Grants for Schools and Teachers

PRISM partner schools are designing plans for improved professional development in mathematics and science. School teams will use those plans to create proposals to finance their vision for school improvement. The following are reminders to PRISM partners to prepare their proposals:

Roche/Montclair State University: Middle School Teaching Excellence Awards to recognize excellent science and mathematics teaching in Grades 5-8. The selection process will culminate in a poster session and awards dinner for winning teachers and their principals. A total of 15 prizes available at $1000 per award: $500 for each selected teacher and $500 for the purchase of science and mathematics classroom materials. Teachers must complete online application by March 15, 2007: http://frontpage.montclair.edu/CSAM/Roche.htm.

NJSSI Standards Implementation Grants: School or district should submit an “Intent to Apply” form and Rubric form due January 12, 2007 and proposal due Feb. 6, 2007. Application materials go to NJSSI central office at Rutgers. Amount of award is dependent on school or district population for use in professional development (70% or more) and curriculum materials (no more than 30%). A one-to-one budget match from district funds or grants is required. Website: http://njssi.rutgers.edu

Bristol-Myers Squibb Grants for Teaching Excellence: for PRISM partner schools and districts to support K-12 professional development in mathematics or science. Proposal submission and awards will be managed by PRISM at Montclair State University. Maximum award $8000 per district for up to 7 districts. Due date March 20, 2007. Website: prism.montclair.edu
EXOTIC CONNECTIONS: Utah, Mars, and Beyond!

Students will soon be talking with scientists in exotic locations throughout the school year. The PRISM program “Rainforest Connection Live!” is expanding to multiple sites for real glimpses into the lives of scientists and the creatures and habitats they study. The Mars Habitat (below) is located in a Utah desert wilderness far from cell phone or internet networks. The Mars Society uses this facility for research into techniques for study of extreme life forms and how humans can live on other planets. Teams live in a mockup of a home that can shelter a group of 6 persons with limited water, food, and fuel. The Utah desert is an ideal location to test the survival strategies for life on Mars. PRISM teachers and their students will be able to converse with crews about science in extreme conditions during their stay in the Mars Hab.

Bryce Canyon, Utah: A geological story in stone that tells of an inland sea and changing climates, uplift, erosion, and weathering.

Belize: Rainforest, Reef, and Ruin

Field Experience for Teachers August 4-15, 2007 (11 nights)
A guided ecological and archeological field experience for educators.

Approximate cost, depending on group size: $2700 per person out of Newark. Respond to prism@mail.montclair.edu for more details. Refundable deposit of $600 due February 15.

August 4 - 9: TREC Marine Lab on Ambergris Caye, located on the most pristine reef system in the Caribbean, staffed by skilled educators providing exploration of marine habitats.

August 9 - 15: Chan Chich rainforest lodge located in the center of a unique privately-owned, protected forest with the highest density of jaguars in the world. Side trips and daily activities include day trip to Lamanai, a primary Mayan archeological site, local school visit and medicinal plant tour, guided walks on forest trails. Wildlife includes monkeys, coatimundis, and other tropical species. Airfares, rooms, most meals, guide fees, and side trips included. Not included: travel insurance and tips.
When PRISM Outreach Specialist Mrs. Elinor Semel visited the Bergenfield Public Schools in December, she found that every elementary school had large colorful science murals. Self-contained classroom teachers worked with art teachers to help students make anatomically correct 3-dimensional murals that teach about insects while exhibiting their true colors and fine art skills. Each mural depicts insect life cycles and habitats. In the mural above, Monarch butterflies cavort through the sky while camouflage caterpillars skulk in the protection of vegetation.

The mural to the right shows a nocturnal luna moth enlarged in detail to show its body segments, “eye spots” on the wings, and feathery antennae, with a backdrop of courting luna moths on a nighttime flight in the moonlight of a darkened neighborhood.

The dragonfly on the upper right flies over a watery habitat, and flowers show their pollen-bearing anthers.
E TOGETHER IN BERGENFIELD

life cycles, ecological roles, and
ally of great interest to elementary
ren's drawings are an excellent window
ng about science. Combining art and
udents solidify their understandings of
allowing teachers an opportunity to
learned. The aesthetics of insect beauty
ed in favor of the smiley-faced stylized
on of an insect body.

ade by Bergenfield elementary students
et rendering of anatomy can also be
ful, and instructive. Note for compari-
real butterfly, in this case a tropical
om Guatemala, on the lower right. The
and the antennae are thin and end in
feathery moth antenna that is used for
ight by fragrance.

Look at a real butterfly for comparison.
Why Are These CUSP Teachers Having So Much Fun? On a work-day, released to learn science, these teachers have been studying physical science and pedagogy through firsthand experience. They explored activities that teach the concepts behind balancing objects and rotating tops. Understanding lever arms, rotational forces, and center of mass are all important in elementary physical science lessons. Teachers designed and built their own mobiles (photo) to apply their knowledge of center of mass and levers: Clockwise from lower left: Marc Gaydos (Ogdensburg), Demetrick Williams (Passaic Valley RHS), Richard Sparano (West Caldwell), and Erin McNeill (Passaic Valley RHS). This CUSP workshop was offered as one of a variety of topics in science and mathematics for CUSP schools. CUSP workshops teach teachers through experiential and constructivist approaches, and are supported by NCLB funds from the NJDOE. See upcoming workshop dates below and summer program p.6.

PRISM Professional Development

Mathematics: All workshops will be announced by email.

Science: Save These Dates: Grades 5-8 Science Workshops meet at PRISM from 9am - 2 pm. CUSP Districts only. FREE. Reservations: prism@mail.montclair.edu

Feb. 2 Assessment in Science - "Backwards Design: Assessment First!" What will students need to know for the statewide science assessments? Will they be able to successfully apply the skills and concepts learned?
Feb. 9 Light, Vision and Lenses - Designed to develop a better understanding of light as energy and its properties, how we see light, and how the interaction of light with lenses is used to enhance our vision. Concepts covered include the reflection, absorption, transmission, and refraction of light, image formation, energy transduction, magnification, and, the cellular composition of tissues. The use of the mean, mode, and median will be employed in determining cell size and density in a tissue, and the use of digital microscopy to capture images in real time for image analysis, illustration, and testing will be explored. 

The Rainforest Connection Live! Daily on the hour February 26- March 2. Videoconferences from Panama. By appointment only. JOIN US WHETHER YOU INTERACT OR NOT: sessions can be viewed without appointment at http://accessnewjersey.net
Guatemala (continued from page 1)

In December, PRISM staff Anna Mazzaro and Jacalyn Willis presented a bilingual paper on the technology and educational uses of videoconferencing between classrooms and scientists in remote field sites. The international conference was hosted in Guatemala by the MesoAmerican Society, making it possible to plan live video-conference programs with Latin American educators and local conservationists. New programs will be piloted this spring and offered to PRISM partners (see Exotic Connections, p.2). The PRISM programs help educate students in the universal concepts of ecology and conservation. One important chapter in the conservation history of Central America is the fate of the once great Mayan civilization. Archeologists surmise that the Maya who built big bustling cities in the period from 300-1100 AD were faced with a long drought, probably a result of excessive clearing of forests, and heavy dependance by concentrated populations on distant crop cultivation. Ancient Mayans had an excellent written knowledge of mathematics, medicine, astronomy, agronomy, and architecture that was largely lost before the Spaniards arrived in Central America. Modern Mayans live in small village communities, mainly in the cool highlands, where many families raise crops of potatoes, onions, tomatoes, and leeks in small plots.