



Post-Workshop Survey Results Fall 2007

The Office of Environmental Education conducted a survey of the 2007 *Environment & Health: Making Connections through Water Quality Investigations* institute participants in December 2007 to determine how the institute influenced participants' teaching of water quality. Seventeen of the 24 participants responded – a response rate of 71%. Participants were asked to respond to each of the following statements by considering the July 8-13, 2007 teacher institute they attended and the water quality resources they received. With the exception of the first question, any single response indicated by more than 60% of the respondents is highlighted in the results below.

What is the *primary* subject you teach? (select one):

Earth/Environmental Science	41%	(7)
Middle School Science	41%	(7)
Biology	18%	(3)
Chemistry	0%	(0)
Physical Science	0%	(0)
Civics/Social Studies	0%	(0)
Other (please specify)	0%	(0)

Have you/will you address the topic of water quality with your students during the fall 2007 semester?

Yes	94%	(16)
No	6%	(1)

The institute influenced the way I teach about water quality and related issues.

Yes	100%	(17)
No	0%	(0)

If yes, please describe how.

- I will use activities and demonstrations shown in this workshop.
- It allowed me to extend my teaching techniques and provided examples of instructional activities.
- More hands on methods that I have used and will use with the students.
- It gave me more resources for the classroom and ideas for teaching
- It gave me many more options and activities that aren't just water chemistry.
- I have more info to teach water quality.
- New ideas and activities.
- Offers practical in-state examples
- I have much more learning materials and insight to teach the water portions of the NC Standard Course of Study. The material and lectures I found to be invaluable. I have a plethora of great lessons plans and ways to incorporate math, social studies, reading, and writing into my class using the water resources provided.
- I did a PowerPoint project on the NC watersheds that introduced my students to the various watersheds
- Spent more time discussing water quality with Earth/Environmental Science students. Also was able to provide more input to AP Environmental students
- I've used this information with Sierra Club, Tar-Pamlico River Foundation meetings, and other civic group outings.
- I will incorporate some of the demo's and activities with my Earth Science class. (running short of time in Bio due to new Standard Course of Study, so will not have time for many activities when I get to my Ecology unit in those classes) I will use many of the activities with my AP Environmental Science class in the spring!
- I can use the materials to enhance understanding of state standards.
- It provided me with a wealth of resources that are thought-provoking for my students. They get us "out of a textbook" and into the real world.
- Applicable to these low water conditions we are having now - couldn't have had it at a greater time

As a result of this institute, I am devoting more time to the teaching of water quality.

Yes 88% (15)
 No 12% (2)

As a result of this institute, I am more aware of water quality related resources available to me.

Yes 100% (17)

The resources I received at the institute have been useful in preparing me to teach about water quality issues.

Yes 100% (17)

Have you used one or more of the resources provided to deepen your *personal* knowledge of water quality?

Yes 88% (15)
 No 12% (2)

If yes, which resource(s)?

- Various keys, river basins
- Consumer news on ee site
- DESTINY lab, Common Water, WET and IOW.
- Living Down Stream
- The State We're In, River Basins maps, Civil Action
- Kits, posters, handbooks and manuals
- River Basins, Water Cycle, Water Pollution, Chemicals
- Water Atlas is great! Very interesting!!!
- Books on water quality
- Many, mostly water conservation because of drought
- The in-class activities were great. The book of lesson plans concerning water quality broaden and renew the subject of water. I used the Civil Action and the students loved it. It ties the concept of water pollution to real life situations. The Healthy Water guide was also great. It is organized to find lessons appropriate for the topic and student level. The Project WET goes without saying. Great resource. I plan to utilize more of the resources in my second semester.
- It's Our Water, Water Atlas
- Several.

Please tell us which of the resources below you consider to be most helpful when preparing for and teaching your lessons on water quality. (Check your top three resources)

1st	Healthy Water, Healthy People Curriculum Watershed Testing Kit	53% (9)
	Civil Action DVD	47% (8)
2nd	Project WET Curriculum	47% (8)
	It's Our Water Curriculum	47% (8)
3rd	Golden Guide to Pond Life	35% (6)
	Water Atlas: A Unique Visual Analysis of the World's Most Critical Resource	35% (6)
	DESTINY Kit	24% (4)
	Project WET Student Copy Pages	18% (3)
	Wonderful Wacky Water Critters booklet	12% (2)
	Sea to Summit Video	6% (1)
	Other: Updated NC River basin sheets	6% (1)
	Other: Living Down Stream	6% (1)

Please indicate your use of the following activities as a result of attending this institute.

	Will Use in 2007-08*	Have Already Used	Will NOT Use in 2007-08
Natural Resource Activities			
Discussion of pollution, including stormwater runoff (n=17)	100%	65%	0%
Discussion of climate change issues related to water (n=17)	94%	65%	6%
It's Our Water Curriculum (n=17)	93%	33%	7%
Discussion of invasive aquatic species (n=16)	88%	35%	12%
Project WET Curriculum (n=15)	88%	50%	13%
Discussion of fish toxicity (n=16)	88%	31%	13%
Discussion of sea level rise (n=15)	87%	53%	13%
Journaling (n=17)	59%	47%	41%
Water Dance - Aquarium slide presentation (n=15)	53%	7%	47%
Discussion of snail study (Rachel Carson Research Reserve) (n=17)	41%	0%	59%
Project Learning Tree – Exploring Environmental Issues: Focus on Risk			
Special Topics: Chlorine (n=14)	57%	14%	43%
Things Aren't Always What They Seem (n=16)	50%	13%	50%
Chemicals, the Environment and You			
The Dose Makes the Poison (n=17)	88%	24%	12%
Different Doses for Different People (n=15)	67%	7%	33%
Lemons and Onions (n=16)	63%	6%	38%
DESTINY: The State We're In			
Environmental Impact Study (regions of NC) (n=17)	76%	41%	24%
Public Hearing Role Play Activity (n=16)	31%	6%	69%
Wet Lab with Daphnia (n=17)	29%	0%	71%
Connecting Chemicals to Water Quality			
Biomagnification of PCBs in the Food Chain (n=17)	82%	18%	18%
Water Muddle Up and Clean Up (n=17)	65%	18%	35%
Introduction to Superfund (n=16)	63%	19%	38%
Evening Activities			
Case study of A Civil Action (n=16)	69%	25%	31%
Discussion: Is Environmental Health a Human Right? (n=17)	59%	24%	41%

*This column includes respondents who have already used the activities

Have you/will you incorporate a field trip as part of your lesson on water quality as a result of attending this institute? (n=14)

	YES
Field trip to local pond or stream for water quality monitoring	86%
Field trip to local wastewater treatment facility	71%
Field trip to Sturgeon City	7%
Field trip to Jacksonville wastewater treatment facility	7%
Other (please specify)	0%

If you have not utilized any of the activities or resources provided at the institute, please indicate your reason(s) in the space below: (n=2)

- Working with new Standard Course of Study with LOW functioning biology students so don't have much time for labs/activities. Also have LOW LOW LOW functioning Earth Science class with lots of behavior problems - don't do many activities there either but have used a couple of the videos and much of the information in discussion format. Next semester, I will have honors bio classes and my AP Environmental Science class and will implement many of the activities and resources!
- The Civil Action related real life situation to the course of study. It also involves cross core with foreshadowing events, plot, conclusion for language arts. The Healthy water info is priceless because of the activities and appropriate worksheets. A well layed out lesson plan.**

***This teacher appears to have mis-read the question, and answered with his/her reasons FOR utilizing the activities and resources. However, this is good information regarding the cross-curricular value of the activities/resources.*

What kind of follow-up to the institute can we offer to assist you in addressing water quality issues with your students? (n=12)

- Since much of the discussion centered on coastal issues, follow-ups with concentrations for piedmont and mountain regions. Comparison of NC issues with surrounding states / regions.
- Reminders and emails of materials as they become available
- As more resources come available, please send them
- It would be nice to have a lesson plan sharing. I'm sure we have all modified the activities in some way to suit our own needs.
- Perhaps a blog where teachers can go to place suggestions or post questions.
- Offer a more advanced extensive study of aquatic macro-invertebrate organisms and water quality issues. Then a separate workshop on just Project Wet, project Wild activities geared to the middle of HS levels.
- More interesting activities would help
- More on water conservation in response to drought, along the lines of collecting rainwater for personal use
- Drought conditions and water quality. How they are related and how it affects our local water sources.
- I appreciate the e-mails with additional information.
- More hands-on activity

Please share any additional comments you have. (n=7)

- Still the best teacher development program I have ever been to.
- It was a great experience. Let's do it again.
- It was an awesome workshop, and my students will benefit from all your work and my willingness to dedicate my time and follow up. Thank you.
- My 8th graders took a field trip to Jordan Lake and our local water treatment plant. It was truly fascinating for the students and connected their use of water, where it goes, and how to be better stewards to water quality. I highly recommend field trips to local state parks. They are free, informative, and outdoors!
- I thoroughly enjoyed the workshop.
- Thank you for all that you do!!!!
- Very good and informative workshop to go back to school and our science department has improved greatly with students, parents and staff. Sarah you worked very hard and it showed at our workshop, again thank you for the workshop, the presenters, all the materials. It's been a great asset to our science department.