

E-Blast # 2 January 2010

Anyone with information for the LSTA LASER should contact their Regional Representative before February 6<sup>th</sup>. Please share your successes with others.

National Lab Day a nationwide initiative to build local communities of support (hubs) that will foster ongoing collaborations among volunteers, students and educators. Volunteers — university students, scientists, engineers, other STEM professionals and, more broadly, members of the community — will work with educators and students to improve labs and discovery-based science experiences for students. Teachers of grades 6-12 are invited to visit <http://nationallabday.org> and enter a proposed project. It is suggested that you keep the project description brief and focused for clarity. Why not submit your project this week.

Information on the following items can be found on the LSTA webpage [www.lsta.info](http://www.lsta.info)

1. Learn the Science Behind the Winter Olympics
2. Earth Expeditions courses and the GFP Masters from Dragonfly Scholarship deadline January 28th
3. Register for the 2010 USA Biology Olympiad Deadline February 3rd
4. National Green Week February 1-5, 2010
5. Louisiana Envirothon Training Session February 6th
6. Christopher Columbus Awards Program use Science to Solve Real World Problems Deadline Feb 8th
7. The Kids in Micro-g! Web Page Student Project deadline February 19th
8. 2010 National High School Challenge Deadline for application February 22<sup>nd</sup>
9. The ASHG 5th Annual DNA Day Essay Contest Deadline March 15<sup>th</sup>
10. United Nations Environment Programme (UNEP), painting competition on Biodiversity
11. Free new “Chemistry of Health” materials from NIH
12. Spring events calendar

#### 1. Learn the Science Behind Winter Olympic Athletes Movements

How does angular momentum help figure skater Rachael Flatt achieve the perfect triple toe loop? How does elastic collision allow three-time Olympic hockey player Julie Chu convert a game-winning slapshot? How do Newton’s Three Laws of Motion propel short-track speed skater J.R. Celski to the finish line? These are just a few of the scientific principles explored in a special 16-part video series entitled “The Science of the Olympic Winter Games,” presented by NBC Learn, NBC Olympics and the National Science Foundation. In each piece in the series, an NSF-supported scientist explains the selected scientific principle, while Olympic athletes describe how these principles apply to their respective sports. The science is broken down by capturing the athletes’ movements with a state-of-the-art, high-speed camera called the Phantom Cam, which can capture movement at rates of up to 1,500frames per second. This allows frame-by-frame illustrations of Newton’s Three Laws of Motion, the Law of Conservation of Angular Momentum, friction, drag, speed, velocity and other scientific concepts. View the free videos at: <http://www.nbclearn.com/olympics>

#### 2. Earth Expeditions courses and GFP Master’s

January 28 is the due date to apply and be considered for tuition scholarships for graduate field courses and master’s programs offering international field and conservation studies in Africa, Asia and the Americas. New in 2010 are courses in Borneo and the Amazon.

Each accepted applicant to the program from Miami University's Project Dragonfly is awarded a tuition scholarship covering 2010 field course tuition, equivalent to \$3,100 in-state and \$7,100 out-of-state. Award recipients are responsible for travel and field costs.

Created by Dragonfly and the Cincinnati Zoo & Botanical Garden, Earth Expeditions graduate courses and the Global Field Program (GFP) Master's degree bring together graduate students, scientists, educators and community leaders at critical conservation field sites in Belize, Costa Rica, Baja, Trinidad, Mongolia, Thailand, Kenya and Namibia.

Earth Expeditions courses and the GFP Master's may be completed part-time from anywhere in the U.S. or abroad and are open to educators and other professionals from all settings and disciplines, regardless of academic focus. For information and to apply, visit:

- Earth Expeditions <http://EarthExpeditions.org> <<http://EarthExpeditions.org>>
- Global Field Program <http://ProjectDragonfly.org/GFP> <<http://ProjectDragonfly.org/GFP>>

Interested applicants in the Cincinnati and Chicago regions may wish to visit <http://MyMasters> <<http://MyMasters>>.org for information on Dragonfly's additional Master's degrees, including the community-based Advanced Inquiry Program co-delivered with premier learning institutions in select U.S. cities.

Project Dragonfly reaches millions of people each year through inquiry-driven learning media, public exhibits and graduate programs worldwide. Dragonfly is housed at Miami University, a state university in Oxford, Ohio, established in 1809 and listed as one of the eight original Public Ivies.

### 3. Register for the 2010 USA Biology Olympiad!!

The USA Biology Olympiad, jointly sponsored by the Center for Excellence in Education and Purdue University, is the premiere biology competition in the United States. Starting with almost 10,000 registered students from 41 states in 2009, the competition ultimately selects 4 students as "Team USA" to represent our nation at the International Biology Olympiad. Last year, for the third year in a row, Team USA returned home from the International Biology Olympiad with 4 gold medals. The team hopes to capitalize on this success in 2010!

Additionally, the USA Biology Olympiad also offers a "Teacher Resource Center" to registered schools to assist teachers. The Teacher Resource Center includes practice exams with answer keys, links to International Biology Olympiad exams, textbook recommendations, links to outside professional development opportunities and study guides, as well as a breakdown of the grading rubric and testing protocol.

The USA Biology Olympiad provides an outstanding forum for aspiring biologists to learn and grow in the discipline through interaction with other likeminded students. Take advantage of this opportunity to challenge your students. For additional information, the program schedule and online registration visit: [www.cee.org](http://www.cee.org) You may also contact Kathy Frame USA Biology Olympiad Director, at [kframe@cee.org](mailto:kframe@cee.org) or 703-448-9062, x 231.

Deadline for Receipt of Registration Payment: February 3

#### 4. National Green Week

Green Education Foundation (GEF) is mobilizing two million children to participate in environmental educational programs during National Green Week 2010, February 1-5.

The objective is to empower students to become environmental stewards within the context of their own lives. GEF provides all the educational content for the program including standards-based environmental lessons that are easily incorporated into science, math, language arts, social studies, and creative arts curriculum. Here are the GEF eco-challenges that schools can participate in during National Green Week 2010:

Waste Free Snacks and Lunches

Green Thumb Challenge

Green Energy Challenge

Green in-Action Awards

For more information, please visit:

<http://www.greeneducationfoundation.org/>

#### 5. The Louisiana Envirothon

2010 Competition will be held Saturday, March 27, at the Cade Farm in St. Martinville, Louisiana.

[www.deq.louisiana.gov/Envirothon](http://www.deq.louisiana.gov/Envirothon)

The training sessions are listed as:

Saturday, February 6, 2010 TBA depending on students

Saturday, March 6, 2010 Baton Rouge, DEQ Galvez Building

For more information contact:

Colette Anzalone cell 337 288-0283 office 337 482-5349, [Colette@louisiana.edu](mailto:Colette@louisiana.edu) or

Karen Fisher-Brasher office 225 219-3265, [Karen.Fisher@la.gov](mailto:Karen.Fisher@la.gov)

#### 6. Christopher Columbus Awards Program use Science to Solve Real World Problems

The Christopher Columbus Awards Program combines science and technology with community problem solving. Students work in teams with the help of an adult coach to identify an issue they care about and, using science and technology, work with experts, conduct research and put their ideas to the test to develop an innovative solution. Eight finalist teams and their coaches will receive an all-expense-paid trip to Walt Disney World® to attend National Championship Week and compete for U.S. Savings Bonds and the \$25,000 Columbus Foundation Community Grant, plus a \$200 development grant to further refine their idea. The competition is open to middle school-aged children; teams do not need to be affiliated with a school to enter.

The deadline to enter is February 8, 2010. For more information, please visit:

<http://www.christophercolumbusawards.com/>

7. The Kids In Micro-g! Web Page has been recently updated with a series of six video modules to help student experimenter design teams with development of their experiments. Hosted by NASA Educator Nathan Lang and NASA Astronaut and former International Space Station Commander Mike Fincke, these brief video modules discuss the ISS and microgravity, considerations for designing a microgravity experiment, the scientific method, and a recap of the Kids In Micro-g! Design Challenge. Bonus videos of microgravity demonstrations onboard the ISS from Fincke and fellow station astronauts Greg Chamitoff and Nicole Stott during their past missions are also included. A matrix of frequently asked questions has also been added as a reference. The FAQ list will be updated weekly as new questions arrive and are answered.

NASA will be accepting experiment proposals through **Feb. 19, 2010**.

For more information about the Kids In Micro-g! Challenge, visit [http://www.nasa.gov/mission\\_pages/station/science/nlab/experimentchallenge.html](http://www.nasa.gov/mission_pages/station/science/nlab/experimentchallenge.html).

If you have any questions about this opportunity, please contact the ISS Payloads Office at [jsc-iss-payloads-helpline@mail.nasa.gov](mailto:jsc-iss-payloads-helpline@mail.nasa.gov) or call 281-244-6187.

#### 8. 2010 National High School Challenge

Applications are now being accepted for the 2010 National High School Challenge, a program encouraging teachers to teach environmental education in the classroom through innovative teaching strategies. High school teachers from around the nation have the opportunity to receive funding of up to \$4,000 to make their ideas become reality.

We're seeking creative ideas from across the spectrum. Teachers from all subject areas should apply. <http://www.classroomearth.org/node/899>

Deadline is Monday February 22, 2010.

#### 9. The ASHG 5th Annual DNA Day Essay Contest

The submission site is now live. You can visit <http://www.ashg.org/education/dnaday.shtml> and click on '5th Annual DNA Day Essay Contest' for the submission link, rules, and more information. Please be reminded that the deadline is **March 15, 2010** at 5:00 PM EST.

#### **2010 DNA Day Essay questions:**

Option 1: Scientists can now determine the complete DNA sequences of organisms, including humans. Now that this milestone has been reached, is there a reason to continue learning about Mendel, alleles, and inheritance patterns? Explain your answer.

Option 2: Genetic testing allows geneticists to determine an individual's DNA sequence, and research has identified a number of genes, such as HMGA2 and GDF5, that are associated with height. Will such associations allow scientists and physicians to predict a person's final adult height from infancy? Explain your answer.

Questions? Please email Angie Wong ([awong@ashg.org](mailto:awong@ashg.org)).

Angie Wong, MHS

Education Programs Assistant

#### 10, Gr 1-8: An international painting competition on "Biodiversity: connecting with nature"

<http://www.unep.org/tunza/children/default.asp>

Follow this path: <competitions> <children's painting> <19th annual ...>

The International Children's Painting Competition on the Environment is organized every year by the United Nations Environment Programme (UNEP), the Japan-based Foundation for Global Peace and Environment (FGPE), Bayer and Nikon Corporation. It has been held since 1991 and has received more than 2.4 million entries from children in over 100 countries. The theme for this year's competition is Biodiversity and it will focus on our beautiful earth, full of different life forms and what can we do to protect it.

The children's paintings will focus on concrete actions to preserve biodiversity such as tree planting, marine and animal conservation, restoration of coral reefs etc

The competition was launched on 20 August 2009 but there is still time for your students to enter. The organizers are inviting children all over the world to submit their paintings to the UNEP office in their

regions. Specific requirements are posted on the web site, but this sounds like a great opportunity to combine science with art, and let our students shine!

Deadline: All entries must reach the UNEP regional office (address below) by 15 April 2010.  
UNEP Regional Office for North America, 1707 H Street, NW, Suite 300 Washington, DC 20006, USA

#### 11. Free science education materials from NIH

A new edition of *The Chemistry of Health* that includes:

- a full-color booklet featuring chemistry basics
- short "Meet a Chemist" profiles
- a companion poster
- an extensive online resource, ChemHealthWeb (<http://publications.nigms.nih.gov/chemhealth/>), with downloadable chapters, chemistry A-Z glossary, molecule gallery and chemistry-related puzzles and games.

Two full-color classroom posters available at <http://publications.nigms.nih.gov/order/pubdescriptions/chemhealthwebposter.html> and <http://publications.nigms.nih.gov/order/pubdescriptions/findingsposter.html>.

The latest issue of *Findings* magazine at <http://publications.nigms.nih.gov/findings/issues.asp>. This issue features Marc Zimmer, a biochemist who studies glow-in-the-dark proteins, and Lola Eniola-Adefeso, a chemical engineer who studies methods to improve heart disease drugs.

Like all of our offerings, these printed and online resources focus on medically relevant life sciences and are **free** of charge. Printed materials are available individually or in classroom sets. They are also downloadable from <http://publications.nigms.nih.gov/order/classroom.html>.

#### 12. Calendar items

January 29, 2010: Deadline for teachers to apply for the Global Learning Adventure of grants of \$5000 to \$10,000. For more information, please visit: <http://www.fundforteachers.org>

January 31, 2010: Last day for 7th – 12th grade students to enter the DuPont Challenge Science Essay Competition. For more information, please visit: <http://thechallenge.dupont.com/>

January 31, 2010: Deadline for 5th grade students to enter the 2010 Arbor Day National Poster Contest. For more information, please visit: <http://www.arborday.org/kids/postercontest/?gclid=CLCm54Prr5wCFQebnAod5B5Ckg>

January 31, 2010: Deadline for elementary students to enter the Siemens We Can Change the World Challenge. For more information, please visit: <http://www.wecanchange.com>

February 2, 2010: Deadline for K-12 students to apply for the Toshiba/NSTA ExploraVision Awards Program. For more information, please visit: <http://www.exploravision.org>

February 3, 2010: Deadline for high schools to apply for the USA Biology Olympiad. For more information, please visit:

<http://www.cee.org/programs/usabo/teacher-info>

February 5, 2010: Deadline for high school minority seniors to apply for the American Physical Society's Physics Scholarship. For more information, please visit:

<http://www.aps.org/programs/minorities/honors/scholarship>

February 8, 2010: Deadline for middle school students to enter the Christopher Columbus Awards Program—Innovative Generation. For more information, please visit:

<http://www.christophercolumbusawards.com/>

February 8, 2010: Deadline for K-12 Schools to apply for the Michigan Council for Arts and Cultural Affairs School Bus Fast Grants. For more information, please visit:

<http://www.themedc.org/Arts/Grant-Program/Default.aspx>

February 12, 2010: Deadline to apply for the Lowe's Toolbox for Education Grant Program. For more information, please visit:

<http://www.toolboxforeducation.com/>

February 15, 2010: Deadline to apply for the Seed for Education Grant. For more information, please visit:

<http://www.for-wild.org/sfecvr.html>

February 26-27, 2010 Louisiana Environmental Education Symposium

[www.wlf.louisiana.gov/eec](http://www.wlf.louisiana.gov/eec)

March 1, 2010: Deadline for high school students to enter the DASH+ Challenge. For more information, please visit:

<http://www.fuelourfuturenow.com/contest/>

March 1, 2010: Deadline for students in grades 3-12 to enter the Engineer Girl! Essay Contest. For more information, please visit:

<http://www.engineergirl.org/?id=3821>

March 1, 2010: Deadline for the 2010 Citizen Science Paper Competition for High School Students. For more information, please visit:

<http://www.sustainus.org/citizenscience>

March 1, 2010: Deadline for 7th – 12th grade students to apply for the Young Naturalist Award. For more information, please visit:

<http://www.amnh.org/nationalcenter/youngnaturalistawards/>

March 15, 2010: Deadline for high school students to enter the DNA Day Essay Contest. For more information, please visit:

<http://www.ashg.org/education/dnaday.shtml>

March 15, 2010: Deadline for K-12 Teachers to apply for the Research Experiences for Teachers, along

with a \$3600 stipend. For more information please visit:

<http://www.ret.magnet.fsu.edu>

<http://bio.fsu.edu/osta/ret>

March 18-21, 2010: NSTA Conference in Philadelphia, PA. For more information, please visit:

<http://www.nsta.org/conferences/2010phi/?lid=tnavhp>

March 27, 2010: Louisiana Envirothon visit: [www.deq.louisiana.gov/Envirothon](http://www.deq.louisiana.gov/Envirothon)

April 1, 2010: Deadline to nominate for Presidential Awards

[www.nsf.gov/pa](http://www.nsf.gov/pa)

April 11 -17, 2010: National Environmental Education Week. For more information, please visit:

<http://www.eeweek.org/>