

Science News



Volume 1, Issue 11

June 2008

CALENDAR OF EVENTS SAVE THE DATES:



Summer Core Curriculum PD Registration

July 28 – July 31:

- 5th Grade FOSS, Harcourt and Blend
- Accelerated 8th Grade

August 4 – August 7:

- 7th Grade FOSS , SEPUP, Glencoe and Blend
- High School Science - Earth Science, Living Environment, Forensics, Science Research, Data Analysis

August 11 – August 14:

- 8th Grade SEPUP, Glencoe and Blend

Teachers who missed training this past year for Grades 3, 4 and 6 will be offered training on **Friday, August 29** (Chancellor's Conference Day) as well as sessions in Fall, 2008.

Registration for grades 5,7, 8 and accelerated 8 for Summer PD are filling up! Please make sure to register before we are filled. Please make sure to speak to your Principal about registration and read the information carefully before you register. The link is:

<http://schools.nyc.gov/Academics/Science/EducatorResources>

Planning on Retiring this June?

We are looking for a few good retired science teachers to help us provide quality professional development for our K-12 science teachers. If you are planning on retiring this June and would like to work part-time as lead workshop facilitators, please send us your resume and a letter of recommendation from your last school principal.

Elementary science teachers please send your resume and attached letter to Roy Harris, RHarris2@schools.nyc.gov, middle school science teachers, to Sheldon Young, SYoung14@schools.nyc.gov and high school science teachers, to Denise McNamara, DMcnama@schools.nyc.gov

Division of Teaching and Learning,
Office of Curriculum and Professional Development



The Department of Mathematics and Science

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Locating the Science Website from the DOE Website

It has been brought to our attention that there is some difficulty in finding the Science information once you are at the DOE Homepage. Please follow the instructions below:

1. Go to <http://schools.nyc.gov>
2. On the left side of the page – click “Academics”
3. Under “Academics” on the left side of the page, click “Science”
4. Under “Science” on the left side of the page, click “Educators’ Resources”
5. In the center of the page – there will be a plethora of links related to Science in Grades pre-K through 12.



City Parks Foundation's (CPF's) education department connects teachers and students to local parks by providing hands-on programs that meet specific community needs and public educational standards. CPF uses parks as outdoor classrooms where students can learn core subjects and important life, critical-thinking and decision-making skills while discovering the natural world that exists right in their neighborhoods. CPF is currently recruiting for school year 2008-09's *Seeds to Trees*, a program that introduces science and nature in the urban environment through

classroom and field experiences. *Seeds to Trees* provides teachers in grades 1 -4 and 6-7 with resources and training to incorporate ecological lessons into the basic curriculum. **Open to Title 1 schools for grades 1-4 and 6-7.** For more information, go to www.cityparksfoundation.org or call (212) 360-2745/email: education@cityparksfoundation.org.



2008 Excelsior Scholars Program in Math and Science

The Excelsior Scholars Program is a 10-day camp that immerses students in activities and experiments designed to build a strong foundation in biology. Through model making, microscope observations, and laboratories – including DNA extraction and genetic engineering – participants build an understanding of cell biology, microbiology, genetics, and biotechnology in week one. In week two extensive lab experience introduces students to recombinant DNA techniques used to manufacture human insulin and other biotech products. Participants use restriction enzymes and transformation to clone a jellyfish gene into bacteria, then purify the resulting green fluorescent protein (GFP) from the transformants. This course is for students who will have completed grade 7 in June, 2008. Qualified students must submit the attached application, and supplementary materials to the DNA Learning Center by June 25 for consideration. Enrollment is limited to 20 students per workshop. Acceptances will be mailed shortly afterwards.

Click on the link for further information and application:

http://schools.nycenet.edu/offices/teachlearn/science/rh/062008/Excelsior_Scholars_Student_Application.pdf

Summer offerings for Students at the DNA Center

Fun with DNA (for students entering grades 6 or 7) is a five-day camp that immerses students in activities and experiments designed to build a strong foundation in biology. Through model making, microscope observations, and laboratories – including DNA extraction and genetic engineering – participants build an understanding of cell biology, microbiology, genetics, and biotechnology.

Offered: **August 4-8** Hours: 9:30 a.m. – 2:30 p.m. Monday – Thursday, and 9:30 – 11:30 a.m. Friday for “Parent Participation Day” when the students become teachers! Tuition: \$375 includes all materials

DNA Science (for students entering grades 10-12) is a five-day workshop that provides extensive lab experience with the basic techniques of recombinant DNA, including DNA restriction and ligation, bacterial transformation, and plasmid isolation. Participants perform the entire lab sequence from the *DNA Science* text.

Offered: **July 7-11, July 28-August 1, or August 25-29** Hours: 9:00 a.m. – 4:00 p.m. Monday – Thursday, and 9:00 a.m. – 2:00 p.m. Friday Tuition: \$450 includes all materials

Detailed course descriptions and registration information are available at: www.dnalc.org/harlemdnalab/

Annual Teacher Open House at The New York Botanical Garden

Wednesday, September 24 @ 3:30 p.m.

Are you a teacher or principal looking for fun and educational programs for your students? The New York Botanical Garden invites you to its free Annual Teacher Open House. Explore how you can use the Garden as an extension of your classroom through year-round offerings such as hands-on workshops, professional development seminars and the Summer Institutes. At the Open House, enjoy demonstrations of our teacher training programs and hands-on activities. Please call (718) 817-8181 for more information or visit www.nybg.org/edu

NYUSteinhardt

Wallerstein Collaborative for Urban Environmental Education

Urban Ecology Summer Series

Summer events on July 9, 10 and 12. All events are free and open to the public. Click on the link for further information and details about each event. www.nyu.edu/wallerstein

http://schools.nycenet.edu/offices/teachlearn/science/rh/062008/July_events_flyer.pdf

EPA Set To Inspect K-12 Schools

The Environmental Protection Agency plans to inspect K-12 schools to determine if they comply with safe storage and handling of chemicals. These visits will be unannounced so schools need to be aware of a possible visit at any time.

An EPA official said: "High Schools should be aware that mismanagement of their chemicals and waste may harm students, staff and faculty - they may also be in violation of EPA regulations that could result in enforcement actions with penalties. Colleges in the state have been under inspection for some time. Dangers include chemicals stored in back rooms and closets and then forgotten. The EPA will be looking at improper use, storage and disposal of: Chemicals, computer and electronic equipment; Fluorescent lamps and other mercury-containing equipment; Picric acid, ethers and sodium metals. For more info, www.labsafety.org/news/dangerouschemicalsinschool.htm.

Earth Science and Penn Park

"How to Captivate the Young Audience"

The newly completed Penn Park at the end of Pennsylvania Avenue on Jamaica Bay is hosting its Annual Tour of the new additions to Gateway National Recreation Area, keeping the community informed of the progress to date. This year the theme is Earth Science and Penn Park - Keeping Young People focused on career opportunities in the Environment. They are having a short seminar presentation with guest speakers on the environment with DEP. Afterwards guests will tour the new Penn Park and nearly completed adjacent Fountain Park and then return to the auditorium for a free luncheon before departing. This event will be held on July 15, 2008 at 9:00 a.m.. Please click here for the flyer and further details:

<http://schools.nycenet.edu/offices/teachlearn/science/rh/062008/scan0001.jpg>



Free Plants on July 24th at the Javits Center

PROJECT is a high-end progressive fashion trade show (website: www.projectshow.com). The show takes place twice annually in New York City and Las Vegas. The next show will be at the Javits Center July 21-23, 2008, Halls 1B and 1C. The trade show industry is one of the country's big wasters when it comes to materials, and is generally not very earth-friendly with the temporary exhibits and vinyl banners often produced for one-time use and trashed at the end of a few days.

This season a conscious effort has been made to step up our greening initiatives at the show. As a small part of this, they are using live plants for floral decorations. The entrance to the show will be covered with shoe bags filled with plants – one to a slot – for a total of approximately 850 young (most likely white flowering) plants. The plants would be transferred into cups or some other small container for people to pick up on site on July 24th, the day following the trade show. If you would like to get plants for yourself, your students or your school e-mail Kristen at: kristen@projectshow.com. Please pass this message on to all of your friends. We want to make sure the plants find homes!

Professional Science Organizations

The Department of Mathematics and Science recommended the following science professionals organizations for you to join:

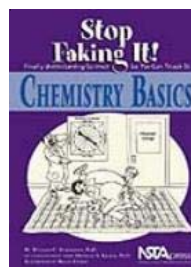
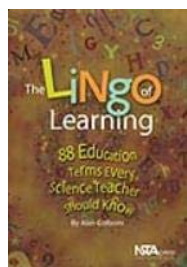
NSTA National Science teachers Association www.nsta.org

STANYS Science Teachers Association of New York State www.stanys.org

SCONYC The Science Council of New York City www.sconyc-ny.org

ESSA Elementary School Science Association Contact Mary Bomba mbomba2@schools.nyc.gov

Recommended Science Professional Publications from NSTA



Here is the first of a new column which will give you some recommended professional science publications. The ones listed in this month's issue are from NSTA press.

- 1) The Lingo of Learning - by Alan Colburn ISBN: 0-87355-228-8
- 2) Using Science Notebooks in Elementary Classrooms –by Michael P. Klentschy ISBN: 978-1-93353-103-8
- 3) Picture-Perfect Science Lessons- by Karen Rohrich Ansberry and Emily Morgan ISBN: 0-87355-243-1
- 4) Chemistry Basics: Stop Faking It! Finally Understanding Science So You Can Teach it – by William C. Robertson, Ph.D. ISBN: 978-0-87355-239-4
- 5) Science as Inquiry in the Secondary Setting – Edited by Julie Luft, Randy L. Bell, and Julie Gess-Newsome ISBN: 978-1-93353-126-7

Science Brain Teaser

Venus

You awake inside a small transparent capsule sitting on the surface of Venus. From a small speaker you hear a voice that says, “We will leave you here either for a day or a year. If you choose to stay a day, we will give you \$1 million. If you choose to stay a year, we will give you \$2 million. Either way, you will have sufficient food and water. We will make sure the temperature is a constant 70 degrees Fahrenheit. We will also supply cable TV.”

What is your choice? (Don't let money decide your answer).

Answer to Water in the Cup:

First, the waiter stuck the match into the lemon wedge, so that it would stand straight. Then he lit the match, and put it in the middle of the plate with the lemon. Then, he placed the glass upside-down over the match. As the flame used up the oxygen in the glass, it created a small vacuum, which sucked in the water through the space between the glass and the plate. Thus, the waiter got the water into the glass without touching or moving the plate.

June Birthday Corner

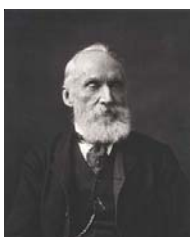


Charles Drew, June 3, 1904



Dr. **Charles Richard Drew** was an American physician and medical researcher. He researched in the field of blood transfusions, developing improved techniques for blood storage, and applied his expert knowledge in developing large-scale blood banks early in World War II. He protested against the practice of racial segregation in the donation of blood from donors of different races since it lacked scientific foundation. In 1943, Drew's distinction in his profession was recognized when he became the first African American surgeon to serve as an examiner on the American Board of Surgery.

William Thomson, 1st Baron Kelvin, June 26, 1824



William Thomson, 1st Baron Kelvin was an Irish mathematical physicist and engineer. At Glasgow University he did important work in the mathematical analysis of electricity and thermodynamics, and did much to unify the emerging discipline of physics in its modern form. He is widely known for developing the Kelvin scale of absolute temperature measurement. The title Baron Kelvin was given in honour of his achievements, and named after the River Kelvin, which flowed past his university in Glasgow, Scotland.

Paul Naim Berg, June 30, 1926



Paul Naim Berg (born in Brooklyn, New York) is an American biochemist and professor emeritus at Stanford University. He graduated from Abraham Lincoln High School in 1943, received his B.S. in biochemistry from Penn State University in 1948 and Ph.D. in biochemistry from Case Western Reserve University in 1952. In 1980 he shared half of the Nobel Prize for Chemistry with the team of Walter Gilbert and Frederick Sanger. All three were recognized for their important contributions to basic research in nucleic acids. His studies as a postgraduate involved the use of radioisotope tracers in intermediary metabolism. This resulted in the understanding of how foodstuffs are converted to cellular materials, through the use of isotopic carbons or heavy nitrogen atoms. Paul Berg's doctorate paper is now known as the conversion of formic acid, formaldehyde and methanol to fully reduced states of methyl groups in methionine. He was also one of the first to demonstrate that folic acid and B12 cofactors had roles in the processes mentioned.

Interesting Science Facts

- Snakes are true carnivores because they eat nothing but other animals. They do not eat any type of plant material.
- 100 years ago: The first virus was found in both plants and animals.
- 90 years ago: The Grand Canyon became a national monument & cellophane was invented.
- The largest man-made lake in the U.S. is Lake Mead, created by Hoover Dam.
- There are no poisonous snakes in Maine.
- The human eye blinks an average of 4,200,000 times a year.
- An inch (2.5 centimeters) of rain water is equivalent to 15 inches (38.1 centimeters) of dry, powdery snow.
- 40 to 50 percent of body heat can be lost through the head (no hat) as a result of its extensive circulatory network.
- The longest living cells in the body are brain cells which can live an entire lifetime.
- The ears of a cricket are located on the front legs, just below the knee.

Congratulations

townsend harris high school

Thomas Cunningham, Principal

149-11 Melbourne Avenue - Flushing, New York 11367



Townsend Harris High School Wins the Intel Schools of Distinction Award for Its' Innovative Science Program

The Intel Schools of Distinction Program announced its 2008 winners –Townsend Harris High School @ Queens College was selected as this year's School of Distinction for high school Science and will receive a \$10,000 cash award.

In selecting Townsend Harris for this award, the Intel Judges noted that the revamped science program at Townsend Harris offered its students a rich and diverse Science curriculum that “capitalized on teachers’ strengths and addressed student interests”. All students study core courses of Biology, Chemistry and Physics and have electives in Advance Placement Psychology and Environmental Science, as well as courses in Robotics, Forensic Science, Genetics, Anatomy and Physiology, Organic Chemistry, and Science Research that challenge students to achieve their best. The judges also noted “the school’s science faculty have developed outstanding courses, and volunteer time to mentor students in science-based extracurricular activities” such as Independent Research, Science Olympiad, FIRST Robotics, and the Brain Bee. Over the past six years, the school has produced 17 Intel semifinalists, 7 Siemens-Westinghouse semifinalists, 19 Intel ISEF finalists, and numerous local awards.

Principal Thomas Cunningham said, “I am pleased and proud of this magnificent achievement. Effort and intellectual curiosity have been justly rewarded. What sets our school apart from many other top achieving schools is our Humanities-focused curriculum. Our approach is holistic, integrating science and math, with languages, history, art and music.”

Ms. Susan Brustein, Assistant Principal of Science and Technology at Townsend Harris High School said, “I am very proud of this achievement. Creating the program we now have at Harris has required great effort and planning by the entire Science faculty. Science education at Harris is now multi-disciplinary, engaging learners in a variety of modalities – visual, auditory and kinesthetic while simultaneously stressing reading, writing, oral communication skills and the ability to evaluate information. We set high standards for our students and provide the necessary support to insure their success.”

In all, Intel honored six schools: one elementary, middle and high school were selected for their outstanding science programs, another three were selected for their mathematics programs. Award sponsors include Dell Computers, eInstruction, and SMART Technologies.

For Immediate Release

Center for Science Teaching and Learning

Two Queens Educators Win Challenge



On Thursday, May 8, 20 twenty finalists in the Covanta Teacher Challenge gathered to compete for cash prizes for themselves and their schools or organizations in the nation’s only competition of this type for teachers. First place this year, and the winner of \$1,000 is **Jennifer Dickmen from PS IS 266 in Bellerose**. “I was thrilled to spend the day meeting new science colleagues and participating in fun, motivational challenges that I can bring back to my students,” stated Ms. Dickman. Third Place went to Kimberly Handle from the NY Hall of Science. Second place went to Missy Weiss from SCOPE Education /WS BOCES and fourth place went to Serena McCalla from H. Frank Carey High School in Franklin Square.



It was all part of a competition sponsored by Covanta Energy and created by The Center for Science Teaching and Learning (CSTL). The competition is open to educators in schools and informal education institutions and cash prizes were awarded to the top four educators and their institutions. The entrants submitted lesson plans they had created and the finalists were selected among the more than 200 entries received. The winners were determined by participation in a series of fun, team-based challenges designed to test their ingenuity at creating all types of energy “contraptions.” The competition is designed to encourage the development of hands-on science programs that teach children about energy and the environment **6**

Tree Planting Ceremony at P.S 96M May 30, 2008

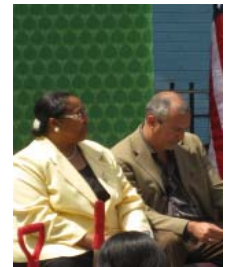


On Friday, May 30, 2008 The Joseph Lanzetta School (PS 96M) hosted a Tree Planting Ceremony in the hot sweltering sun in front of the school on 120th Street in East Harlem. The Principal, Dr. Claudia Moore-Hamilton was joined by a host of city officials: Ed Lewis, Assistant Commissioner for Community Relations; Councilmember Melissa Mark-Viverito; PlaNYC Project Manager, Sue Donoghue; Nazli Parvizi, Commissioner of the Mayor's Community Affairs Unit; William Castro, Manhattan Borough Commissioner; Bill Perkins, State Senator; and Adam Clayton Powell IV, Assembly member.



The students were excited about their newly planted trees and learned all about the type of trees and the importance of planting one million trees in the five boroughs by the year 2017.

If you would like to learn more about what the City of New York Parks & Recreation Department does, please visit: www.nyc.gov/parks.



Principal, Dr. Claudia Moore-Hamilton with Assembly Member Adam Clayton Powell IV

Below is the write up from the pamphlet that was given out to all attending this great event:

MillionTreesNYC is a citywide, public-private initiative with an ambitious goal to plant and care for one million new trees across the city's five boroughs by 2017. As a result of a new comprehensive tree planting approach, entire neighborhoods throughout New York City will be transformed into beautiful landscapes.

Today, as part of the MillionTrees Campaign, we are celebrating the planting of 23 trees on the block in front of P.S.96. This was done in response to a request that Sonia Ortiz, President of the Community School District 4 Presidents Council, made to the Mayor's Community Affairs Unit, which then contacted the Parks department. The species of trees planted include: 8 Silver Lindens, 6 Littleleaf Lindens, 4 Crimean Lindens, 3 American Lindens, and 2 European Hornbeams.

Trees are important to the quality of life in the city. They cool summer temperatures and clean the air we breathe, improving public health by reducing the causes of asthma and other respiratory diseases. Trees also beautify neighborhoods and boost property values.

You can become involved too! Write or e-mail and share your story of how you participated in a volunteer day, planted a tree to celebrate a special occasion or how you organized as a community group to care for a newly planted grove of trees. Tell us your story today and let it inspire others to dig in and get involved with MillionTreesNYC. To tell us about your tree experience, please e-mail info@milliontreesnyc.org with the following information:

- Your name
- A title for your story
- Your story (100 words or less)
- A photo of you and your tree if you have one

You can help keep the City's street trees in good condition. Here are a few are tips:

- Watering is the most important thing you can do for your street tree.
- You should cultivate or loosen the soil so that the water can reach the tree's roots.
- Weeds should be removed from the street tree pits as frequently as possible.
- No one can fully appreciate a site if it is littered with plastic bags, bottles, and cigarette butts. Keep tree pits free of litter.



Eighteen students (15 individual projects and 3 team projects) were selected to represent NYC at the 2008 Intel International Science & Engineering Fair in Atlanta, GA from May 11-16, 2008. The Intel ISEF, the world's largest international pre-college science competition, annually provides a forum for more than 1,500 high school students (grades 9-12) from over 40 countries to showcase their independent research. The Intel ISEF unites these top young scientific minds through participation in a series of activities celebrating their accomplishments and by providing an opportunity to compete for nearly \$4 million in prizes and scholarships. Below is a list of the NYC representatives and the awards that were won. Please make sure to click on the link below to see a summary of the projects along with the awards and a picture of the New York City Finalists.

Pukar Hamal (Forest Hills HS)

Will Kalb (Horace Mann School)

Billy Huang (Bronx HS of Science)

Na Xue (Midwood HS)

Erin Zeqja (Townsend Harris HS)

Katherine Cagen (Horace Mann School)

Tim Chang (Stuyvesant HS)

Katherine Banks (Stuyvesant HS)

Elizabeth Whitman and Christina Xiong (Benjamin Cardozo HS)

Tinya Cheng and Nischay Kumar (Townsend Harris HS)

Elie Bochner and Shai Chester (Yeshiva University HS for Boys)

Kudos to all of the students, teachers, mentors, chaperones and parents. A special thanks to Jeanette Kim and her team. To see a summary of the projects along with the awards and a picture of the New York City Finalists, please go to: <http://collegenow.cuny.edu/sciencefair/awards/2008isef/> You can also download the 2009 NYCSEF application at this link.

New York State Science Olympiad 2008

The New York Metropolitan Region Division of the Science Olympiad was held this spring and the winners in the High School Division were:

First Place	Stuyvesant High School – A Team
Second Place	Benjamin Cardozo High School – A Team
Third Place	Collegiate School – A Team
Fourth Place	Townsend Harris High School – A Team
Fifth Place	Archbishop Malloy High School

Congratulations to all of the students and their teachers for this prestigious accomplishment! If you would like to have your middle school or high school become involved in the Science Olympiad, contact John Pritchard at (718) 381-9600 ext. 233 or jpritch@schools.nyc.gov. To register directly, please go to: www.newyorkscioly.org

New York State Energy Research and Development Authority's Energy Smart Students Program is a series of free professional development workshops targeted toward educators in grades K-12. Below are links to access the flyers and information for these workshops:

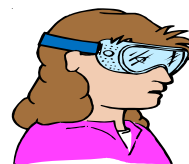
The ABC of Energy - Grade K - 3 : <http://schools.nycenet.edu/offices/teachlearn/science/rh/062008/6.7ABCflyer.pdf>

The Four E's of Energy - Grades 4 - 6: <http://schools.nycenet.edu/offices/teachlearn/science/rh/062008/6.214Eflyer.pdf>

Energy Trilogy - Grades 7 -12: <http://schools.nycenet.edu/offices/teachlearn/science/rh/062008/6.14Trilogyflyer.pdf>

Energy Smart Students Workshop Registration Form:

<http://schools.nycenet.edu/offices/teachlearn/science/rh/062008/registrationform.pdf>



Eye Protection - Goggles

Goggles are not part of the science core curriculum materials, but schools are requested to ensure that all students use goggles when conducting specific laboratory activities. The following is from the New York City Science Safety Manual:

Students must wear goggles and other protective equipment when appropriate. Contacts may be worn in the laboratory in conjunction with non-vented safety goggles.

All persons must wear eye protection whenever chemicals are handled, glassware is used, flames are involved, or when there is danger of splattering of liquids, or chipping of ores, minerals, and rock samples. This includes students and faculty who are not actively engaged in the experiment or demonstration.

Ordinary eyeglasses do not provide adequate protection for use in the science laboratory or classroom. Contact lenses afford no protection and may be harmful to the eyes because chemicals can be trapped beneath them. Only safety goggles marked with the code "Z87" provide the necessary protection. Safety goggles are either Type G which has no ventilation or Type H which is indirectly ventilated. Both types are equipped with flexible edging so they fit firmly against the skin of the face, protecting against splashes as well as flying fragments of glass or rock. Students who must wear contacts should inform the teacher and be required to wear non-vented goggles.

"Safety glasses" are unacceptable. These are similar in appearance to ordinary eyeglasses and have side shields which are not as effective against large chemical splashes.

Protective eyewear used by one class should be properly sterilized by an approved Board of Health method before being distributed to the next class. Ideally, a goggle sanitizer should be present in very laboratory room.

If your school wants to order goggles for the students you can find many listed on FAMIS. When you go to FAMIS, type goggles in the search engine.

Kerlin Institute 2008-09 at Bank Street College

Check out this unique opportunity for middle school science teachers at Bank Street College and the Kerlin Institute. The summer part of the institute this year is called "Inquiry-based Physics: Investigating Motion and Force". Click on the link for the application and further information:

http://schools.nycenet.edu/offices/teachlearn/science/rh/062008/Kerlin_Brochure_08-09.pdf

SciencePlay and PlaNYC

SciencePlay presents a rare opportunity to combine outdoor learning and play with New York City’s new K-8 science curriculum—inspiring students, families, and communities to engage with everyday science in the city. If your school is interested, please contact SciencePlay at scienceplay@jcca-nyc.com.

Mayor Bloomberg’s PlaNYC Schoolyards to Playgrounds Initiative is opening hundreds of school playgrounds for use outside of school hours, thus increasing public open space citywide. SciencePlay—an innovative collaboration among city parks, schools, and education advocates—will transform selected PlaNYC spaces into outdoor science playgrounds by incorporating science playground equipment, native plants and gardens, graphics, and signage into schoolyards. The SciencePlay program also includes the creation of a classroom curriculum and programs designed specifically for the science equipment and installations.

Through this unique intersection of school learning and play, SciencePlay has the potential to make science more accessible and fun for children enrolled in the participating PlaNYC “schoolyards to playgrounds” school sites, as well as the surrounding communities.

SciencePlay’s primary goals are to

- Stimulate curiosity about nature through informal learning and play
- Offer an outdoor laboratory for NYC’s science teachers
- Connect what happens on the playground to classroom learning and the new NYC science curriculum
- Generate citywide enthusiasm for everyday science

Essential to this effort is the collaboration of the NYC Department of Parks and Recreation (DPR), the NYC Department of Education (DOE), the New York Hall of Science (NYHOS), and Jane Clark Chermayeff & Associates (JCC&A) to develop curricular connections to ensure that the new playgrounds serve teachers and communities and become integral to learning. As part of PlaNYC, this collaborative effort will elevate New York City as a leader in science learning innovation.



Q&A on SciencePlay

Q. What is SciencePlay?

A. SciencePlay is a new collaboration among city parks, schools, and education advocates to capitalize on the outdoor learning potential of public playgrounds. This project’s highest goal is to make science more accessible to diverse, multigenerational urban audiences. This was created in conjunction with Mayor Bloomberg’s PlaNYC’s Schoolyards to Playgrounds

Q. Why bring science learning to city playgrounds?

A. Research shows that students are more apt to learn when using a hands-on approach to science. Opportunities for informal exploration and discovery, the kind of experiences that play promotes, can help spark curiosity and engage a lifetime interest in sciences.

Q. How does the SciencePlay equipment connect to classroom science?

A. Each piece of SciencePlay equipment was chosen to fulfill an aspect of New York City’s new science core curriculum for grades K-8. The New York Hall of Science (NYHOS) created a matrix to show specific curriculum tie-ins for each grade level. NYHOS also wrote curriculum captions to describe the science action or phenomenon demonstrated by each equipment piece.

Q. Who is eligible to participate in SciencePlay?

A. PlaNYC “Schoolyards to Playgrounds” sites can participate in SciencePlay. The Mayor’s office has selected 290 PlaNYC schoolyard sites in underserved neighborhoods and dedicated \$111 million in capital funding for playground improvements. These playgrounds will be open after school, on weekends, and during school breaks.

Q. How do I find out more about SciencePlay or see this equipment at work?

A. For more information about SciencePlay contact scienceplay@jcca-nyc.com.

The Grant World

National Gardening Association Offers Hooked on Hydroponics

Grants to Schools and Youth Organizations

Deadline: September 15, 2008

The Grow Store (<http://www.growstore.com/>) has joined with the National Gardening Association (<http://assoc.garden.org/>) to offer Hooked on Hydroponics grant packages to elementary, middle, and high schools and youth organizations in the United States. The grant program is designed to help young people learn how to grow plants hydroponically (without soil) and to explore related topics in botany and environmental science.

The program will select thirty-six schools or organizations to receive hydroponic garden systems and indoor light systems as well as curricula and reference books. To be eligible for the program, schools and youth organizations must plan to engage in a hydroponics project with at least fifteen children between the ages of 6 and 18 during the 2008-2009 school year. Applicants must also verify that their facility can accommodate the equipment in the award packages available for their age group.

Complete program information and application instructions are available at the NGA's Kidsgardening Web site.

<http://fconline.foundationcenter.org/pnd/15013220/hydroponic>

Shade Structure Program Accepting Grant Applications from Organizations Serving Children and Youth

Deadline: April 10, 2009

The American Academy of Dermatology (<http://www.aad.org/>) Shade Structure Program provides grant awards for the purchase of permanent shade structures designed to provide shade and ultraviolet ray protection for outdoor areas. The academy also provides a permanent sign to be displayed near the shade structure promoting the importance of sun safety. The academy re-ceives support for this program from Johnson & Johnson Consumer Products Company (<http://jn.com/connect/caring/corporate-giving>). The program is open to 501(c)(3) organizations that serve children and teenagers, age 18 and younger. To be considered, applicants must be sponsored by an academy member dermatologist and demonstrate a commitment to sun safety within their organization. (To locate a local member dermatologist, visit the American Academy of Dermatology Find A Dermatologist Web page.) Grants are for \$8,000 each. Visit the AAD Web site for complete program information.

<http://fconline.foundationcenter.org/pnd/15013188/aadpublicgrants>

The Mickelson ExxonMobil Teachers Academy Expands Opportunities for Teachers to Attend the 2009 Program

The Mickelson ExxonMobil Teachers Academy recently announced a new way for elementary school teachers to get a chance to attend the 2009 Mickelson ExxonMobil Teachers Academy and improve their math and science teaching skills. Students can nominate teachers from Grades 3, 4, and 5 or urge them to apply for an all-expense paid trip to the Academy's math and science professional development program by logging on to www.sendmyteacher.com, an interactive website. The teachers will spend five days next July at the Liberty Science Center in Jersey City, NJ, deepening their understanding of mathematics and science content, building expertise in facilitating student learning through problem solving and inquiry, and using links between math and science that support student learning and understanding in the classroom.

Teacher applications are due by October 31, 2008. The National Science Teachers Association and the National Council of Teachers of Mathematics will convene a panel of math and science experts to evaluate the entries and announce the selections in February 2009.

The 2008 Mickelson ExxonMobil Teachers Academy will host more than 600 teachers in Houston, Texas; Baton Rouge, Louisiana; and Jersey City, New Jersey. To date, nearly 1000 teachers have attended the Mickelson ExxonMobil Teachers Academy.

To nominate a teacher or to learn more about the program, visit <http://www.sendmyteacher.com>.

O’Neill Foundation, William J. and Dorothy K. – Capacity Building Grants -The program provides support for activities designed to build capacity in an organization so it can better fulfill its mission and vision. Grants are awarded for capacity building activities that develop or improve the effectiveness, impact and strength of the organization. Capacity building initiatives may include those that strengthen board and staff leadership, strategic planning, financial systems, human resource management, technology, or other activities that improve an organization’s infrastructure. A vital component of this grant making program is active collaboration between the O’Neill Foundation and grant seekers. Deadlines for submitting an LOI in 2008 are: January 2, April 1, July 1, and October 1. *Region:* Cleveland, OH; Cincinnati, OH; Columbus, OH; Licking County, OH; Baltimore/Annapolis, MD; Big Island, HI; Bonita Springs/Naples, FL; Houston, TX; **New York City, NY**; Richmond, VA; San Francisco, CA; Washington, DC. *Contact:* 216-831-4134

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

Teachers Network Teachers Network has compiled a series of grant opportunities for various topics, including humanities, mathematics, science, social studies, technology. Many of these will already be familiar to Grant Spy subscribers. www.teachersnetwork.org/Grants/index.htm

Hayden Foundation Youth Development Grants; Education Grants; Museum Grants

The Foundation makes contributions only to institutions that serve children and youth ages 3 to 18 from the metropolitan areas of New York and Boston. They concentrate support on youth development and education programs that present: (1) evidence of program impact on young people and (2) plans for making measurable progress toward well-defined goals in a specific time frame. Program support is generally for program expansion and creation. Capital support is awarded for renovation to existing buildings, construction of new buildings and additions or the purchase of existing structures, and purchase of non-expendable equipment (generally excluding computers). *Deadline:* Open www.charleshaydenfoundation.org/guidelines.php

Invitrogen Corporation

The Foundation is committed to strengthening the pipeline of future life scientists. Funding and partnership opportunities that address the following areas of interest will be considered: life science education for students, beginning at the high school level; professional development for high school and community college instructors; programs that are broad in scope and reach students and/or educators from a variety of geographic locations are preferred. Special consideration is also given to programs that target groups traditionally underrepresented in the life sciences, including but not limited to women and diverse populations. Through outreach and education, the Foundation also seeks to increase society’s understanding of the life sciences and their critical role in addressing global issues. Programs and initiatives that address these objectives are preferred: educating community leaders about the importance of life science, particularly as it relates to education, economic strength and global health; activities and initiatives that demonstrate thought leadership; museum and traveling exhibits, community events and public lectures that reach a broad, cross-section of the population.

Deadline: N/A www.invitrogen.com/site/us/en/home/Global/We-Have-Redesigned-the-Site.html

Wal-Mart Stores, Inc. – Teacher of the Year

Wal-Mart Stores, Inc. partners with Phi Delta Kappa International, the world's leading education association, to implement this recognition program. Wal-Mart will donate \$4.3 million to local schools with winning teachers. At the local level, one teacher in each community will be honored. The local Teacher of the Year will receive a \$1000 grant, payable to the school taught at, to be used for an educational program of the teacher's choosing. Local Teacher of the Year winners are then eligible to apply for the State Teacher of the Year award. Increased this year, state winners will receive an additional \$10,000 educational grant. Finally, one National Teacher of the Year will be selected from the state winners. The National Teacher of the Year will receive an additional \$25,000 educational grant for a total of \$36,000 to his or her school. Nominations will be accepted **October 1, 2008– October 31, 2008** at your local Wal-Mart store or Sam's Club. <http://www.pdkintl.org/walmart/home.htm>

National Science Foundation – Active Funding Opportunities -Recently Announced http://www.nsf.gov/funding/pgm_list.jsp?org=NSF&ord=rcnt

AGI Earth Science TV Series Now on The Science Channel

The four-part television series “Faces of Earth,” produced by the American Geological Institute, is being broadcast nationwide on The Science Channel in the coming weeks. With dazzling cinematography and computer-animated graphics, “Faces of Earth” explores how Earth is continually changed by the forces of nature.

To learn more about the series, go to <http://www.facesofearth.tv>. For show times, see <http://science.discovery.com/tv-schedules/series.html?paid=48.15158.118970.31892.x>.

BSCS Science Institutes

BSCS is pleased to announce our 2008 Science Institutes. This year we are offering three institutes including one focused on evolution titled, “Evolution: Earth & Life.”

For more information visit our website at www.bsos.org/si or contact Aleigh Raffelson at araffelson@bsos.org (719.219.4119) or Dr. Spiegel at sspiegel@bsos.org.

The American Geological Institute

The American Geological Institute (AGI) is pleased to announce the first Geotimes videocast, available both through <http://www.geotimes.org> and YouTube. The premiere videocast takes a look at the current developments related to the Chaitén eruption in Chile.

Geotimes Online is now producing original videocasts of Earth-related news. The videocasts will cover current geologic news, including natural disasters, current research and public policy affecting the geosciences. Anchored by staff writers of the magazine, the videocasts supplement Geotimes' regular earth science news items throughout the month.

To view the latest posting as well as to read features from the magazine and view other Web Extras, please visit <http://www.geotimes.org/>.

Summer Professional Development Opportunities

Complete Weather and Climate Curriculum

Do you want to learn more about weather and climate? Are you interested in lesson plans and supplies for your classes? The NYC Center for Space Science Education and the American Museum of Natural History have teamed up to create an exciting new curriculum called *Airplanes & the Atmosphere: Investigating Human Impact on Earth's Climate*. This summer they are offering a p-credit course to support the use of this curriculum.



Participating teachers will receive the complete curriculum, including all lesson plans, student sheets, overheads, and assessments; AMNH Membership; AMNH Science Bulletins DVD; PBS DVD "Dimming the Sun"; and classroom supplies.

The course will meet Monday through Friday, 9 a.m. – 4 p.m., from August 4 through August 8. Course sessions will be either at the NYCCSSE or the AMNH. P-credits can be applied towards salary differential (3 credits) or professional development hours (30 hours). The curriculum is intended for Regents Earth Science classes. For more information, check out www.nyccsse.org/atmosphere or call (212) 608-6164 x112. To register, go to <http://www.nycenet.edu/aspdp/>. The course number is P17-200SS08 and the course title is "Teaching Weather and Climate Through Airplanes and the Atmosphere."

If you are interested in piloting the curriculum, but cannot take the p-credit course, please email kbrown@schools.nyc.gov.

Teacher Opportunity - Improve Your Use of Earth Science Data In Your Teaching - Middle/High School Teachers

High School/Middle School Teachers who teach Earth Science courses can work with the Liberty Science Center and Lamont-Doherty Earth Observatory in testing classroom activities that use real data (Data Puzzles) are being recruited. Accepted teachers should be data novices, with little to no previous use of data in their classrooms. Participants will register and attend a three day Summer 2008 Earth Science Teacher Institute hosted by Liberty Science Center, Liberty Park New Jersey – August 4-6

For further information including application, contact person and e-mail please click on the following link:

http://schools.nycenet.edu/offices/teachlearn/science/rh/062008/Teacher_Recruitment_Phase2_2_.pdf

The City College of New York and The New York City Department of Education Present:

The Teacher Enhancement Academy in Mathematics and Science
(T.E.A.M.S.)

Tuition-Free Graduate Courses in Math and Science

Three separate series of courses will run concurrently:

A series for 7th and 8th grade math teachers

A series for 7th grade science teachers

A series for 8th grade science teachers

Priority will be given to applicants from SUR and SINI schools.

Dates: July 21 to August 14, 2008, a total of 16 days

Days: Monday to Thursday each week

Time: 2:30pm to 7:45pm each day

Location: City College of New York, Baskerville Hall, Convent Ave at 141st St.

Capacity: Up to 80 math participants and up to 80 science participants

Credits: Upon successful completion of the course, you will receive six graduate credits



http://schools.nycenet.edu/offices/teachlearn/science/rh/062008/TEAMS_flyer_and_description.pdf

Summer Professional Development Opportunities



2008 Summer Institutes at The New York Botanical Garden

Summer Institutes provide a week-long intensive immersion in ecology and botanical science led by professional scientists and educators. Participants in this dynamic program learn how to make science fun through field-tested, hands-on, inquiry-based activities. Teachers discover how to make the Garden an extension of their classroom, while enriching the curriculum with award-winning resources and more.

July 7–11, or July 14–18, 2008: Seedlings Program for Teachers of Grades K–2

July 21–25, or July 28–August 1, 2008: Saplings Program for Teachers of Grades 3–5

Fee: \$175 (includes curriculum materials, reproducible handouts, and plants)

For an application or more information, call (718) 817 - 8177 or visit www.nybg.org/edu

AMERICAN MUSEUM OF NATURAL HISTORY

Summer P-Credit course through the American Museum of Natural History and the NYASDP

Three exciting courses are available this summer from the American Museum of Natural History and the New York City Department of Education's After School Professional Development Program. Designed for K-12 educators, these three-week online courses are led by an experienced classroom teacher and a research scientist. Also included is a required one-day on-site experience at the Museum, with hands-on activities, special tours of the Museum's resources and the chance to meet your classmates face-to-face. In-depth readings and assignments paired with rich web-based discussions assure that educators finish each class with a deeper understanding of both science content and the tools of scientific inquiry.

Summer 2008 P-credit courses:

- The Ocean System:* Online June 7 – 28
On-site Saturday, June 14
- The Solar System:* Online June 21 – July 12
On-site Saturday, June 28
- Earth: Inside and Out:* Online July 12 – August 3
On-site Saturday, July 19

Register online at: <http://www.nycenet.edu/aspdp/>

View more course details in the Course Catalog under "Science": <http://www.nycenet.edu/aspdp/PublicPages/CourseCatalog.aspx>

For more information on the courses, contact Katie Rasmussen at: semadmin@amnh.org

Free Summer Workshops

The Adirondack Curriculum Project is offering 2 great workshops this summer - FREE - with meals and lodging included. If you develop an "Adirondack Challenge" and use it in your classroom - a stipend will be available. Please consider attending one! Deadlines are soon approaching.

Geography Institute for Adirondack Teachers - July 21-25, North Country Community College, Saranac Lake
<http://www.adkcurriculumproject.org/2008geography.htm>

Biodiversity - August 4 - 6, Adirondack Ecological Center, Newcomb
<http://www.adkcurriculumproject.org/biodiversity08.htm>

Both of these workshops are open to teachers in all grade levels and subjects. All you need to do is develop a lesson that connects the subject matter to something you already teach in your classroom.

Science Core Curriculum Professional Development Registration -Summer 2008

Below is the schedule for Science Professional Development Summer 2008 and the registration links are open and getting filled. Please register immediately.

July 28 – July 31:

- 5th Grade FOSS, Harcourt and Blend
- Accelerated 8th Grade

August 4 – August 7:

- 7th Grade FOSS, SEPUP, Glencoe and Blend
- High School Science - Earth Science, Living Environment, Forensics, Science Research, Data Analysis

August 11 – August 14:

- 8th Grade SEPUP, Glencoe and Blend

Teachers who missed training this past year for Grades 3, 4 and 6 will be offered training on

Friday, August 29 (Chancellor's Conference Day) as well as sessions in Fall, 2008.



The registration links for grades 5,7,8 and accelerated 8 for Summer PD are ready!! Please make sure to speak to your Principal about registration and read the information carefully before you register. The link is:

<http://schools.nyc.gov/Academics/Science/EducatorResources>

All the professional development is at either IS 89M or across the street at Stuyvesant High School.

High School Summer Professional Development

Monday – August 4, 2008 – Living Environment – The day will focus on an overview of the Core Curriculum and its integration with the New York City Scope and Sequence as well as the Living Environment Regents Examination. The day will culminate with hands-on activities from the four (4) mandated NYS Living Environment Labs and an overview of the Science Safety Lab Manual.

Tuesday – August 5, 2008 – Earth Science – The day will focus on an overview of the Core Curriculum and its integration with the New York City Scope and Sequence as well as the Earth Science Regents Examination. The day will culminate with training for the revised Earth Science Part D practical examination and an overview of the Science Safety Lab Manual.

Wednesday – August 6, 2008 – Forensics – The day will focus on an overview of the Forensics Curriculum and an overview of the Science Safety Lab Manual. The day will culminate with hands-on activities and Crime Scene Investigation.

Thursday – August 7, 2008 – Chemistry – The day will focus on an overview of the Core Curriculum and its integration with the New York City Scope and Sequence as well as the Chemistry Regents Examination. The day will culminate with hands-on activities that focus on problem-Based Learning in Chemistry.

To register, go to: <http://schools.nycenet.edu/offices/teachlearn/science/SciencePD.doc>

For more information, please contact Denise McNamara at (212) 374 – 0870 or dmcnama@schools.nyc.gov

Science Enrichment Opportunity for Incoming 8th Grade Students

Columbia University is recruiting incoming 8th grade students to participate in a summer session from July 7th through July 25th. Students who successfully complete the summer session will be invited to participate in a specialized engineering and applied science program during the schools academic year starting in October 2008. Students who demonstrate interest and dedication will be invited to continue throughout high school. Applications are distributed by invitation only. We are seeking students who have lots of potential, who may have already demonstrated an interest in science and engineering, possess a solid academic performance and have good school attendance.

The overarching goal of the program is to expose underserved urban youth to a scholarly scientific college setting. All instruction is hands-on inquiry based, which helps promote problem solving and critical thinking.

During the three week summer session, in addition to building robots, launching rockets, studying cell engineering, testing models planes in a wind tunnel and working with computers. The students will also venture off campus to participate in field trips and recreational activities. All students are provided free breakfast and lunch.

Any further questions, please contact Evelyn Roman-Lazen Director, K-12 Programs at 646-808-4080 or e-mail er2430@columbia.edu

Updates from our Publishers

FOSS Website:

NYC FOSS Website
www.fossweb.com/nyc

If you have any questions for FOSS, please e-mail:
fossnyc@berkeley.edu



Redeeming Coupons: If you did not redeem your coupons from FOSS this year they are good for four years.



The Planning Guides are on the FOSS website.
Click on: <http://www.fossweb.com/NYC/>

Use fossnyc for your username and your password.

Summer 2008 FOSS Middle School Institutes

NYC Middle School FOSS teachers have the opportunity to take weeklong intensive courses this summer from the Lawrence Hall of Science. Check the following courses and the links for details:

Populations and Ecosystems: August 6-10, 2008

http://schools.nycenet.edu/offices/teachlearn/science/rh/PopEco_Workshop_Flyer_plus.pdf

Chemical Interaction: July 21-25, 2008 http://schools.nycenet.edu/offices/teachlearn/science/rh/Chem_Int_Workshop_07-08.pdf

Weather and Water: July 20 - 25, 2008 <http://schools.nycenet.edu/offices/teachlearn/science/rh/WWApplication08.pdf>

Make sure to check out the FOSS website for planning guides and many other needed resources. The Spanish translation for Populations and Ecosystems (units 3-4, grade 6) is available now on

<http://www.fossweb.com/NYC/>. The translations for the remaining three titles (Chemical Interactions, Weather and Water, and Planetary Science) will be available online in August.



Glencoe Website: The NYC Glencoe site is up and ready!

When an item on the right Teacher Tools navigation tab is selected the user is prompted for a UN/PW:

UN: NYCTEACH

PW: GlencoeSci

http://www.glencoe.com/sites/new_york/teacher/science/index.html

Harcourt Website:

NYC Harcourt Website:

http://www.harcourtschool.com/menus/science/index_nyc.html

If you have any questions for Harcourt, please e-mail:



Jeanette.Watley-Wilson@harcourt.com

You should follow these easy steps to download the Harcourt planning guide:

First click on the Teachers Link.

Then click on the NYC Planning Guides.

Then click on the Grade and Unit you want to view.

When asked for a password type in the following:
NYCPG

The password works for all NYC teachers.

The Lab-Aids NYC website:



<http://nyc.lab-aids.com/>

Website World

UFT Humane Education Committee www.uft.org/member/committees/humane/

Humane Education Resource Guide (2006) www.uft.org/member/committees/humane/services/resources/

Free (for a limited time) to teachers of grades 5 - 12 only, The Emotional World of Farm Animals DVD or VHS and Study Guide www.animalplace.org

Free Share the World video, poster and curriculum packet for teachers of grades 3 -6 www.sharetheworld.org

Excellent photos of cells and anatomical parts – These can improve your presentations and serve as wonderful observational tools in the study of cell physiology.

http://images.wellcome.ac.uk/indexplus/gallery/Image+Awards+2008.html?s=Ty3T7wtXn7E&_IXMAXHITS_=250#anchor15354

Human Genetics – This is a collaborative learning activity that has collected genetic data from thousands of teachers and their students. Students analyze data to determine if the dominant trait is the most common.

http://www.rwlo.org/users/1/Real%20World%20Learning%20Objects/Science_Human%20Genetics%20and%20the%20Dominant%20Trait/overview.html

Selected dominant traits: extra fingers/toes (polydactyly) short fingers/toes (bradydactyly) Huntington's disease and some rare forms of dwarfism Note that not all dominant traits appear in high frequencies! Also, many of the traditional traits studied in our genetics units are proving to be more complicated than previously thought.

Misconceptions in Biology Avoid Misconceptions When Teaching About Plants <http://www.actionbioscience.org/education/hershey.html> More Misconceptions to Avoid When Teaching about Plants <http://www.actionbioscience.org/education/hershey3.html>

Mitochondria And Aging

Douglas C. Wallace, University of California at Irvine, explains in an interview why aging has been linked to mitochondrial DNA damage and describes the research that hopes to provide solutions to reducing the damage.

<http://www.actionbioscience.org/genomic/wallace.html>

The Evolution Of Emerging Viruses

In this interview, Eddie Holmes of Pennsylvania State University talks about new and remerging viruses that pose a global threat to human health and current efforts to combat these pathogens. <http://www.actionbioscience.org/newfrontiers/holmes.html>

The Global Decline Of Mollusks

Alerts readers to the dwindling number of snails, clams, mussels, and other mollusk species and highlights their value to our lives and the environment. <http://www.actionbioscience.org/biodiversity/parent.html>

Scientific Literacy In The Classroom

Carol Brewer, Montana State University, is interviewed about the biology curriculum and ways to improve student understanding of science concepts and issues.

<http://www.actionbioscience.org/education/brewer.html>

Save Our Amphibians: this new lesson engages students in critical thinking about the value of amphibians and encourages them to consider ways to save threatened species.

<http://www.actionbioscience.org/biodiversity/zipfel.html#educator>

- For additional lessons, refer to the lesson directory at: <http://www.actionbioscience.org/lessondirectory.html>

Regents Biology Review (Living Environment Review) web-sites:

<http://www.regentsprep.org>

(click on Living Environment)

<http://www.edusolution.com/regentsquiz/index.htm>

(click on Living Environment))

http://www.lewport.wnyric.org/jwanamaker/le_practicetests.htm

(click on topic of choice)

<http://www.lew-port.com/10712041113402793/site/default.asp>

(click on BIo Place then Animated)

<http://www.tvdsb.on.ca/westmin/science/sbi3a1/sbi3a1.htm>

(click on Cell Functions or Genetics)

<http://sciencereviewgames.com/srg/subjects/le.php>

(click on topic of choice to play game)

<http://www.barronsregents.com>

(you must subscribe online for \$16.99)

<http://www.regentsreviewlive.net>

(Click Streaming Video or PowerPoints for Liv. Env.)

Math and Space problems <http://spacemath.gsfc.nasa.gov/>

Neuroscience for Kids <http://faculty.washington.edu/chudler/neurok.html>

Windows to the Universe <http://www.windows.ucar.edu/windows.html>

Smog City <http://www.smogcity.com/welcome.htm>

The Yuckiest Site on the Internet <http://yucky.discovery.com/flash/>

National Environmental Education Foundation programs and grants

http://www.neefusa.org/?email=education_20080507

Have a great summer, restful vacation and we hope to see you for some science professional development during the summer and in the fall.

Continue checking out our website during the summer for updates which will include “Possible Models for Teaching Science in the Elementary School”.

<http://schools.nyc.gov/Academics/Science/default.htm>

