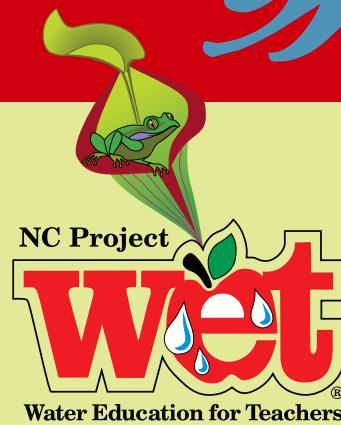


# The Water Cooler



## INSIDE THIS ISSUE

Project Webfoot	2
Cost of Guide Increases	2
Activity Adaptations	3
From the State Coordinator	4



*Uruguay teachers learn the proportion of water to land on Earth with the Blue Planet/Surf-n-Turf activity.*

Fall 2008

## NC Project WET in Uruguay

The Project WET International Foundation and UNESCO-IHP (United Nations Educational, Science, and Cultural Organization-International Hydrologic Program) have a joint education initiative for Latin America and the Caribbean. The partnership formed in an effort to help meet the United Nation's Millennium Development Goals, as well as the priorities identified in the UN's Decade Water for Life and Decade of Education for Sustainable Development.

As part of this initiative, Holly Denham, the North Carolina State Coordinator for Project WET, traveled in April with other Project WET affiliates to Montevideo, Uruguay to help launch Project WET there. Seventy English immersion teachers from across the country took part in a three-day Project WET training. At the conclusion of the workshop, 12 outstanding teachers participated in additional Project WET facilitator training. These teachers will now hold workshops in their regions for local teachers.



Although the format for the workshops was similar to those in the U.S., there were many changes and adaptations that were made to meet the needs of this international audience. Participants received a different WET Guide than the U.S. version. It is more condensed and speaks more to issues faced in Latin America and the Caribbean. Many of the activities also had to be changed, because many materials common in the U.S. are not readily available throughout the region.

Environmental education is a very new concept to the teachers of Uruguay, but they were enthusiastically receptive to Project WET. The cultural exchange also enriched the experience for the participants and the Project WET staff, opening world views for both.

For more information on the Project WET International Foundation's efforts in other countries including the new Latin America/Caribbean and Africa initiative, visit: [www.projectwet.org](http://www.projectwet.org).



Image from Wikkipedia

## Combined Project WET/Webfoot Workshops a Great Success in N.C.

The N.C. Division of Water Resources is currently partnering with Duck's Unlimited to offer free combination Project WET/Webfoot workshops. Project Webfoot is a collection of educator and student curriculum materials on wetlands conservation. Each Project Webfoot kit contains a WOW! The Wonders of Wetlands educator's guide; and interactive CD-ROM; wetland guidebooks; color posters, student workbooks; student Project Webfoot Activity Books; a Read Aloud Wetlands Book list; and a one-year classroom subscription to the wetlands magazine, Puddler. When the Project WET Curriculum and Activity Guide is added to these quality materials, educators leave these workshops with a comprehensive set of water education resources free of charge.

For more information on Project Webfoot, see their Web site: <http://www.duck.org/projectwebfoot/>. If you would like to schedule a free, combined Project WET/Webfoot workshop at your school or nature center, please contact the NC Project WET State Coordinator, Holly Denham at (919)715-5433 or [holly.denham@ncmail.net](mailto:holly.denham@ncmail.net)



### Cost of Project WET Guides Increases to \$15

The cost of the Project WET Guide is increasing for the first time since the 1990's. The increase will help pay for the rising cost of printing and storage. One dollar of every guide sale also goes to the Project WET USA Evaluation and Assessment Fund. This fund pays for original research and evaluation of both the guide and the Project WET USA program in general.

### Student Copy Pages Available on CD



Tired of tearing the binding of your WET Guide to copy the Student Pages? Buy a CD of all the Student Copy Pages and have clean copies every time. For more information, visit the Project WET store at: <http://store.projectwet.org/>.



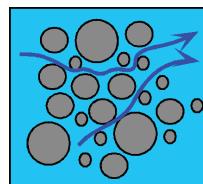
The mission  
of Project WET  
is to reach  
children, parents,  
educators, and  
communities of  
the world with  
water education.

We invite you  
to join us in  
educating  
children about  
the most precious  
resource on the  
planet – water.

## Activity Adaptations: Get The Ground Water Picture Infiltration Demonstration

### Procedure:

Explain to the audience that there are many types of substrates that make up the geologic strata underground (see diagram below). Water moves differently through these substrates as it infiltrates into the ground.

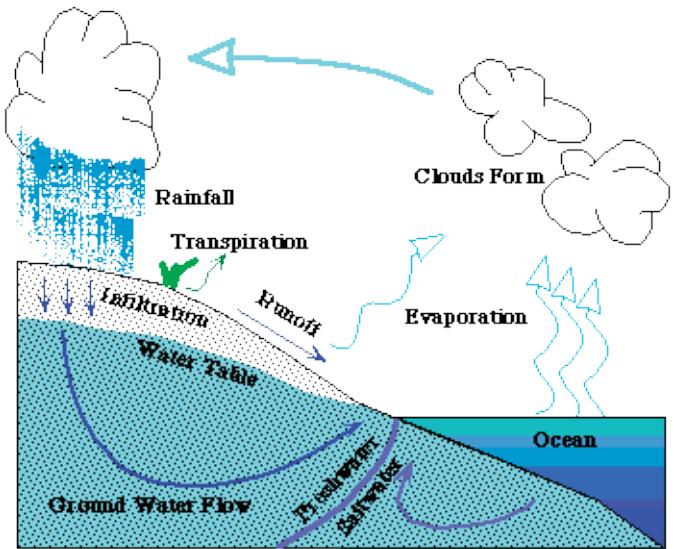


### Materials:

- large, clear plastic container (at least 6"x6"x12")
- large bag of blue marbles
- 10 to 15 two-inch Styrofoam florist balls
- 15 to 25 one-inch Styrofoam florist balls
- 25 to 35 one-half-inch Styrofoam florist balls
- small container with lid to hold the marbles

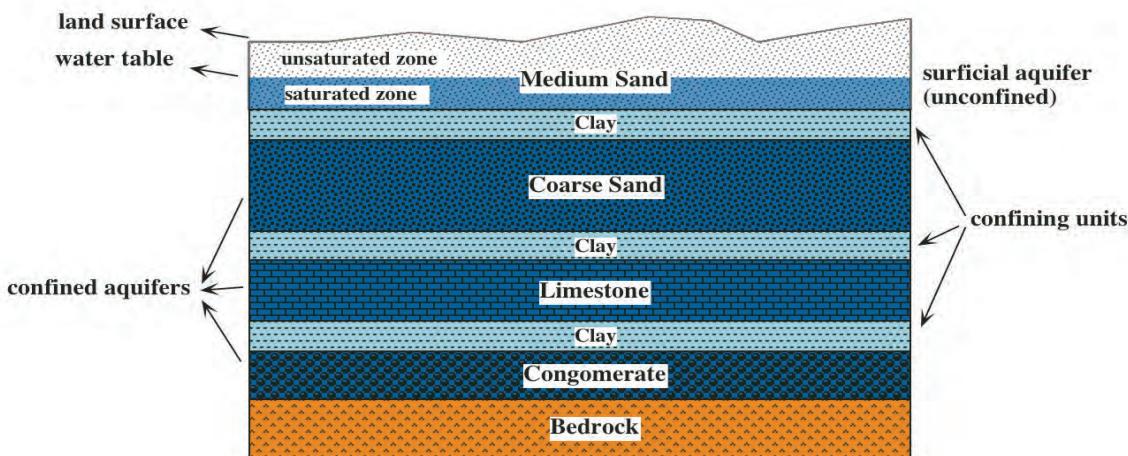
Then explain that the three sizes of Styrofoam balls represent three sizes of substrate with gravel being the largest, sand the medium, and the smallest as clay.

Fill the large, clear plastic container with the large balls. Then show the audience a blue marble and tell them that it represents water. Ask them if they think that the water will drain through the gravel quickly or slowly and why (The large spaces between the balls will allow the water to pass quickly through). Pour the marbles over the balls and demonstrate how the marbles move easily through the balls. You may have to jostle the container slightly. Then remove the large particles from the container and drain the marbles back into their container.



Next, fill the clear container with the medium balls, explaining that they represent the sand. Ask the audience what they notice about these particles compared to the gravel. Can you fit more or fewer than gravel (more)? Are the spaces between them larger or smaller than gravel (smaller)? Will water pass as quickly through the sand particles as it did through the gravel (no)? Why (because the spaces are significantly smaller)? Then pour the blue marbles over the balls and watch some move to the bottom while others are suspended throughout the container. Then, remove all the balls and drain the blue marbles back into their original container.

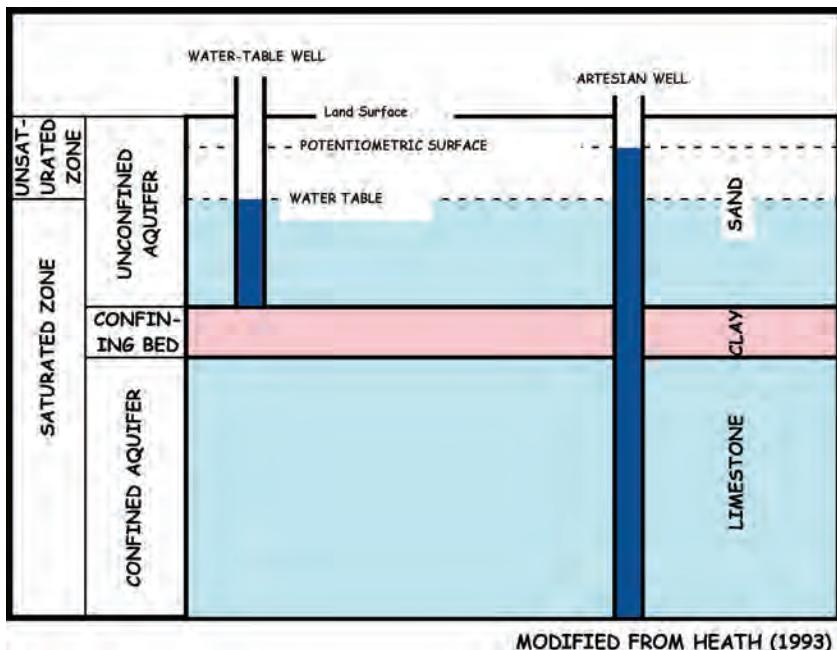
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## Get the Groundwater Picture (Cont.)

Fill the container with the smallest balls and explain that these represent clay particles. Ask the audience whether they think the marbles will pass more or less quickly through the clay particles than the others (less). Ask them about the size of the spaces between the particles and note that there is very little space between the particles at all. Ask them what they think will happen when you pour the marbles onto the clay and then pour the marbles into the container. They will actually sit right on top.

Explain that clay is relatively impermeable, meaning that the particles are so close together that water cannot pass through them. Gravel is permeable (water passes through) and sand is less permeable than gravel. Because the bottom of the container is impermeable, when water is poured over sand or gravel, water will not be able to pass through it. It will begin to backfill the spaces between the particles. Explain that if this container represented an aquifer, the area at the bottom where the spaces are filled with water would be the zone of saturation. (Refer participants to the Project WET diagram of an aquifer from Get the Ground Water Picture.) The beginning of the zone of saturation is called the water table. The area above where the spaces are filled with air is called the zone of aeration. When a well is constructed, it must reach down into the zone of saturation in order to extract the ground water.



"Acts of conservation without the requisite desires and skills are futile. To create these desires and skills and the community motive, is the task of education." -- Aldo Leopold

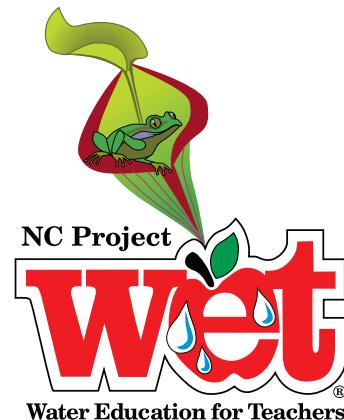
## From the State Coordinator:

*I will be on maternity leave soon and other tidbits.*

I will be out on maternity leave from the middle of January until the end of March. Jessica Johnson, the DWR receptionist, will be filling guide orders for facilitators while I am away. She can be reached at (919)715-5423 or [jessica.l.johnson@ncmail.net](mailto:jessica.l.johnson@ncmail.net).

Please be aware that the 319 grant that paid for many of the guides during the last two years has expired. In addition, the cost of the guides has increased from \$10 to \$15. If you are interested in hosting a free workshop, please consider the combined Project WET/Webfoot workshops.

I will begin facilitating workshops statewide beginning in June 2009. These workshops can be scheduled before the end of December 2008 or after March 31, 2009.



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