



## The Science & Technology Hotline

April 2007  
Newsletter

### Alberta Water Quality Awareness Day

#### Alberta Water Quality Awareness (AWQA) Day, June 5th, 2007

**Be a part of the big picture – share your results!**

Have you ever wondered about the quality of water in your local stream or wetland? Students, seniors and everyone in between will have the opportunity to learn more about their local waterways during Alberta Water Quality Awareness (AWQA) Day on June 5, 2007.

Everyone is invited to participate in AWQA Day 2007. Interested parties can register and order their free water quality test kit online at [www.awqa.ca](http://www.awqa.ca). The deadline for ordering test kits is April

30th. This kit can be used to test any stream, lake, river, wetland, dugout, reservoir, pond, slough or other surface water body in Alberta. Test up to 50 sites for water temperature, dissolved oxygen, turbidity and pH – four basic measures that have important implications for fish and wildlife habitat.

Water quality testing can be done anytime between May 15th and June 30th. Volunteer participants add their water quality information to the online database at [www.awqa.ca](http://www.awqa.ca), and together create a picture of water quality in Alberta.

This type of monitoring helps build awareness, and brings together citizens with

a common interest in protecting Alberta's waterways. Join the thousands of Albertans that want to take action, and make the changes needed to ensure clean water for our future.

This activity fits in well with both Grade 8 Fresh and Salt Water Unit and 9 Environmental Chemistry Science Unit.

The Kits are FREE and there are many prizes to be won if you participate!

For more information on Alberta Water Quality Awareness Day, please visit [www.awqa.ca](http://www.awqa.ca). Or contact: [info@awqa.ca](mailto:info@awqa.ca) (780) 702-ALMS.

### Need some extra money for the classroom?

Inside Education is happy to be partnering with BP Canada Energy on a project entitled **A+ for Energy**. BP Canada is providing \$500,000 in grants and scholarships to Alberta K-12 teachers for their innovative ideas in teaching kids about energy, energy conservation and alternative energy choices during the 2007/2008 school year.

Under the A+ for Energy Pro-

gram, BP Canada will present grants for **\$5,000** or **\$10,000** to teachers who submit proposals for creative classroom, after-school, extra-curricular or summer activities focused on energy education and/or energy conservation. Through the program, BP hopes to inspire students to become the innovators who will develop future technologies that will conserve energy.

As part of this project, teachers receiving the grants will also attend a three-day workshop this summer at the spectacular *Banff Centre* – where your friends at Inside Education will facilitate an Energy Education Conference.

For more information, please contact [Praxis@ \(403\) 527-5365](mailto:Praxis@4035275365) or [praxis@praxismh.ca](mailto:praxis@praxismh.ca).

#### Interesting Science Facts:

- *More germs are spread through shaking hands than kissing.*
- *The fastest speed a falling raindrop can hit you is 29 kilometers per hour (18 miles an hour).*
- *Each person sheds 40 pounds of skin in his/her lifetime.*
- *It would take over an hour for a heavy object to sink to the heaviest part of the ocean.*
- *A quarter of the world's plants are threatened with extinction by the year 2010.*
- *An individual blood cell takes approximately 60 seconds to make a complete circuit of the human body.*
- *The universe contains over 100 billion galaxies.*
- *There are 96560 kilometers (60,000 miles) of blood vessels in the human body.*
- *The deepest part of any ocean in the world is the Mariana trench in the Pacific with a depth of 10 910 metres (35,797 feet).*
- *Giraffes never lie down.*
- *The Ebola virus kills 4 out of 5 people it infects.*

## The Naked Egg

### Materials

small jar or glass  
vinegar (at least 5%)  
egg

### Procedure

1. Carefully inspect the egg to ensure it is free of cracks. If there are any cracks, get a new one.
2. Place the egg in the jar.
3. Cover the egg with vinegar.
4. You may want to put a lid on the jar as it can begin to smell quite strongly of vinegar.
5. Watch what is happening.

6. Set aside on the counter.
7. Be patient, it will take some time (up to three days) for this experiment to completely work.
8. After three days, gently remove the egg from the jar.
9. Wash the egg under cold water. Rubbing gently to remove all of the white shell.
10. If the shell is not completely removed, return it to the jar with the vinegar and wait 24 more



hours.  
Observe.

### Explanation

When you initially placed the egg in the vinegar, bubbles immediately began to form on the outside of the shell. These bubbles are the result of a chemical reaction. The acetic acid (vinegar) and calcium carbonate (the egg shell) are reacting. As a result, carbon dioxide bubbles are being released.

## More “Eggciting” Experiments

### Raw or Hard Boiled Test

#### Materials

hand  
raw egg  
hardboiled egg  
flat hard surface to work on

#### Procedure

1. Take one of the eggs and spin it. Observe.
2. Take the second egg and spin it. Observe.

#### Explanation

If the egg spins well, it is hard-boiled. The egg that wobbles and

weaves all over is the raw egg. A hard boiled egg is a solid object, whereas a raw egg is still fluid inside. When the raw egg spins, the center of gravity changes as the insides of the egg are also moving around.

#### Strength Test

#### Materials

hand  
raw egg

#### Procedure

1. Place the egg in the center of your palm and hand.
2. Wrap your fingers evenly

*“Eggs are nature’s strongest architectural design!”*

around the egg.

3. Squeeze as hard as you can.

#### Explanation

The egg should have stayed in one piece. When you are squeezing the egg, the force and pressure are being distributed evenly out along the entire surface of the egg. As a result, the egg stays in one piece. The egg is stronger than you might think!

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

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