



The CRCST Quarterly

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.....from the Editor

Norm Schmidt

On Sunday, August 8, 2009, Karl Wheatley, an education professor from CSU wrote an editorial for the Plain Dealer titled: "Pushing for higher test scores won't lead to better education." He claimed that too often teachers are encouraged to, or default to, teach to the test and thereby reduce their instruction to an uninspiring, non-motivational and vapid series of offerings. He spoke to the lack of "real" learning taking place in the classroom.

In a letter to the editor on Wednesday, August 12, 2009, Bryan Ashkettle, a teacher of AP history in a good school in the area, lauded Professor Wheatley's editorial and said that he has resorted to very low level rote memorization tactics in his classroom, at the expense of higher level discussions critical thinking and problem solving activities, in order to better prepare his students for high achievement on the AP history test.

I will come clean; I have worked on state mandated science proficiency tests since they were begun in Ohio. My first committee work was on the 12th grade test (1994) and when that faded out I was moved to the 9th grade test and then when the state developed science standards and it was decided to move the high stakes test to the 10th grade, I was asked to join that committee. Recently the committee system has been changed a bit. Instead of sitting on both the science content committee and the range finding committee, indi-

We have many wonderful resources in NE Ohio. Some continue to teach in their classrooms and some are retired but they all have a story to tell. See the interview of Jo Ann Lane on Page 8.

-viduals sit on one or the other.

I am now only attending meetings of the range finding committee. This committee reviews short answer (2 point) and extended response (4 point) answers that have been given by students during the most recent round of testing. The committee members make a decision on what score should be assigned to a sampling of student answers. These papers and their scores are used by the scoring company to train their cadre of scoring professionals (all of which must have at least a bachelor's degree).

The science content committee reviews questions submitted by the company which designs the tests before they become part of a test. When the particular questions are approved (multiple choice, short answer and extended response) they are added to one of the test forms and are given a 'trial-run' and do not count in the students' score. Psychometric data is collected on these questions and they are reviewed again before they become a scored question on a future form of the test.

There is another committee which reviews the questions for language and cultural appropriateness.

In every committee review, the questions on the 10th grade Ohio Graduation Test (OGT) for science are evaluated in terms of their alignment with the 9th and 10th grade Ohio Science standards. The questions *Continued on Page 4*



Presidential Column

Ray Patacca, President

Changes and Challenges

Welcome back to a brand new school year. This new year greets us with many changes and challenges. Some of these changes are a result of our country's economic situation; still others are caused by the rapid change in technology including the rise in popularity of Facebook, LinkedIn, Twitter, texting, and on-line course work. They are all changes. Some of us like change, yet some of us resist it. In either case, change happens. Change presents challenges and opportunities. CRCST is not immune to change and over this past year has embraced these changes. Our members have capitalized on these challenges and turned them into opportunities. Join us at the Fall Conference on Saturday, October 24th at JCU's Dolan Center to see how. *Continued on page 9*

Sally Pellegrin, CRCST Secretary, has been selected as the recipient



of the Presidential Award for Excellence in Science Teaching for 2008. We who know Sally are well aware that she is truly deserving of this

award and we congratulate her accomplishment. Hats off to her!!

Science in the News

An Environmental Lesson Taught by a 6-Year Old – Messages of Faith

The Cleveland Plain Dealer Saturday, July 11, 2009
Sister Beverly Anne LoGrasso

Like many persons in every faith and secularist tradition, I am struggling to integrate new awareness about our sacred Earth into my spiritual practices. As the late Trappist monk Thomas Merton reminds us, being rooted in your own tradition is your best asset in incorporating new insights. My Catholic Christian tradition has extensive teachings on virtue and the outstanding example of the environmental saint, Francis of Assisi.

The Catholic bishops in their 2001 document "Faithful Stewards of God's Creation" have reminded Catholics that the environmental crisis is a moral challenge to examine the goods of the Earth, what we are passing on to future generations, and how we care for God's creation.

I have always accepted the premises of modern science about global warming and climate change; my struggle is not intellectual. Rather, I struggle to change my life and to practice environmental virtue, to remember to bring my reusable bag into the grocery store with me. Instead, it usually sits in the car as I come to the checkout.

Then, I feel guilty and struggle to carry out my items without using yet another plastic bag that may clog a sewer, choke a gosling, or sit in a landfill for 1,000 years after which it biodegrades and contaminates soil and water. Of course, there is also the challenge of trying to remember to bring my plastic mug to meetings or my stainless steel water bottle instead of a plastic bottle.

Paul's Letter to the Romans, Chapter 7:18-19, consoles me: ". . . the good I desire to do, I do not do." I want to become a more responsible citizen of the planet that God sees as "good."

But, where do I find the motivation to continually reduce my carbon footprint?

Of course, my first mistake was my belief that I could find this motivation on my own. Instead, a moment of grace intervened in the person of my 6-year-old godchild, Xavier. One Sunday morning after Mass, we went to the coffee-and-doughnuts gathering where he asked me for a small glass of orange juice, which was served in a plastic cup. I gave it to him, and when he finished it, he handed it to me. As his godmother, Canon Law 774 tells me that I am to form him "by word and example in faith and Christian living." Being ever mindful of my duty, I gently reminded him not to litter and pointed to the garbage can. As I watched him walk to the garbage can, I reveled in my successful discharge of my duty as a responsible adult in seizing this "teachable moment."

My flash of moral superiority was short-lived. Xavier walked over, paused at the lip of the garbage can and walked back

to me with the cup in his hand, faced me, looked me squarely in the eye, and said: "Recycle!" I spent the rest of the day reflecting on the consciousness that Xavier has been blessed with at such a young age. Perhaps God is blessing this generation with the spiritual gifts that are required for their particular challenges in returning the Earth to its original state of clean air, water and soil.

Theologian Regis Duffy points out in "Real Presence: Worship, Sacraments and Commitment" that when celebrating Baptism, members of the Christian community often emphasize the change in the baptized individual, but the understanding of the early church was that the community was also changed by the presence of the newly baptized. I find myself living that truth each time I encounter my godchild, who I am sure has changed me spiritually more than I have changed him.

My progress in the development of the virtues of stewardship is slow. However, since my godchild seized a teachable moment to help me deepen my practice, I have found that my motivation has increased considerably because it is fueled by my love for him and for his future on a healthy, sustainable planet.

Because of Xavier, I now find myself gladly carrying home cans and plastic cups in my purse for recycling!

Although the Christian tradition has always taught that the root of all virtue is love; the journey to that root can be a long one -- unless you have been blessed with a 6-year-old godchild with freckles on his nose and wide blue eyes, who is going to live on this planet long after many of us are gone.

Sister Beverly Anne LoGrasso is a Cleveland Ursuline nun on staff at Women's Re-entry Network, a program of Community Re-entry, sponsored by Lutheran Metro Ministry.

Are Schools Wounding Kids? From Teacher Magazine – July 29, 2009 By Kathie Marshall

When I returned to the classroom this year after six years as a literacy coach, I chose to teach a reading intervention class other teachers actively avoided—a mix of 6th and 7th graders reading at a mid-2nd to early 4th grade level.

It was a year of change for me as a teacher. I was returning to the classroom for the first time since No Child Left Behind prompted my district to introduce mandatory instructional programs. These included a scripted reading curriculum for our intervention students.

Teaching struggling readers wasn't new to me. In the late 1990s I had created a language arts intervention course using service learning as the primary vehicle for motivation. Now, however, I found myself *pushing* students through a massive workbook each day. Their general response was, "It's booooooring!"

Pretty quickly I found myself "cheating"—changing up the curriculum on Fridays. We read plays from *Action*

Magazine, wrote and illustrated poems, did word games, and sent letters to pen pals and authors. I began letting my more creative side breathe a bit. When the theme included a story about wacky inventions, we had a contest in which students devised their own. When author Elisa Kleven's scrap art was introduced, students invented their own scrap-art figures and wrote character sketches. Throughout the year, there was this constant tension between what I was supposed to be doing with students and what I was actually doing.

And what was I supposed to be doing? To me, hand-in-hand with the goal of improving reading was the equally important goal of providing my at-risk students with positive learning experiences. Many were already beaten down and convinced they were losers. Bringing some fun and win-win into the classroom equation would help them, however cautiously, to try once more. Was this not important, too?

Teacher-consultant Bill Page defines at-risk students as "Children who are expected to fail because teachers cannot motivate, control, teach, or interest them using traditional methods and prescribed curriculum." This is precisely what I observed in the early months with my intervention students.

To shine a light on these issues, one day I had my kids sit in a large circle. One child at a time answered the question, "When did you turn off to school?" In my years as literacy coach, I met privately with intervention students who had the lowest grade point averages, and they always had an answer to this question. Most often they turned off in 3rd or 6th grade, when they realized they were struggling and others around them seemingly were not.

Interestingly, seven of my 7th graders this year had turned off to school in the 2nd grade, when they were part of a district experiment that retained the lowest performers. They still had not forgotten what it felt like to be left behind as their friends moved on. At least now I was able to tell them how sorry I was this happened to them. Surely these students deserve a chance to heal the hurt and rethink their identities as learners, something no scripted curriculum I'm aware of can address.

'Teachers' Little Comments'

Recently, I came across Kirsten Olson's new book, [*Wounded by School*](#). I immediately devoured it and found more insights into the world of at-risk students.

Olson explains that her book began "with a desire to understand the experiences of highly capable learners, virtuoso explorers who showed unusual vitality in learning." But she was "quickly diverted by the repeated and powerful descriptions among my research subjects of educational wounding and laceration in school."

As I read this, I immediately saw an image of myself as a 6th grader. I was walking back to class after recess, and for perhaps the fifth day in a row I asked my teacher, "Can I go

to the nurse? I have a headache." "What's wrong with you?" shouted Mr. Wright. "Why do you always have a headache?!" It was another 15 years before my migraines were diagnosed. I warily hid my headaches from others after my teacher taught me to believe something was wrong with me as a person.

Wounded by School delineates a dozen different types of school wounding and their effects, including:

- Feeling you aren't smart and your ideas lack value.
- Feeling you don't have what it takes to be successful in school.
- Feeling ashamed of your efforts.
- Suffering a loss of ambition, self-discipline, and persistence when faced with obstacles.

In a section called "wounds of rebellion," I found my intervention kids and their defensive symptoms:

- The only way to protect yourself is to rebel.
- In response to being unsuccessful or told we are unworthy, we become hostile.
- We are unwilling to see another point of view.
- We act out, as an adaptive response and it becomes fixed, maladaptive, and self-destructive.

Olson quotes one student, who remembers a crushing moment in 7th grade that led him to declare, "I quit! I just really quit!"

The student saw himself as a screw-up: "Basically I became motivated to not do well—like what I could do well was not to do well. ... Kids that struggle are so much more sensitive to *moments*—especially bad ones. These moments shape their whole lives, their sense of themselves. Teachers' little comments had a huge effect on me."

These lines could have been spoken by any one of my intervention students. In an essay about three strengths of his, one of my students wrote: "I am good at three things. I can draw (graffiti), I like to be bad, and I get in trouble a lot."

Olson's book is not directed only at struggling students. Her research clearly shows that all students are vulnerable to school wounds. She nails what I observed this year among the most capable 6th graders in my English and history classes. She writes:

"Rather than making them more dutiful, more competent, and more disciplined, they grew weary of school and learning ... risk averse, overly intimidated by authority, or likely to underestimate themselves ... simply deadened—less enlivened by the world and its possibilities than they might be."

I wonder if this was why some of my most successful classroom projects from past years seemed less engaging this time around. Although these students were strong oral readers and tested well, they didn't enjoy reading, were

often highly apathetic toward learning, and resisted staying on-task if the work was challenging. As a result, I was disappointed at times by their response to assignments that had once excited and engaged my students before I became a literacy coach.

On our last day of school this June, as I dismissed the class with the cheery words “have a great summer,” one of my best students turned back and said, “We’ve been waiting for this day since September.”

What is within our control to do differently?

After eight years as a literacy coach, Kathie Marshall returned to her Los Angeles classroom in the fall of 2008 to teach middle grades language arts. She writes frequently about instructional practice and the teaching life.

Continued from page 1

on the test are based on the state standards and these standards are a richly detailed parallel of the National Science Education Standards developed by the National Research Council and published in 1996. If the questions do not align with the 9th or 10th grade state science standards they are rejected for modification or for good.

There is work underway to take a close look at the current state science standards and make revisions that will strengthen the document by updating the science and giving it a web based presence which will make it much easier to use.

The above explanation was made to clarify the process of developing the state tests. It is a thoughtful and dynamic process which is based on a set of standards that have been developed by a wide array of thoughtful individuals. Prior to the state standards there was a document which recommended how science teaching should progress through the K-12 systems. The early version of the 9th grade science proficiency test was based on this document. I believe similar documents existed in the other major content areas. In Professor Wheatley’s critique and in Mr. Ashkettle’s letter there is no mention of the state standards on which our K-12 education is based.

The embracing of state standards and the resulting testing that became a near nationwide movement (Iowa was fairly reticent) was a response to some major happenings. In the late 1980’s a group of leaders from commerce and education produced a report (A Nation at Risk) that stated that too many students were leaving high school without the needed critical thinking skills, problem solving abilities and understanding of how to work effectively in groups. Here is a quote from the report, “*If an unfriendly foreign power*

had attempted to impose on America the mediocre educational performance that exists today, we might well have viewed it as an act of war. As it stands, we have allowed this to happen to ourselves. We have even squandered the gains in student achievement made in the wake of the Sputnik challenge.” Since then a few more VIPS have been gathered to provide further reports of the shortcomings of our educational system, the latest being the Glenn Report. Most of these high level reports are reminiscent of Shakespeare’s Macbeth: “*...a poor player that struts and frets his hour upon the stage and then is heard no more: it is a tale told by an idiot, full of sound and fury, signifying nothing.*”

Another reason for the movement to write standards and assess students was the hefty amount of national funds that were linked directly to this process. A state would have to write the standards or miss out on a large funding opportunity.

So, the impetus for the testing:

1. A demand for accountability from multiple communities including business, science and education.
2. Money from the national government to pursue the process.

Most of the questions on the Ohio tests are multiple choice and worth one point each but there are also short answer and extended response questions. These are sometimes recall questions that are fairly easy if the material was covered but some are much more sophisticated and require the student to evaluate the information that is written or in graphic form and use their understanding of the process of science in order to answer the question. The characterization of the science OGT as a “reading” test is often made by some critics. Reading is clearly a requirement but the reading level is rather low (about grade 5 or 6) and a 10th grader should have the ability to read and understand at that level in order to qualify for a diploma.

I don’t know much about the AP tests, especially not the history test, but I find it hard to fathom engaging students in rote learning as a more effective strategy than setting up situations that require understanding the events or cultures that may have led to some historic event. Even if the test is asking for dates or names of documents, wouldn’t it be more AP-like to put those dates or documents into a historic context that helps students to understand the reason why

these dates or documents are considered important?

I do understand that students can sometimes skip some basic coursework in college by doing well in AP courses, but if the teacher feels that it is not challenging the students in its current form, talk to the AP folks or stop teaching it. Mr. Ashkettle did not mention the OGT in his letter but I assume he is not a fan of that assessment either. The state does not mandate AP testing. The OGT is mandated by legislation. The fee for taking an AP test is fairly hefty. There is no fee to take the OGT and students can take it several times if they do not pass it the first time.

The use of actual lab work or group work focused on a particular problem in science involving the use of resources and technology all the while being monitored by a knowledgeable adult would certainly be preferable to the paper and pencil tests that are now used to assess student understanding. Can you imagine the cost and the built-in subjectivity?

Now you likely believe that I am an enthusiastic proponent of state testing. I am not. The cost is huge and the benefit is still questionable. If it was clearly beneficial in informing how teachers can modify their teaching methods to produce well prepared students there would not be so much dissatisfaction with the whole process. But the state testing is done fairly and it is based on well reasoned standards that are open for review and amendment. In my opinion, it is the best means of measuring accountability in an imperfect educational system.

In a perfect world, every teacher would have the time and resources to effectively teach and assess their students at every grade level in every content area.

Transparency of Common-Standards Process at Issue

By Sean Cavanagh - Education Week - Aug. 11, 2009

As the most concerted effort to create common academic standards in more than a decade rolls forward, the process has drawn criticism from those who say that too much of the nitty-gritty work is taking place behind closed doors.

The organizations leading the effort—the National Governors Association and the Council of Chief State School Officers, both headquartered in Washington—have assigned a pair of working groups to oversee the initial writing of the documents.

Those two panels have produced draft standards for

college and career readiness in mathematics and English language arts. More-detailed guidelines for grades K-12 are expected to come later. Yet those groups' deliberations have so far been deemed "confidential" and closed to the public by the NGA and CCSSO, which say there will be several opportunities for public input in the weeks and months ahead arts and math are to be publicly released.

Complaints about lack of transparency are common during the crafting of standards, curricula, and education policy reports at all levels. The criticism of the new standards effort—a process in which 46 states, as well as the District of Columbia, Puerto Rico, and the Virgin Islands, have agreed to participate—comes after a draft of the document was leaked on the Web in early August; that working version alternately drew praise and censure from those who read it.

NGA and CCSSO officials say the views of the public and outside experts will be taken seriously—and that such dialogue is, in fact, already occurring. The organizations have created a pair of "feedback" panels of experts, who along with state officials and outside organizations are poring over the draft. In addition, NGA and CCSSO officials say they are actively reaching out to state leaders and others for additional input.

Next month, a revised draft is scheduled to be put online for public consideration, said Dane Linn, the director of the education division of the NGA's Center for Best Practices. The public also will have a chance to offer its views when the standards are presented to states, which will have to decide whether to adopt them, Mr. Linn noted. In most cases, that process will be directed by state boards of education, he said.

Outside Opinion

Yet, some parents and education organizations have questioned how much influence they can exert over a document that, so far, has been crafted behind closed doors.

The working groups of standards writers are made up mostly of representatives of Achieve, a Washington policy organization; and the Iowa City, Iowa-based ACT and the New York City-based College Board, two organizations probably best known for developing college-admissions tests.

"The concern is that they'll write it, and once it's written, it's set in stone," said Barry Garelick, a Virginia parent who takes a strong interest in math standards and instruction. His view has been echoed by others, sometimes in commentaries on the Web.

Some of those who have been worried about the writing effort also credit the NGA and CCSSO with taking recent steps to allow more outside opinion.

Randi Weingarten, the president of the 1.4 million-member American Federation of Teachers, said in an interview that “there needs to be a lot more transparency” about the drafting of the standards.

But the union leader said she had a “very productive” meeting with NGA and CCSSO officials recently and was cautiously optimistic that the process was opening up. Making it more public will increase the odds that teachers embrace the standards and help implement them, Ms. Weingarten said. The AFT plans to review the current draft and offer its opinions, she added.

“We need to make sure that this is a process that happens in real time, not 20 years from now,” said Ms. Weingarten, who has been advocating common academic standards.

Similarly, the president of the National Council of Teachers of Mathematics, Henry S. Kepner Jr., who earlier this summer raised concerns that his group’s past standards work was being ignored, said last week that the NGA and CCSSO had become more committed to gathering outside opinions. Mr. Kepner, whose Reston, Va.-based organization has 100,000 members, is serving on the math feedback panel tasked with reviewing the working draft.

“They have become much more open and engaging,” Mr. Kepner said of the NGA and CCSSO. “We’re establishing, I hope, a very trusting relationship.”

‘The Price We Paid’

A number of participants in the last major movement to create voluntary national academic standards, during the 1990s, described those processes as more open than the one being undertaken today. But those observers also noted the former efforts, which played out in across different subjects and were in some cases underwritten by the federal government, took several years to complete, and were marked by strong divisions over curriculum and content.

The drafting of history standards, for instance, “was about as open and democratic and transparent as possible,” recalled Gary B. Nash, an emeritus professor of history at the University of California, Los Angeles, who co-directed that effort during the 1990s.

The initial writing of the history document was carried out by task forces of teachers and academic schol-

ars, said Mr. Nash, who later co-wrote a book that described the undertaking. Members of the public were allowed to attend those initial meetings, Mr. Nash recalled, though he believed few people did. Much broader public discussion, and input from historians and curriculum experts, came later, during open meetings on the drafts, he said.

Yet Mr. Nash acknowledged that a wide-open process was at times difficult to manage. “Having [so many] organizations involved and having it be transparent is certainly not the most efficient way to get to the finish line,” he said. “It was the price we paid for trying to be inclusive.”

English standards were drawn up in a similarly open fashion, recalled Alan E. Farstrup, the retired executive director of the International Reading Association, which co-led the effort along with the National Council of Teachers of English. Teams of writers and reviewers went through numerous public drafts and revisions, he said.

The effort being directed by the NGA and CCSSO, Mr. Farstrup said, did not strike him as being “significantly different” in terms of its openness than the procedures that guided the work by English experts in the 1990s. While Mr. Farstrup said he saw public vetting of the document as important, he also said such input could occur during the review of the drafts to come.

“You can’t have a draft of anything developed by a committee of the whole,” Mr. Farstrup said. “It simply doesn’t work.”

Scott Montgomery, a deputy executive director at the CCSSO, said this week that his organization and the NGA have talked about “keeping [the process] as open as we could,” while also seeking to build consensus around a working document.

Ilene M. Berman, a program director in the NGA’s education division, added that from the outset, the goal has been to have a state-led effort “There is a built-in process for state and other input,” Ms. Berman said.

A Request for ‘Evidence’

The NGA and CCSSO collect money from states through membership dues, as well as revenue from other sources. But the common standards work is being paid for through the NGA’s Center for Best Practices, a 501(c)(3) entity that is funded primarily through grants from the federal government and private foundations as well as through contracts, according to the governors’ organization. The NGA regards the working groups’ efforts to write the standards as “working

meetings” and closed to the public to protect “the integrity of the process,” the NGA said in a statement.

It’s common for tension to exist between government agencies and other organizations wishing to conduct certain business in private, and requests that such work be made more open, said John Wonderlich, the policy director for the Washington-based Sunlight Foundation, which promotes transparency in government, particularly through technology.

Opening up a process tends to invite more discord, he said, while privacy can make it easier to get things done. While there was probably not any legal standard that would compel the NGA and CCSSO to write the document in the open, Mr. Wonderlich said, a strong case could be made for them doing so voluntarily.

Education standards, because of their potentially broad influence, are “clearly something that the public has a right to know about,” he said.

But Mr. Linn, of the NGA, predicted that drafts of the standards would receive close scrutiny from both the feedback panels and the public. The NGA and CCSSO want to create a document based on “evidence,” shaped by model academic standards and research about important college and workforce skills, he said.

The draft circulated last week cites several such documents, including standards from individual U.S. states and high-performing countries, as well as studies and reports. Individuals and organizations are being encouraged to submit their own evidence, if they disagree with those documents, Mr. Linn said.

The end goal is to create a “structured process,” he said, in which views of the standards are informed by research. NGA and CCSSO officials expect that those drafting the standards will receive valuable insights from the feedback groups, state officials, and the public, which the working groups would take seriously.

“We want the feedback to be used,” Mr. Linn said, adding that the reviewers “represent a range of views on English language arts and math.”

The Development Process: A Timeline

• **December 2008** — The Council of Chief State School Officers, the National Governors Association, and Achieve release a report calling for states to adopt common, internationally benchmarked stan-

dards in math and language arts.

• **April 2009** — Representatives of 41 states gather in Chicago to discuss the possibility of common standards.

• **June 2009** — The CCSSO and NGA announce that 46 states, plus the District of Columbia, Puerto Rico, and the Virgin Islands, have signed memorandums of agreement to take part in the process of devising common standards.

• **July 2009** — Twenty-nine people are named to two “work groups” charged with writing the standards; 35 others are named to “feedback” groups to review and critique them. A “validation” committee will later review the work, the NGA and CCSSO say.

• **July 2009** — A draft of the groups’ college- and career-readiness standards is leaked on the Web and draws mixed reviews from subject matter experts.

(Projected)

• **September 2009** — The governors’ and chiefs’ organizations hope to have the college- and career-readiness standards approved by the validation committee.

• **December 2009** — Draft K-12 standards in language arts and math are to be publicly released.

• **January 2010** — K-12 standards are to be approved by the validation committee.

• **Early 2010** — States will submit timelines and processes for adopting the standards.

SOURCES: *Education Week*; Common Core Standards Initiative

CRCST Fall Conference Highlights

Registration Form on Page 13

Keynote: Dr. Glenn D. Starkman, Professor of Physics, Case Western Reserve University - Speaking on **Origins**
Concurrent sessions covering K-12 levels:

- Scale and Size: From 10^{-10} to 10^{10} meters and beyond!

Bob Marquard, University School

- Chemistry – It’s Elemental – National Chemistry Week activities Cleveland Section of the ACS

- Seeds of Science-Roots of Reading program

Pam Keiper and Jane Stange, CMSD

- Cyber Surgeons: A Medical Emergency Simulator

Jackie Shia, Challenger Learning Center® at the Center for Educational Technologies® at *Wheeling* Jesuit University

- Alternative Energy - Ray Patacca, Lake Farmpark

- 3-4 additional sessions, TBA

3 sessions sponsored by CRABS:

- Eye Color Inheritance Lab - Maureen Wahl, Notre Dame/Cathedral Latin H.S.

- Sharing Ideas for Improving Your AP Biology and Advanced Biology Courses - Jo Ann Lane, retired from St. Ignatius H.S.

- Darwin, the Man and His Science: Celebrating the 150TH Birthday of *the* Origin of Species (2 hr workshop runs until 1:45 pm) - Rich Benz, Lake County Ed. Serv. Center

An Interview with Jo Ann Lane

Please talk a bit about your personal growth during your early years.

I grew up in Euclid and attended St. Christine's for elementary school and Villa Angela Academy (before it combined with St. Joseph's) for high school. While both my parents were intelligent, well read individuals, neither finished high school. I was the first in my family to finish college.

My greatest influences in deciding to become a science teacher were the science teachers I had both in high school and college, especially Sister Ursula who taught me biology at VA and Sister Felicia who was my biology professor at Ursuline College. Sister Ursula asked each student to teach a lesson during the year and I still remember getting up and teaching "the woody twig" (lenticels, buds, etc.). I am proud of the fact that I graduated from Ursuline with a Bachelor of Arts degree, which meant I had to fit in all my science courses to obtain a comprehensive science teaching certificate with courses in philosophy, history, and English. My class was the first one at Ursuline to have this curriculum. Even though I lived close enough to the old Ursuline College to commute, I chose to board since I had two siblings at home who didn't have to study every night and I wanted to be where I could better study.

I was in a few clubs at school, but most of my free time was taken up with working to help pay for my tuition. In high school I worked at Kroger's as a cashier during the school year and in the summer and I continued this job during the summers I was in college. I also worked on the college switchboard on the weekends during the school year.

How did you decide on your post-K-12 education?

I decided to attend Ursuline College because I received a half tuition scholarship. In those days I was able to pay for room and board and the rest of tuition with the jobs I had (see above). I paid for all college expenses except for \$2000. that my grandfather gave me in my senior year. My major influence during my college days was Ursuline Sister Felicia who taught me all my biology courses. Her excellent teaching gave me a wonderful foundation for all the other science I have had to learn while teaching in the years after college.

I applied after my first year of teaching to an institute at Duke University paid for by the National Science Foundation. At the end of the first summer I was told that I could come back additional summers to complete a Master of Arts in Teaching degree. I took advantage of this offer and finished my master's during three sum-

learn while teaching in the years after college. I applied after my first year of teaching to an institute at Duke University paid for by the National Science Foundation. At the end of the first summer I was told that I could come back additional summers to complete a Master of Arts in Teaching degree. I took advantage of this offer and finished my master's during three summers at Duke and the final one at John Carroll University. I was engaged to be married the first summer I was at Duke, a newlywed the second summer, and the mother of a three month old baby at the beginning of the third summer.

Where did you begin your career?

I began my teaching career at Collinwood High School in Cleveland teaching 8th and 9th grade general science the fall after I graduated from Ursuline. The second year I taught major work life science to bright 7th graders and biology to 10th-12th graders. This was possible because, at the time, Collinwood contained grades 7-12. This variety of teaching in just a few years gave me the confidence to be able to tackle many varied teaching assignments over the years from grades 7-12, to freshmen in college, and in the later years of my career, to teaching other teachers in institutes and having four interns from the John Carroll University Master's Program.

Discuss the highlights of your career. How and why did you become involved in one or more professional organizations?

Most of my career, twenty-five years, was spent teaching at St. Ignatius High School. I am proud of the fact that I was appointed science department chair for the last ten years and was deeply involved in the complete renovation of the science building. I was able to teach the last five years of my career in a state-of-the-art building in which each teacher had his/her own classroom complete with a lab. All of the labs were identical with large lab benches, fume hoods, water, gas, electric and wireless computer connections. This meant that no teacher had to change rooms because of teaching two different subjects, and also that the rooms would be able to be used for whatever course(s) are introduced in the future.

Other highlights include being involved with teaching other teachers, first with the Satellite Evolution and Nature of Science Institute which I taught with Michael Kimmel, a teacher from Conneaut High School, from 1993-1996 and then, as a consultant for the College Board, I have been teaching one day and one week AP Biology Institutes for the last

ten years. We were proud to have influenced the teaching of evolution and the nature of science to close to one hundred Northeastern Ohio educators during the four years of the institute.

I was a member of the National Association of Biology Teachers and the Cleveland Regional Council of Science Teachers for most of the years I taught at St. Ignatius. I found that both participating in the conferences of these organizations and attending summer institutes helped me keep up-to-date with my teaching and gave me new ideas to keep my teaching fresh and interesting. Over the years I accumulated more than 50 credit hours after my master's degree from attending institutes at Ohio State, Edinboro State, Cornell University and many other colleges.

I presented materials from the SENSI Institute at four national NABT conferences and have served on the board of CRCST two different times for a total of about 8 years.

Discuss your adult family life in relation to your career and personal and professional growth.

My husband, John, was also a teacher so he understood the time commitment good teaching takes. After my sons were in middle school and high school I was able to attend summer institutes to help me be a better teacher while my husband stayed home with our sons. I did the same for him at various times. I must say, however, that most of my summers work both as a participant and instructor in institutes occurred after our sons left home.

What advice can you give to young educators? What are your current interests and what hopes do you have for the future for yourself and for science education?

I realize that young educators have many more obligations with regards to keeping up their certification than I did, but it is important for them to become involved with local, state and national science teachers' organizations in order to keep up with the latest educational methods, scientific knowledge and to make contacts with fellow teachers to have as resource persons. I would advise them to join at least one local or state organization and one national organization. Attend at least one local or state conference a year and one national conference every three years or so. Reading the newsletter or journals of these organizations can help keep yourself current.

I am still active and on the board of both CRABS and CRCST and love to attend events at local museums and other organizations. I am a member of the Cleveland Zoo, Cleveland Museum of Natural History, Cleveland Botanical Gardens, Holden Arboretum, Cleveland Museum of Art and am a Friend of the Cleveland Public

Library and Ursuline College Library. Just recently, for example, my husband and I spent two hours viewing the new wing of the art museum and then went to a lecture on the Apollo space program and moon landing at the Great Lakes Science Center. My husband and I love to travel to new places and have planned at least two big trips in each of the years I have been retired. In the past two years we have been to China, Israel and Jordan, the Northwest U.S.A. and Canada, and will soon be leaving for Slovenia, Croatia, and Montenegro.

I am still working as a College Board consultant and plan on teaching the AP Biology Summer Institute for a third year next July at La Salle University. I will also serve as an on-site coordinator for at least two College Board workshops this fall and winter.

I would hope that science education would become more about learning less material well, rather than the manner in which much material is now covered during one year at a more shallow level. I would also like to see even more "learning by doing," especially in the lower grades. I realize that we are now in an era of "teaching to the test," but I hope that teachers can still find the time to instill the wonders and awe of science into their students.

What are a couple notes of interest that most of your colleagues don't know about you?

Most people probably don't know that, besides loving science, I also have an interest in music and art. John and I love going to art museums as much as zoos and aquariums when we travel and have subscriptions to both the Cleveland Orchestra and Great Lakes Theater.

My hobbies include trying new recipes from my large collection of cookbooks (I am always buying new cookbooks), reading for pleasure a wide variety of books from mysteries to biographies to best sellers and photography. Thanks to digital photography I can now document our travels with hundreds of photos taken during each trip.

President's Column from Page 1

First, we tackle the technological challenges. CRCST is excited to announce that in addition to our website, we now have a Facebook page. Thanks to Renata Brown, Norm Schmidt and Mark Waner for moving us in this direction. We invite you to become a fan and take part in our discussions and updates. It is a place to share information and news. Take on this new technology challenge and post something on our wall.

At the Fall Conference, CRCST challenges

the economic crisis with a Toyota Tapestry grant writing workshop led by Connie Kowalski. Connie will share her insight into the grant process and show you how Toyota Tapestry works. Who knows, you might be able to land a grant of \$2,500 to \$10,000 to help fund projects in your classroom.

More good economic news... Past president Pam Keiper and board member Jane Stange will share the *Seeds of Science, Roots of Reading: Intergrating Science and Literacy* program which began this summer at JCU (funded by a grant from the Ohio Board of Regents) at the Fall Conference on October 24th.

Even better economic news... Renata Brown, Mark Waner, and Norm Schmidt just received notice that CRCST has received its first ever grant! The Martha Holden Jennings Foundation has funded the professional development program, *Science + Reading*. This hybrid professional development course (blending online and face-to-face components) focuses on science and reading for teachers of grades K to 3. *Science + Reading* is a collaborative effort among CRCST, CTSC, The Cleveland Botanical Garden, and the Cleveland Museum of Natural History and utilizes two GEMS units and additional plant science activities and trade books. Check the information/registration sheet in this newsletter for additional information.

Are you ready?... Attend the CRCST Fall Conference on October 24th at JCU to learn more about these and other challenges turned into great opportunities. See you there and be prepared to take on the challenges of our time!

Save the date!



Reminds you to **save the**

date for the 2009

EDUCATOR'S OPEN HOUSE

Join us for this **FREE** event
Tuesday, October 20th
Anytime between 4:00 and 7:00 pm in

The RainForest

Enjoy the RainForest exhibits after hours with you and your family

Complimentary hors d'oeuvres and drinks!

Close encounters with education animals

Education demonstrations for ALL programs!

New! **WVIZ NATURE CLUB** members receive **V.I.P.** status at this event! (Go to www.wviz.org/moodle and click on **NATURE CLUB** to get started).



The Cleveland Regional Council of Science Teachers
Professional Development Opportunity for K-3 Teachers



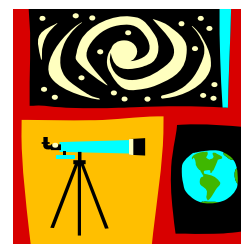
"Science + Reading"

*This PD opportunity is supported by the
Martha Holden Jennings Foundation and the CRCST GEMS fund*

- Enhance your skills in teaching science.
 - Learn how to integrate literacy & science in your lessons.
 - Use exceptional materials (GEMS) that align with state and district standards.
 - Become a member of the Cleveland Regional Council of Science Teachers.
 - Become a member of the Teacher Resource Centers of both the Cleveland Botanical Garden and the Cleveland Museum of Natural History.
 - Earn one hour of non-degree graduate credit from Ashland University (optional)
- You must be a public school teacher, grades K-3 to be eligible.*

Benefits:

- CBG teacher resource center membership - \$35 value
- CMNH teacher resource center membership - \$30 value
- CRCST membership - \$15 value
- CRCST Fall Conference Admission - \$20 value
- Improving your craft – *priceless*



Your cost is only:

\$30.00 (Make check payable to **CRCST**)
Additional cost for the non-degree graduate credit.

The program will begin at the 2009 CRCST Fall Conference on October 24 at John Carroll University. Participants will attend morning and afternoon sessions (6 contact hours) to be introduced to the GEMS science and reading units and learn the *Angel* web interface used for the online portion of the program. Over the next several weeks participants will work online on class assignments focused on the use of science activities with appropriate nonfiction reading material including the GEMS units *Buzzing a Hive* and *Tree Homes*. Additional hands-on and reading activities focused on plant structures, habitats and growth will be selected by the instructor, Renata Brown (Associate Director of Education, Clara DeMallie Sherwin Chair in Education).

A half day session (4 contact hours) will be held at University Circle to engage participants in exploration of the resources available at the CBG and the CMNH teacher resource centers. The final online assignments will address remaining questions and draw together the curriculum materials and the local resources. The course will conclude by December 15, 2009. Participants will be online for 6 contact hours. The course will entail a total of 16 contact hours.

Registration Form for Course including CRCST Fall Conference

Name _____ Grades Taught _____
 School _____ District _____
 School Phone # (____) _____ Home Phone # (____) _____
 Cell Phone (____) _____ E-Mail _____
 Home Address _____
 City _____ Zip _____

*Make check payable to **CRCST**
 Mail to: Mark Waner, Dept. of Chemistry
 John Carroll University
 20700 North Park Blvd.
 University Heights, OH 44118*

Opportunities for Teachers and Students

A Worldwide Weather Site:

<http://www.worldweathermeteo.com/WWMSat.html>

This site has several useful features: such as high and low pressure system locations, tropical storms, climate areas, web cams pictures in real time, animations, forecasts, etc.

A World in Motion Project in CMSD

The Society of Automotive Engineers, ALCOA and the Cleveland Technical Societies Council collaborated on a project in Cleveland fifth grade classrooms using a project involving problem solving and critical thinking as students (or groups of students) built Jet Cars (actually, rocket cars, but.....). This is part of an SAE sponsored A World In Motion program. Check out the news report at: <http://www.fox8.com/news/wjw-world-in-motion-txt,0,2883626.story>

If you are a fifth grade teacher in CMSD, make sure you look for information regarding this years project which will take place in May, 2010.

Tires to Oil

If you teach environmental science or chemistry or would like to engage your students in a discussion about critical issues such as old tire disposal, new ways of generating electrical power and new sources of hydrocarbons, these videos can help you get started:

<http://www.youtube.com/watch?v=nCcV0DhkDtk>

<http://www.youtube.com/watch?v=FIK8fS8aCM8>

<http://www.youtube.com/watch?v=RwKSsfsJ73I>

Candlepower?

Is this magic or some new discovery that we are just now hearing about. Perhaps this could be used to encourage your class do some critical thinking. It might also lead to a reverse design experiment.

<http://www.break.com/usercontent/2007/2/Candle-Power-Who-Needs-Batteries-220129.html>

RECENT BIOSCIENCE ARTICLES:

THE DINGO DILEMMA

The first dingoes may have tumbled onto its shores straight out of human hands, but their descendants are

straight out of human hands, but their descendants are now essential to the survival of Australia's wilderness.

<http://www.bioone.org/doi/full/10.1525/bio.2009.59.6.3>

MALAWI AS MICROCOSM

Malawi, a landlocked country of poor farmers, faced a food crisis in 2005. By providing subsidized fertilizer and seed to farmers, the country's maize harvest tripled by 2007 and estimates are that this year's maize crop will beat the 2007 record.

http://www.aibs.org/bioscience-editorials/editorial_2009_07.html

To read more free articles or to subscribe to the magazine BioScience:

<http://www.aibs.org/bioscience/>

FOR EDUCATORS

INSECT BIOLOGY AND BIODIVERSITY is a new lesson on ActionBioscience.org that engages students in field and inquiry activities about leafroller caterpillars. Students rear collect, identify, and rear caterpillars, compare moths and parasitoids, discuss natural controls and pesticides...and more!

<http://www.actionbioscience.org/biotech/miller.html#educator>

EDUCATOR'S BLOG: You are invited to blog about issues in educational technology for bioscience teaching and learning. "Technology: An Educational Issue?" discusses ways to learn and teach with technology. Recent discussions include podcasting resources, free Academic Earth videos, the AIBS Advocacy Tool, BioQUEST investigative cases, and the Year of Science 2009 online resources.

<http://teachissues.blogspot.com/>

EN ESPANOL

Nuevas traducciones al español de artículos seleccionados:

- El Uso de Pruebas Genéticas para Predecir Enfermedades: Implicaciones Éticas, Legales, y Sociales (IELS)

<http://www.actionbioscience.org/esp/genomica/glenn2.html>

- Nanotecnología: Es un Mundo Muy, Muy, Muy, Muy Pequeño

<http://www.actionbioscience.org/esp/biotecnologia/merkle.html>

- Los Biólogos Evolutivos Buscan Proteger las Plantas y los Animales de Madagascar

<http://www.actionbioscience.org/esp/evolucion/roberson.html>

Continued on Page 14

Cleveland Regional Council of Science Teachers



39th Annual Fall Conference

Dolan Science & Technology Center

Saturday, October 24, 2009



Tentative Schedule

7:30 – 8:00am	Registration, Continental Breakfast, Networking & Browsing Vendor Displays
8:10 - 9:00	Concurrent Session 1
9:20 - 10:15am	Keynote Address: Dr. Glenn Starkman “Origins”
10:15 – 10:30am	Annual Membership Meeting
10: 35 – 12:35	Concurrent Sessions 2 & 3 and Workshop Sessions
12:40 - ???	Explore Vendors, Network with your colleagues.
1:15 – 4:15	Optional online PD opportunity for K-2 teachers (pre-registration required)

There will be three 50 min. concurrent sessions with topics that include life, earth/space, physical, and integrated science for elementary through college classrooms. We hope to have some 2 hour workshop sessions as well. Give-aways and vendors will be back by popular demand. Enjoy networking, other professional science education organizations displays, and more. Look for information on our web site: www.ctsc.org/crcst

Questions: Mark Waner: 216-397-4791 mwaner@jcu.edu

CRCST Fall Conference 2009 Registration

Please use one form per person, copy as needed. Membership in CRCST or CRABS is required.

Please check the appropriate option	<i>Early-bird</i> (by Oct. 10)	<i>On-site</i>
Conference only (existing member)	\$20	\$25
1 year CRCST membership & conference (undergraduate education student)	\$20	\$25
1 year CRCST membership & conference	\$35	\$40
2 year CRCST membership & conference	\$49	\$54
3 year CRCST membership & conference	\$63	\$68
1 year CRCST/CRABS membership & conf.	\$40	\$45
2 year CRCST/CRABS membership & conf.	\$59	\$64
3 year CRCST/CRABS membership & conf.	\$78	\$83

Name: _____ H Phone (____) _____

H Address: _____

City: _____ ZIP _____

School/Work Site _____

City: _____ ZIP _____

Phone: (____) _____ E-mail _____

Plantas y los Animales de Madagascar

<http://www.actionbioscience.org/esp/evolucion/roberson.html>

- Mi nombre es LUCA – El último Ancestro Universal Común

<http://www.actionbioscience.org/esp/nuevas-fronteras/poolepaper.html>

- ¿Cuál es el Último Ancestro Universal Común (LUCA)?

<http://www.actionbioscience.org/esp/nuevas-fronteras/poolearticulo.html>

- Por favor diríjase al Directorio de artículos en español:

<http://www.actionbioscience.org/esp/>

ActionBioscience.org is an education resource of the American Institute of Biological Sciences (AIBS), Washington, DC.

[Supernova Discovered by 14 year-old Scientist](#)
[New Supernova Is Discovered by Young Citizen Scientist](#) →

The Science Education Council of Ohio (SECO) Annual Professional Development Conference to be held February 25 – 27, 2010 at the Greater Columbus Convention Center in Columbus, Ohio. For Information: www.SECOonline.org



Caroline Moore

Cleveland Regional Council of Science Teachers



Norm Schmidt, Editor
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 Cleveland OH 44102