



# The CRCST Quarterly

Volume LXV I No. 1

66 Years

Spring 2010

## .....from the Editor

Norm Schmidt

Green burial was highlighted in the newspaper a couple years ago and a contact was given. I was interested and emailed the contact and he called me. We talked about the lack of green cemeteries in Ohio and he sent me the rules and regs for cemeteries in Ohio (hoping I might consider starting a green cemetery) and as I looked through the lawyer-speak, I realized that the whole deal was impractical for me. The \$50,000 in escrow was a biggie.

But I did see a bit of a loophole. If you have property in your family that is of appropriate size and location you can do a green burial (or any kind of burial for that matter) on that property without any licensing involved.

This seemed too un-bureaucratic to be true. I found the person in charge of cemeteries in Ohio. He happens to have an office in Cleveland. I called and we talked about the prospect of my burial (in the distant future) on my families land which lies in Chardon Township. He said that I had read the regulations correctly and that there was no problem as long as the burial was not too close to a drinking water source. He suggested that just to be on the safe side I should contact Chardon Township and make sure that they have no local regulations opposed to this. My cousin knew a trustee that I contacted. He heard me out, **Cont. on pg. 6**



## Presidential Column

Mark Waner, President

### **So, What's Your Philosophy of Teaching? How a tool for getting a job in higher education, might be repurposed.**

As part of almost any advertisement for a faculty position in higher education one will find a request for a statement of teaching philosophy, in addition to the typical cover letter, curriculum vitae and plans for research. These 2-3 page statements lay out some of the candidate's basic views and approaches to teaching their discipline. Given the relatively short length, it is not very in-depth, but would generally cite some specific examples to illustrate what their classroom would look like to a student or observer. So, why would I think it might be useful for you as CRCST members to think about this kind of document? Most of you are either currently teaching, or are retired, and have focused on K-12 education, where such statements may or may not be the norm. Either way, just stick with me for a couple more paragraphs and I hope you'll agree that the exercise of developing such a statement could be a productive way to spend some time.

I've been thinking more about this after some recent reading and personal experiences. A few years ago I read an article that encouraged established college instructors to go back and re-visit the teaching philosophies they had writ-

-ten years before, when they were looking for a job. By revisiting and writing new statements one could take time out to reevaluate their own beliefs and practices, as a developmental opportunity. Last month I was pointed to a very interesting article by Mark Cohan (a sociology professor at Seattle University). Not many of us would start an article with: "I have a confession to make. I was a bad teacher." [1], though he is bold enough to do so. Through the article he relates how he progressed from a very traditional view and approach to teaching, to one that is much more student centered and engaging for himself as well as his students. The third experience was working with a soon to be Ph.D. in another field, edit and refine their own teaching philosophy statement, which got me reflecting back on my own statement. I would also point out that my own philosophy of teaching has been greatly enhanced by my interaction with a great many of you, my fellow CRCST members.

Now why do I think it useful for K-12 teachers to think about developing or refining a statement of teaching philosophy, especially those not looking for a job? First off, writing a 2-3 page statement such as this is not overly taxing. We're all really busy, and it is hard to find time for something extra, particularly something that may be viewed as an exercise for ourselves. I would argue, however, that this is precisely why we should consider taking some time for self reflection. It is so easy for us to get bogged down in the daily 'grind,' to just do what we've always done, or worse, to let ourselves dwell on the problems we all face in our work. Stepping back

to reflect on the breadth of what we do, can help us to refocus on why it is we became teachers in the first place and (hopefully) why we still love it.

All of us have a personal philosophical belief regarding our methods of teaching. Taking some time out to express in words our philosophy can help us clearly define and refocus our teaching efforts in a positive manor. Whether one is creating or reevaluating a teaching philosophy, one must focus on the big picture and think carefully about what we and our students bring to the classroom. If one keeps in mind that this statement is most often used as part of the job search process, then your approach will not likely be to complain about a problem and how it must be someone else's responsibility to fix. If the problem is not the key to your classroom approach, then it need not be in this statement anyway, and if the problem is central to the classroom, you will need to focus on the ways that you, as the teacher, seek to address it in order to meet the student where they are.

I would not write the same statement I did 11 years ago when I got my current job, though what has changed most is not the students, but rather my teaching. I still find the essence of my philosophy described by my old statement, but the process of implementing what I most value has changed. I can now also reflect more on the bigger picture, and less on a few specific examples of a particular way I approach a specific topic. Lastly, this re-examination forces me to again lay claim to my own beliefs with respect to teaching and redouble my efforts to keep those things in the forefront of what I do in and out of the classroom.

Have a happy spring, and be sure to join us April 29 for our Spring Symposium on Sustainability at Ignatius High School.

[1] Cohan, M. (2009). Bad apple: The social production and subsequent reeducation of a bad teacher. *Change* (November/December), 32–36.

## Science in the News

### [Fossil Shelved for a Century Reworks Carnivore Family Tree](#)

More than a hundred years after its discovery, the limbs and vertebrae of a fossil have been pulled off the shelf at the American Museum of Natural History to revise the view of early carnivore life-styles. Early carnivores had been considered arboreal in their early evolutionary history, but the recently studied skeleton suggests that some early carnivores were built to walk

on the ground, at least part of the time.

### NEW ARTICLES POSTED ON ACTIONBIOSCIENCE.ORG:

#### BIRDS: WHAT CAN THEY TELL US ABOUT OUR PLANET?

Paul R. Schmidt from the U.S. Fish and Wildlife Service provides some sobering facts that should be a wake-up call for us to take action on avian conservation.

<http://www.actionbioscience.org/biodiversity/schmidt.html>

#### THE FUTURE OF MARINE FISH RESOURCES

J. Emmett Duffy, College of William and Mary's Virginia Institute of Marine Science, suggests ways to mitigate the damage caused by overfishing, destructive fishing practices, and pollution.

<http://www.actionbioscience.org/biodiversity/duffy.html>

#### DARWIN'S DELIBERATIONS ABOUT THE ORIGIN OF SPECIES

John St J. S. Buckeridge, RMIT University, Australia describes the anguish that Darwin went through while writing "On the Origin of Species".

<http://www.actionbioscience.org/evolution/buckeridge.html>

**BioScience** magazine's online articles are available at no cost to members of AIBS. Selected articles, however, are available to non-members for free. Free reading:

"What's New with Honeybees?" Myrna E. Watanabe examines the status of honeybees since commercial beekeepers began reporting a strange malady affecting their beehives about three years ago.

<http://www.bioone.org/doi/full/10.1525/bio.2009.59.11.19>

"Biofuels: The Past, Present, and a New Vision for the Future." Tom Simpson suggests that a redesigned agricultural landscape could produce food, feed, and fuel and at the same time improve water, air, and habitat quality.

<http://www.bioone.org/doi/full/10.1525/bio.2009.59.11.2>

Subscribe or learn more about *BioScience*: [http://www.aibs.org/bioscience/current\\_issue.html](http://www.aibs.org/bioscience/current_issue.html)

### FOR EDUCATORS

#### 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 a look at Foldit: Protein Folding Game and Vidque, a site where you can curate and share videos. <http://teachissues.blogspot.com/>

**(NSF) Discoveries** -The Fantastic Armor of a Wonder Snail [http://www.nsf.gov/news/news\\_summ.jsp?cntn\\_id=116243&WT.mc\\_id=USNSF\\_51](http://www.nsf.gov/news/news_summ.jsp?cntn_id=116243&WT.mc_id=USNSF_51)

### **Tectonics and Poor Construction in Haiti**

from the *Los Angeles Times* (Registration Required)

The catastrophic quake that struck Haiti on Tuesday involved a collision of lethal circumstances: a massive, shallow eruption below a densely populated city with few, if any, building codes.

The magnitude 7.0 quake occurred near the boundary between two major tectonic plates, the Caribbean and North American plates. Most of the movement along these plates is what is known as left-lateral strike-slip motion, according to the U.S. Geological Survey, with the Caribbean plate moving eastward in relation to the North America plate.

Kate Hutton, a seismologist at Caltech, said the quake was similar to those seen along the San Andreas fault: It was shallow, a fact that enhances the intensity and makes it more localized to the region right along the fault.

### **[Astronomers Say Alien Dust Is Nothing to Sneeze At](#)**

Using the Gemini South telescope in Chile, astronomers at UCLA have found dusty evidence of the formation of young, rocky planets around a star some 500 light-years distant. But these potential, extra-solar worlds are alien in an even more intriguing way: In the aftermath of collisions between planetary embryos around this star the researchers discovered that the dusty debris bear no resemblance to the planetary building blocks of our own solar system.

### **[The Venus Flytrap's Lethal Allure](#)**

from *Smithsonian Magazine*

As I slogged through black swamp water, the mud made obscene smooching noises each time I wrenched a foot free. "Be careful where you put your hands," said James Luken, walking just ahead of me. "This is South Carolina"--home to multitudinous vipers, canoe-length alligators and spiders with legs as thick as pipe cleaners.

... Our destination, not far from the headwaters of the Socastee Swamp, was a cellphone tower on higher ground. Luken had spotted a healthy patch of Venus flytraps there on an earlier expedition. To reach them, we were following a power-line corridor that cut through oval-shaped bogs called Carolina bays.

... Luken, a botanist at Coastal Carolina University, is one of the few scientists to study flytraps in the wild, and I was starting to understand why he had so little competition.

### **Journal Retracts Paper Linking Vaccine to Autism**

from the *New York Times* (Registration Required)

A prominent British medical journal on Tuesday retracted a 1998 research paper that set off a sharp decline in vaccinations in Britain after the paper's lead author suggested that vaccines could cause autism. The retraction by *The Lancet* is part of a reassessment that has lasted for years of the scientific methods and financial conflicts of Dr. Andrew Wakefield, who contended that his research showed that the combined measles, mumps and rubella vaccine may be unsafe.

But the retraction may do little to tarnish Dr. Wakefield's reputation among parents' groups in the United States. Despite a wealth of scientific studies that have failed to find any link between vaccines and autism, the parents fervently believe that their children's mental problems resulted from vaccinations.

### **Mathphobia from elementary teachers**

Read the study: [http://news.uchicago.edu/news.php?asset\\_id=1850](http://news.uchicago.edu/news.php?asset_id=1850)

### **[NASA and Texas Instruments Use Human Spaceflight to Bring Math and Science Topics into High School Classrooms](#)**

NASA and Texas Instruments are using the theme of human space exploration to develop digital libraries of math and science problems for high school students.

### **[Environmental Change Impacts Oklahoma Rivers](#)**

Biodiversity in freshwater systems is impacted as much or more by environmental change than tropical rain forests, according to University of Oklahoma Professor Caryn Vaughn, who serves as director of the Oklahoma Biological Survey. "When we think about species becoming extinct, we don't necessarily think of the common species in freshwater systems, many of which are declining," says Vaughn.

### **"Turtle Positioning System" helps reptiles on fantastic voyage**

[http://www.nsf.gov/news/special\\_reports/science\\_nation/seaturtles.jsp](http://www.nsf.gov/news/special_reports/science_nation/seaturtles.jsp) - includes a nice video.



**What do you suppose this woltle eats?**

**Using an atom interferometer**, University of California, Berkeley scientists have tested one of the foundations of Einstein's general theory of relativity: that time slows down in a gravitational field. Their experiment proves that Einstein was correct with 10,000 times more precision than previous experiments. They achieve this precision by comparing the interference between matter waves separated by 4/1000 inch. Full story at:

[http://www.berkeley.edu/news/media/releases/2010/02/17\\_gravitational\\_redshift.shtml](http://www.berkeley.edu/news/media/releases/2010/02/17_gravitational_redshift.shtml)

### **Working Toward the Next Generation of Science Standards**

NSTA has long sought to take science education to the next level by addressing the challenges faced by states, school districts, and teachers as they work toward the goal of a science literate population. The need to focus the country on a rigorous set of science standards that are clear, coherent, and manageable is both compelling and urgent.

Over the past year, NSTA engaged a team of experts to advise and move the science standards effort forward. We solicited—and received—opinions from science teachers, supervisors, district and state leaders and many others about the scope and direction of new science standards. We also worked with key national organizations, including the American Association for the Advancement of Science (AAAS) Project 2061, the National Research Council (NRC), and Achieve, Inc. to further the effort.

NSTA Executive Director Francis Eberle in the March 2010 *NSTA Reports* sheds light on where the project is headed: <http://www.nsta.org/publications/news/story.aspx?id=57049&lid=scimat>

### **Diversity of Corals, Algae in Warm Indian Ocean Suggests Resilience to**

### **Future Global Warming**

For those of you who participated in JASON XI: Going to Extremes, you'll probably remember our teacher Argonaut, Barbara Zimmerman, who worked with the Aquarius (Florida Keys) research team. In particular, the team shared research on coral bleaching and what appeared to be devastating affects on corals. This article gives some hope for the survival of corals, at least in the Indian Ocean.

Corals that harbor unusual species of symbiotic algae have been discovered thriving in water that is too warm for most other corals. The discovery gives hope that coral reefs and the ecosystems they support may persist—at least in some places—in the face of global warming.

Full story at: <http://www.science.psu.edu/news-and-events/2010-news/LaJeunesse2-2010>

**Biologists are finding evidence that culture has been interacting with genes** to shape human evolution. <http://www.nytimes.com/2010/03/02/science/02evo.html?emc=eta1>

### **Start Science Sooner**

Excellence in science education must begin in kindergarten

From the [March 2010 Scientific American Magazine](#)  
By [The Editors](#)

Good science education at the earliest grades is supremely important, but in most classrooms it gets short shrift. Studies have found that children in kindergarten are already forming negative views about science that could cast a shadow across their entire educational careers. When researchers interviewed kindergartners from typical classrooms, barely a third of the children showed any knowledge of science, whether from school or other sources. Many children said that science was for older kids and adults, not kindergartners like them. They talked of science being about magic potions or dangerous chemicals; they said science is hard, science is not interesting, and “I am not good at science.” Ask a room of five-year-olds to draw a scientist, and you will likely get lots of pictures of white-coated men in laboratories. Furthermore, even before first grade, fewer girls than boys say they like science.

It is perilous to generalize about anything in the U.S. education system—quality varies **cont on page 10**

# Cleveland Regional Council of Science Teachers

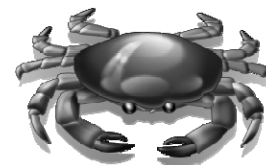


## 2010 Spring Symposium

St. Ignatius High School

Thursday, April 29, 2010

4:30 – 7:15



### Tentative Schedule

|                |                                                                                                       |
|----------------|-------------------------------------------------------------------------------------------------------|
| 4:30 – 5:00 pm | Registration, Light Supper, Networking                                                                |
| 5:00 – 6:00    | Panel Discussion: Sustainability in Your Life<br>What You Can Do.                                     |
| 6:00 – 6:15    | Break                                                                                                 |
| 6:15 – 7:15    | Split Groups: Sustainability in School, Lessons & Practices<br>Group A - PreK – 6<br>Group B - 7 – 12 |

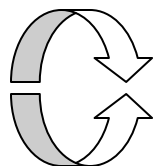
Further details and information about rooms and parking will be forthcoming via emails or may be accessed at [www.ctsc.org/crcst](http://www.ctsc.org/crcst)

Questions: Mark Waner: [mwaner@jcu.edu](mailto:mwaner@jcu.edu)

### CRCST Spring Symposium Registration

Please use one form per person, copy as needed.

Membership in CRCST or CRABS is required.



|                                                     | Fee  |
|-----------------------------------------------------|------|
| Symposium only (existing member)                    | \$10 |
| 1 year CRCST membership & symposium ( <b>full</b> ) | \$15 |
| 1 year CRCST membership & symposium                 | \$25 |
| 2 year CRCST membership & symposium                 | \$39 |
| 1 year CRCST/CRABS membership & symposium           | \$30 |
| 2 year CRCST/CRABS membership & symposium           | \$49 |

Name: \_\_\_\_\_ H Phone (\_\_\_\_) \_\_\_\_\_

H Address: \_\_\_\_\_

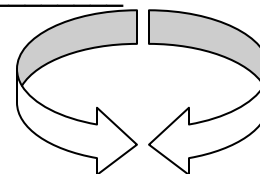
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School/Work Site \_\_\_\_\_

City: \_\_\_\_\_ ZIP \_\_\_\_\_

Phone: (\_\_\_\_) \_\_\_\_\_ E-mail \_\_\_\_\_

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



# Visit the Nature Preserve on Cleveland’s Lakefront

Sponsored by: Dike 14 Environmental Education Collaborative, Cleveland Botanical Garden, Cleveland Metroparks, Cleveland Museum of Natural History, Cuyahoga Soil and Water Conservation District, Cuyahoga Valley National Park Association, Earth Day Coalition, Lake Erie Nature and Science Center, The Nature Center at Shaker Lakes, Ohio Department of Natural Resources, Cleveland Lakefront State Park, The Ohio Lepidopterists, Western Cuyahoga Audubon Society, Cleveland-Cuyahoga County Port Authority, City of Cleveland

For more information contact: Chris Trepal at (216) 281-6468 x227

## “Migration Mania”

at the Cleveland Lakefront Nature Preserve at Dike 14  
Saturday, May 22

7:30 a.m. to 2:00 p.m.

near the Cleveland Lakefront State Park

Join us for walking tours on one of Cleveland’s hidden treasures. The Nature Preserve at Dike 14 will be open for self-guided hikes from 7:30 am to 2:00 pm. Come experience Cleveland’s only nature preserve along the shores of Lake Erie during prime spring migration. Birds, butterflies, the best views of Cleveland’s skyline and stunning views of Lake Erie will be yours!

*Exit #177 from I-90. Parking is available at Gordon State Park. Entrances from North Marginal at E. 72nd Street, from North Marginal between E. 72nd and MLK, and park office entrance from Lakeshore Boulevard east of MLK. Additional space at E. 55th State Park (Exit SR 2). Please arrive 15 minutes before beginning your walk to sign a waiver and receive additional information.*

### Enjoy self-guided tours along a one-mile trail!

Be sure to wear appropriate clothing and check carefully for ticks during and after the hike.

**From pg 1** chuckled and passed me on to the health department. That person promised to get back to me if he found any problem with the plan of being buried in a six foot deep hole in a cardboard box or cloth sack on the Schmidt family property. He never called back. I decided that meant defacto permission to carry on with my plan. So, when I tire of these earthly bonds, I have (sort of) an agreement with my family to dig me a hole and plunk me in it and plant a black walnut tree on top. Why not cremation? Cremation is

the favored method of body disposal in my family of late. My parents, aunt, brother have all had their ashes spread on the land. My problem with cremation is three-fold:

1. It costs too much
2. It uses too much energy
3. It does not provide the enrichment to the soil that the decay of an actual body provides

My lovely niece found an article about dissolving the body in lye and simply flushing it down the drain.

This is a favored method of disposal of old cadavers or body parts used in med school. But it seems a waste and recently became illegal for funeral homes to use this method. And even if it was allowable to do this on private property, I can’t see my relatives cooking up a barrel of lye and plopping good old uncle Norm’s body in it. So, I might as well continue to honor my green philosophy at the end of my life as well as during my life.

## Opportunities for Teachers and Students

### **ASM Materials Camp®-Teachers**

**(For high school general science, chemistry, physics, math and technology teachers; middle school science teachers.)**

A weeklong program that demonstrates how to use low no cost, simple labs and experiments using everyday materials that can be integrated into existing math / science / technology lesson plans. These simple activities and experiments are proven to actively engage students in learning more about applied science.

### **ASM Materials Camp®-Students**

**(For students entering their Junior or Senior year in the Fall of 2010)**

It is a program utilizing hands-on learning principles of applied math, physics and chemistry led by a distinguished world-class faculty. It is aimed at stirring students' interest in science and gets them excited about materials, science, and engineering careers. Students learn to be team players, and become "science detectives" at the camp. See

<http://asmcommunity.asminternational.org/portal/site/www/Foundation/Students/CampSchedule/>

### **Living In A Material World: K-12 Teacher Grants**

To provide support and incentive for K-12 teachers to develop and implement science-teaching activities.

<http://asmcommunity.asminternational.org/portal/site/www/Foundation/Educators/TeacherGrants/>

**Deadline: May 25, 2010**

### **Kishor M. Kulkarni Distinguished High School Teacher Award**

This award is established through a generous donation by Dr. Kishor M. Kulkarni (past Trustee of ASM International) and his family to honor/recognize the accomplishments of one U.S. high school science teacher who has demonstrated a significant and sustained impact on pre-college age students. **Deadline: June 30, 2010**

<http://asmcommunity.asminternational.org/portal/site/www/Foundation/Educators/TeacherAwards/>

### **City of Materials** – <http://cityofmaterials.com/portal/site/cityofmaterials/> **"Explore · Examine · Engineer"**

K-12 website for students to connect with Materials Science and Engineering both as a real world engineering discipline and as a possible career.

### **CMNH's Student Naturalists and Future Scientists programs**

I encourage you to make your students aware of these opportunities.

These programs introduce students to the natural sciences through outdoor field experiences. Activities have included eagle spotting, fossil hunting, water quality monitoring, reptile surveys, mammal tracking, butterfly banding, and testing for amphibian diseases. Students will perform real field work, meet expert scientists, and enjoy unique natural areas. The Student Naturalists program (Grades 5-8) introduces methods of scientific fieldwork and the Future Scientists program (Grades 9-12) continues with more in-depth study.

During the fall, winter, and spring months, the programs take place on Saturdays, 9am-4pm.

Throughout the summer, Tuesday-Friday sessions are scheduled, including overnight camping trips.

Register at <http://cmnh.org/site/ClassesandPrograms/Youth.aspx>

Please contact Nathan Taxel at 216-231-4600 x3251 or [ntaxel@cmnh.org](mailto:ntaxel@cmnh.org) for more information.

### **Bioinformatics Labs**

If you are interested in doing bioinformatics labs; Mark Miller from New Generation Biology Workbench has made a new tutorial. Here are links to the tutorials that were developed from labs originally on American Biology Teacher and one adapted from Kim Foglia's Whale activity.

<http://www.grochbiology.org/WhalesActivity.htm>

flash tutorial <http://www.ngbw.org/labs/seals/seals.htm>

<http://www.grochbiology.org/PandasBearsNewVersion.htm>

flash tutorial: <http://www.ngbw.org/labs/bears/bearlab.htm>

<http://www.grochbiology.org/PrimateActivityNewVersion.htm>

flash tutorial: [http://www.ngbw.org/labs/primates/](http://www.ngbw.org/labs/primates/primate_lesson.htm)

[primates\\_lesson.htm](http://www.ngbw.org/labs/primates/primates_lesson.htm)

### **New Podcast from the Encyclopedia of Life's Podcast of Life Series!**

**This week, Sea Cucumbers!**

What reef animal comes in a rainbow of crazy colors, can throw out its stomach to immobilize predators, then creep away and regrow a brand-new stomach? It's the sea cucumber, prized as a gastronomic delight by some cultures and beginning to yield some of its secrets to scientists. Follow host

Ari Daniel Shapiro from a Chinatown market to the reefs of Fiji to learn more about this amazing creature.

### Teachers!

Listen to the Sea Cucumber Podcast with your students and then go to the [Encyclopedia of Life Learning and Education website](#). Students can record their vocal impressions of what it sounds like when a sea cucumber squirts out its guts right on the website. We will showcase the best impressions in the coming weeks. Also, take a [Google Earth Tour](#), find educational activities and learn fun facts about these amazing creatures! And in case you missed it, check out our first podcast in the series, which features the [North Atlantic Right Whale \(\*Eubalaena glacialis\*\)](#). <http://education.eol.org/podcast/sea-cucumber>

### About the Podcast of Life

Introduce your students to marine biology and biodiversity through the [Podcast of Life](#) and witness science in action through lively, you-are-there stories from the front lines of ocean science. To download the podcasts, go to [eol.org/podcast](http://eol.org/podcast). You will be able to listen to the podcast on our website or download it on iTunes. We will add a new podcast every two weeks. This series of 13 podcasts, hosted by [Ari Daniel Shapiro](#), is brought to you by the [Encyclopedia of Life](#) at: <http://www.mnh.si.edu/> and a consortium of marine education network partners.

### About the Encyclopedia of Life

The [Encyclopedia of Life \(EOL\)](#) harnesses the powerful collaborative technology of the internet to inspire learning and understanding of the Earth's biodiversity. It's a constantly growing, perpetually evolving encyclopedia, a single free portal to the 1.9 million named species on Earth and more that are being described every day. Our goal is to make freely available to anyone knowledge about all the world's organisms. Anybody can register as an EOL member and add text, images, videos, comments or tags to EOL pages. Expert curators ensure quality of the core collection by authenticating materials submitted by vetted content partners and individual contributors.

### HeLa Cell-Line

Here is a link from NPR Fresh Air about the book and the story behind this cell line that has been used since the 1950's.

<http://www.npr.org/templates/story/story.php?storyId=123232331>

And here is a Smithsonian Magazine article on this book: <http://www.smithsonianmag.com/science-nature/Henrietta-Lacks-Immortal-Cells.html>

### From the Biology Learning Center

<http://library.thinkquest.org/20465/games.html>

1. Bloody Madness: getting the correct blood type in an ER
2. Punnett squares for Peas
3. Transcription Demonstration
4. Linkage Maps - where you place the genes the correct distance from each other.

### Investigating traction in a variety of foot structures

National Science Foundation Discoveries - Following in the Footsteps of Nature [http://www.nsf.gov/discoveries/disc\\_summ.jsp?cntn\\_id=116297&WT.mc\\_id=USNSF\\_1](http://www.nsf.gov/discoveries/disc_summ.jsp?cntn_id=116297&WT.mc_id=USNSF_1)

**The world of science education has a fast, new teammate: NASCAR**, whose 2010 Sprint Cup race season begins in Daytona, Fla. on Feb. 14 with the Daytona 500, the most celebrated stock car race of the season.

A 12-module video series, "The Science of Speed," by project partners the National Science Foundation and NASCAR calls on drivers and engineers from major race teams to take educators and students behind the scenes of NASCAR racing. More at

[http://www.nsf.gov/news/news\\_summ.jsp?cntn\\_id=116306&WT.mc\\_id=USNSF\\_51&WT.mc\\_ev=click](http://www.nsf.gov/news/news_summ.jsp?cntn_id=116306&WT.mc_id=USNSF_51&WT.mc_ev=click)

**The Library of Congress** is seeking K-12 teacher leaders to help with its planned national teacher network. They should be available to take part in an online course and a face-to-face workshop at the Library in Washington, DC July 19-22, 2010. There are no costs associated with participation. Applications are due by April 28, 2010.

See: [http://www.loc.gov/teachers/newsevents/events/tps\\_mentor/](http://www.loc.gov/teachers/newsevents/events/tps_mentor/)

### JASON Project Job Openings Now Available

Are you interested in changing the face of 21st century education? Consider a position at The JASON Project. By joining the JASON team, you'll be helping ignite the spark of education in students around the world. JASON fosters a creative and team-centric work environment and offers excellent benefits and resources to all employees.

The following contract positions, of up to one-



year, have recently been posted:

- **Project Specialist** - provides planning, logistics support, coordination and oversight for multiple projects for The JASON Project, including the JASON Argonaut Program, professional development, and video field shoots
- **Content Producer (Student Edition)** - writes and oversees the development of grades 5-8 inquiry-based science curricula
- **Content Producer (Teacher Edition)** - writes and oversees the development of teacher materials for grades 5-8 inquiry-based science curricular.

If you would like to learn more about any of these positions, or about how to apply, please visit <http://www.jason.org/public/whatis/aboutcareers.aspx>

### AAAS Project 2061

#### An Invitation for Teachers to Participate in the Field Testing of Middle School and High School Science Assessment Items

AAAS Project 2061 is developing assessment items to measure middle and high school students' understanding of important science ideas from the National Science Education Standards and the AAAS Benchmarks for Science Literacy. We are recruiting middle and high school science teachers willing to field test our multiple-choice test items with their students in April, May or June of 2010. As an incentive, each participating teacher will receive a copy of Volume 2 of the Atlas of Science Literacy or a \$50 gift card from either Borders or Barnes and Noble Bookstore. The assessment should take no longer than 45 minutes to complete, and will cover one of a variety of topics in science. It is not necessary that your students have had formal instruction on any of the topics being tested.

The guidelines for participation are as follows:

- You must be a middle or high school science teacher in the United States.
- Your students must be in 6<sup>th</sup>, 7<sup>th</sup>, 8<sup>th</sup>, 9<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup>, or 12<sup>th</sup> grade.
- You must obtain permission to participate from the appropriate school or district personnel.
- You must return all testing materials to AAAS Project 2061. Pre-paid shipping labels will be provided. This study is not intended to evaluate teachers or students. Individual students will not be identifiable, and teacher information will remain strictly confidential. Our only interest is to learn how students respond to these test items so that we can design test items that are

valid measures of what middle and high school students know about important science ideas. If you are able to participate, please use the link below and complete the registration form that follows. Participation in this study is limited, so registrations will be accepted on a first-come, first-served basis. If necessary, we will also adjust our selections to achieve representation from urban, rural, and suburban schools from different parts of the country. Teachers who are selected to participate will be notified by email.

2010 Project 2061 Field Testing registration: <http://register.p2061.org/field>

**The deadline for registration is April 2<sup>nd</sup>, 2010.** If you have any questions, please contact the coordinator of this assessment study by email at [2061assessment@aaas.org](mailto:2061assessment@aaas.org) or by phone at 1-202-326-6207.

**NASA** has launched a new web page to help people better understand the **causes and effects of Earth's changing climate**: [http://www.nasa.gov/home/hqnews/2010/feb/HQ\\_M10-036\\_Warming\\_World\\_page.html](http://www.nasa.gov/home/hqnews/2010/feb/HQ_M10-036_Warming_World_page.html)



**April 26, 2010, 4-6 p.m., State Theatre at PlayhouseSquare, 1519 Euclid Ave.**

#### **FREE ADMISSION | FREE REFRESHMENTS | PRIZES**

Fair on the Square is your best resource for finding out about arts education opportunities and field trips for the 2010-11 school year. Be sure to take advantage of early registration - only those who pre-register will be eligible to win ALL of the prizes we'll be giving away.

All educators in attendance will be entered into our Grand Prize Drawings - two \$250 Huntington Bank American Express Gift Cards will be awarded. The school and district with the most educators in attendance will also receive prizes.

The Ohio Alliance for Arts Education is holding two professional development workshops at PlayhouseSquare from 3-5 p.m. If you attend a workshop, you'll receive free parking, refreshments, and entry into a special cash prize drawing! Plus you'll have plenty of time to visit Fair on the Square after the workshop.

Workshop admission is \$5. To learn more, click on the workshop links below:

[Assessment Is Not a Mystery - http://ev15.eventue.net/cgi-bin/ncommerce3/SEGetEventInfo?ticketCode=GS%3APSQ%3A10EDU%3AWKA0426A%3A&linkID=psq&shopperContext=&caller=&appCode=](http://ev15.eventue.net/cgi-bin/ncommerce3/SEGetEventInfo?ticketCode=GS%3APSQ%3A10EDU%3AWKA0426A%3A&linkID=psq&shopperContext=&caller=&appCode=)

[Tools You Can Use - http://ev15.eventue.net/cgi-bin/ncommerce3/SEGetEventInfo?ticketCode=GS%3APSQ%3A10EDU%3AWKT0426A%3A&linkID=psq&shopperContext=&caller=&appCode=](http://ev15.eventue.net/cgi-bin/ncommerce3/SEGetEventInfo?ticketCode=GS%3APSQ%3A10EDU%3AWKT0426A%3A&linkID=psq&shopperContext=&caller=&appCode=)

[Register now for Fair on the Square: http://ev15.eventue.net/cgi-bin/ncommerce3/SEGetEventInfo?ticketCode=GS%3APSQ%3A10EDU%3AFOS0426A%3A&linkID=psq&shopperContext=&caller=&appCode=#](http://ev15.eventue.net/cgi-bin/ncommerce3/SEGetEventInfo?ticketCode=GS%3APSQ%3A10EDU%3AFOS0426A%3A&linkID=psq&shopperContext=&caller=&appCode=#)

Fair on the Square is presented by Huntington Bank with additional support from Barnes & Noble, Cuyahoga County residents through Cuyahoga Arts and Culture, Dominion East Ohio, the Ohio Arts Council, and WFHM 95.5 FM "The Fish." Fair on the Square is an event of the PlayhouseSquare Community Engagement & Education Department.

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enormously from classroom to classroom—but science has long been a poor stepchild to mathematics and reading. One report noted that science instruction in the early grades “occurs sporadi-

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"Some say it's irrevocable, others say it's irreversible. Given such an absence of consensus I suggest we do nothing drastic."

-cally and rarely engages children in practices that encourage rigorous and reflective science learning.” Science is high on the list of subjects that early-grade teachers feel ill prepared to teach. A 2009 study found that Head Start children in Florida ended their pre-K year with significantly lower readiness scores in science than in any other domain.

Of course, teachers need to make difficult trade-offs in the classroom, where many worthy subjects compete for precious little time. If more science is to be taught in kindergarten, what should be removed to make way for it?

Maybe nothing. Educational psychology researchers at Purdue University have developed an approach for teaching science in kindergarten that integrates it with language. The combination not only makes science instruction more appealing to teachers who are very mindful of language arts core curriculum requirements. It also enhances language learning by providing situations in which written language is used for a genuine purpose—recording and reporting predictions and observations—instead of a task devoid of any real context. And the kindergartners delight in learning words they would usually never encounter in kindergarten lessons, such as “excrete” (even if they cannot always spell them correctly).

The Purdue approach, the Scientific Literacy Project ([www.purduescientificliteracyproject.org](http://www.purduescientificliteracyproject.org)), introduces children to the most fundamental idea—that science is about carefully conducted inquiry to learn about the world—and shows them that everyone can do science. The lessons do not depend on expensive equipment or the latest in animations and computer games. Low-tech methods suffice, including experiments as simple as seeing if salt will dissolve, reading well-chosen nonfiction books—which many adults mistakenly imagine to be inappropriate or uninteresting to such young children—and maintaining individual science journals.

The researchers found that students participating in their project showed significant gains relative to those taking traditional classes. The kindergartners readily developed skills related to asking questions, conducting observations and experiments, drawing conclusions and sharing their findings—and had tremendous fun along the way. The project showed its worth for children of diverse ethnic and social backgrounds, and, most interestingly, it eliminated the gender gap in attitudes. A group at the University of Illinois at Chicago developed a similar project—Integrated Science-Literacy Enactments ([www.uic.edu/educ/ISLE/](http://www.uic.edu/educ/ISLE/))—for grades 1 through 3.

An emphasis on “inquiry science” has long been advocated by the National Research Council, whose national science education standards [stress](#) science as inquiry and grasp of a few fundamental concepts, ahead of the more traditional focus on a wide smattering of content knowledge (see [tinyurl.com/inquirysci](http://tinyurl.com/inquirysci)). The approach does, however, depend on the instructors understanding how to carry out inquiry-based lessons effectively. The teachers need training in how to teach science. It is not enough to give them courses to bolster their science content knowledge—or to fast-track science graduates into teaching with insufficient schooling in the science of how children learn.

Children are natural scientists: not only are they inquisitive and energetic, but they have an instinct for controlled experimentation. The goal of science education at the earliest levels should be to encourage and refine children’s innate love of exploring the world around them and to help that enthusiastic behavior grow into true scientific literacy.

### New Blog at NSTA.org

Dear NSTA Chapter and Associated Group Leaders,

I am pleased to announce that NSTA has a new [blog](#) just for CAGs! This blog is dedicated to helping the past, current and future leadership of NSTA’s CAGs, and your participation is critical for its success! Participation is easy:

1. Email me ideas to blog about (What leadership issues keep you up at night? What can NSTA do to make your life easier?)

Post a comment < <http://nstacommunities.org/blog/2010/03/05/new-blog-on-the-block/> > about the blog (What is working in your group? What

successes have you had?)

3. Change the direction of the discussion by posting a comment. (Want to discuss a different facet of the topic – post a comment!)

Either way, please participate!

I look forward to hearing from you soon, and remember – I’m just an e-mail away: [aodonnell@nsta.org](mailto:aodonnell@nsta.org). Anne O’Donnell

### Upcoming Ohio Alliance for the Great Lakes Happenings- Adopt-a-Beach™ and Great Lakes in My World Trainings Adopt-A-Beach™ Training and Get Together!

Keeping our beaches clean & healthy takes caring people in our communities working together. To thank current adopters and to welcome new adopters, we invite you to attend our annual training. The training will include a review of the Adopt-a-Beach™ data collection forms and protocol, including a discussion of some recent changes. This is your opportunity to ensure that you are collecting data in a standardized method. Come to one of our training sessions listed below and meet others that share your zeal for the Great Lakes.

New and returning Adopt-a-Beach™ teams can choose a training date that’s convenient for your schedule and location. Refreshments and a light snack will be served.

**To R.S.V.P. contact April Mather at 216-630-8140, or [amather@greatlakes.org](mailto:amather@greatlakes.org).**

Wednesday April 7th from 6-8 pm at the Arts Collinwood Community Center 15605 Waterloo Road, Cleveland, OH 44110. Enter through the cafe and go to the back for the community center.

For those of you not located near a training site, online training materials are available at [www.greatlakes.org/adoptabeach](http://www.greatlakes.org/adoptabeach)

**For a list of beach visits open to the public visit:** <http://www.greatlakes.org/Page.aspx?pid=970>

What is Adopt-a-Beach™?

Adopt-a-Beach™ is the Alliance for the Great Lakes’ largest volunteer program and is present on 4 of the 5 Great Lakes. More than 7,000 volunteers including schools, businesses, individuals and families participate in the program. Teams catalogue and remove litter, and also complete a beach health

assessment form that includes science based observation of beach conditions and water testing. Information collected by teams is entered into our online database and used for education about conditions at their beach, shared with local authorities and used to identify areas needing improvements. For more information, go to: [www.greatlakes.org/adoptabeach](http://www.greatlakes.org/adoptabeach)

**Great Lakes in My World Summer Training: Place-based Education in Your Classroom: Great Lakes in My World Educator Workshop**  
[June 23<sup>rd</sup> 9am-5pm](#)

Old Woman Creek State Nature Preserve & Estuarine Research Reserve

2514 Cleveland Road East, Huron OH 44839

**Cost \$55** (includes lunch and a snack, curriculum, supplemental CD, creature cards)

**Description:**

The Alliance for the Great Lakes hosts a workshop at Old Woman Creek, which covers Great Lakes ecology, beach health, and methods to integrate new activities into your classroom. There will be an overview of the Alliances' Great Lakes in My World (GliMW), including information on Adopt-a-Beach™ and activities from the curriculum resource.

**For more information contact:**

**April Mather, Ohio Outreach Coordinator, at**  
[amather@greatlakes.org](mailto:amather@greatlakes.org) or 216-630-8140 or  
[www.greatlakes.org/education](http://www.greatlakes.org/education)

**To Register:**

Payment can be sent to Jennifer Jazwiec, Alliance for the Great Lakes, 17 N State St., Suite 1390, Chicago, IL 60602. Please include Great Lakes in My World-Huron OH in the memo line or call Jennifer at 312-939-0838 (ext 221) to pay via credit card.

**A Mosaic of Cassiopeia**

This mosaic of images from the Wide-Field Infrared Survey Explore in the constellation of Cassiopeia contains a large star-forming nebula within the Milky Way, called IC 1805 or the Heart Nebula. IC 1805 is more than 6,000 light-years from Earth. Also visible in this image are two nearby galaxies, Maffei 1 and Maffei 2. Both galaxies contain billions of stars and are located some 10 million light-years away. Maffei 1 is a lenticular galaxy, which has a disk-like structure and a central bulge. Maffei 2 is a spiral galaxy that also has a disk shape with a bar-like central bulge.

Website: [http://www.nasa.gov/multimedia/imagegallery/image\\_feature\\_1610.html](http://www.nasa.gov/multimedia/imagegallery/image_feature_1610.html)

**Cleveland Regional Council of Science Teachers**



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