE FIRST 5 EDUCATORS TO CALL OR E-MAIL ME WILL BE THE LUCKY WINNERS OF THESE RESOURCE KITS. GOOD LUCK!**

## Fire Extinguisher

### Materials

water  
measuring cup  
baking soda  
measuring spoon  
nail  
hammer  
spoon  
1 small jar (plastic)  
1 large jar with a metal lid

### Procedure

1. Ask an adult to help you make a hole in the middle of the jar lid. Using the nail, hold it in the center of the cap and hit gently with the hammer until the nail
2. goes all of the way through.
3. Using the measuring cup, measure 500 mL of water.
4. Pour into the large jar.
5. Add 45 mL (3 tablespoons) of baking soda to the jar of water. Stir well.
6. Measure and pour 125 mL (1/2 cup) of vinegar in to the small jar.
7. Carefully place the small jar inside of the large one.
8. Place the cap on the large jar.

8. Gently tip the jar on its side, or shake VERY gently.
9. Watch what happens.

### Explanation

A white foam similar in appearance to what comes out of a fire extinguisher should have erupted out of the hole in the lid. This is due to a chemical reaction between the sodium bicarbonate (baking soda) and the acetic acid (vinegar). When these two substances mix, they form carbon dioxide which can smother a fire.



*“Remember to enter the Science Reporter Contest.*

*For more details log on to the Praxis website*

*@www.praxismh.ca or call (403) 527-5365. As a teacher you could win a \$200 gift certificate for your classroom.*

## Shiny Coins

### Materials

dirty pennies  
2 paper cups  
salt  
water  
vinegar  
measuring spoons  
measuring cup  
2 pipettes  
paper towels  
flat, plastic container

### Procedure

1. Measure 250 mL (1 cup) of water and place in each of the paper cups.
2. Measure 15 mL (1 teaspoon) of salt. Add to one of the cups of water and stir well.
3. Measure 30 mL (2 teaspoons) of vinegar and add to the second cup of water.
4. Place the dirty pennies in the flat container.
5. Using the pipette add a couple of drops of the salt solution followed by a couple of drops of the vinegar solution. Keep doing this for

five minutes.

6. Remove the pennies from the solution and rub with the paper towels.
7. What happened?

### Explanation

The pennies came very clean because of the solution you made by mixing the vinegar and the salt. When you mix vinegar (acetic acid) and salt (sodium chloride), it chemically changes to form a weak form of hydrochloric acid. Hydrochloric acid cleans metals such as copper very well.



**Turn your dull pennies to shiny ones!**

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

p: (403) 527-5365

f: (403) 528-6570

e: [praxis@praxismh.ca](mailto:praxis@praxismh.ca)

Founding Member of:

