

**Creative University-School Partnerships  
(CUSP)**

East Orange	Park Ridge
Englewood Cliffs	Passaic Valley RHS
Franklin Lakes	Ridgefield
Hackensack	Rutherford
Hillsdale	Saddle River
Leonia	Teaneck
Little Falls	Totowa
Lodi	Wayne
Lyndhurst	West Orange
Montclair Orange	West Paterson MSU

CUSP is a partnership of a research and teaching university (MSU) with a diverse group of school districts in Bergen, Essex, and Passaic counties. CUSP is a comprehensive project that addresses educational needs using research-based pedagogies.

**CUSP Project Activities**

- Summer Institute
- Distance Learning
- Content-based workshops
- Videoconferencing
- Adopt-a-professor
- Math & Science courses
- Assistance in achieving HQT status in math and science
- Classroom visiting teams

**EVENTS AND IMPORTANT DATES**

Mar.19 - Science Day, Student Center 1 pm - 4pm.

Mar. 22 - PRISM Partners meeting/workshop 9 am - 2pm on Classroom Safety in Science. Mathematics and Science Resources from the Eisenhower National Clearinghouse.

Apr. 15 - New Jersey Board of Education Workshop: Packaging, Signs, Symbols and Codes.

May 24 - 25 Hands and Minds Together, National Science and Mathematics Conference, MSU Student Center Annex (SC)

For an extensive list of sites to **enrich curriculum** and **professional development**, try this guide for educators <http://school.discovery.com/shrockguide/>.

**Hands and Minds Together**

Leaving No Child Behind in Science & Mathematics  
**National Science and Mathematics Conferences**  
Montclair State University, NJ May 24 - 25 2005  
Register online at [www.tlcpd.com](http://www.tlcpd.com)

**Rainforest Connection Live from Panama**

Barro Colorado Island (BCI) in Panama was the site of the Rainforest Connection Live! videoconference telecasts to thirty-three schools in three states from Tuesday, January 25 through Saturday, January 29, 2005. Dr. Jacalyn Willis, twelve scientists, researchers and educators offered their expertise in interactive conferences with students and teachers in New Jersey, New York and Texas.

Now in its third year the Rainforest Connection Live! served up a varied menu of topics indigenous to a tropical locale such as BCI. Some of the topics presented were *Decomposition: the Brown Food Web, Bats and Their Roles in Forest Ecology, Symbiosis: How Species Live Together, Studying Adaptations Through Ants, and Medicines from Plants*. Also, students were able to *Interview a Rainforest Researcher* or *Interview a Scientist*. Ninety-six classes tuned in to participate in these discussions and to question the experts about their experiences in the field.

Dr. Anders Hedberg of the Bristol Myers Squibb Foundation, and Dr. Robert Prezant, Dean of the College of Science and Mathematics at Montclair State University, joined the scientists of the island's Smithsonian Tropical Research Station to lead these discussions. Dr. Hedberg's sessions dealt with medicines from plants, how island natives learned to extract and refine these medicines, and why "modern" people are still interested in tribal medicines. Dr. Prezant, a marine invertebrate zoologist, shared his expertise as a researcher involved in invertebrate studies. He preceded his discussions with video clips of insects and mollusks, such as katydids, apple snails, and limpets. In an interview for this article Dean Prezant stated, "It was not *Scientific American*; it wasn't *National Geographic*; it was reality TV. It was very important for the students to see the real thing. I think students from these classrooms felt important tapping into something with which they have no other contact."

In evaluations sent to the PRISM office, reactions from teachers mirror this response. "The opportunity to talk to scientists live from the rainforest was excellent. Even if a child isn't interested in science, it is hard not to be impressed by the live experience and to see, first hand, animals they have not seen before. What a wonderful learning experience and opportunity!" "As an educator I try to involve my students with hands-on activities and experiences to help them with their learning. The program was well done."

Comments from the students reflect the excitement of speaking with professionals in the rainforest and of using the videoconferencing technology. "I thought it was like being on a business call at an official event. It was interesting to see the video cameras take shots of animals." "It was unique and creative to talk to people so far away, see them on the television, ask them questions, and get an immediate response. It is like science fiction that you can push a button, and they can hear and see you." "Instead of getting things out of textbooks, we got to see it first hand."

## SUMMER COURSES

### Procedures for Registration with a Discounted Tuition

**Purpose:** To improve the math/science expertise of teachers (grades 5-9) in CUSP partner school districts and non-public schools, in accordance with new state teaching requirements.

**Deadline for Summer 2005:** April 29<sup>th</sup>

Registration begins April 11<sup>th</sup>; classes begin May 16<sup>th</sup>

**Discounted tuition and course fees:** \$500 per 3-credit course; \$750 per 4-credit course. The first 60 CUSP participants completing a summer course or institute will be reimbursed \$500 as a stipend.

**Discount Cap:** 2 discounted courses per person for the lifetime of the grant.

**Appropriate Courses:** Graduate or undergraduate level courses from the College of Science & Mathematics

It is the responsibility of the participating teacher to notify PRISM when requesting a tuition discount. PRISM will verify that the teacher is from a CUSP partner district and is within the discount cap of two courses. The following procedures should take place to ensure proper tuition discount:

1. If not already enrolled at MSU, apply immediately to the Office of Graduate Studies (see MSU website [www.montclair.edu](http://www.montclair.edu)). For non-degree status complete part A of the application form, pay the \$60 application fee to MSU, submit transcripts; must be accepted **prior** to course registration.
2. Register for the course via the MSU website; disregard the full tuition charge that appears in the registration confirmation notice.
3. Notify the PRISM office (973-655-7553 or [killianco@mail.montclair.edu](mailto:killianco@mail.montclair.edu)) with name, home address, home phone number, e-mail address, school district, grade level currently teaching, social security # , registered course number.
4. PRISM will arrange with the Bursar's office for proper billing.
5. When billed by MSU, please pay promptly. If the bill indicates full tuition, notify PRISM immediately; PRISM staff will seek corrected billing through the Bursar's office.

Each of the courses is introductory and suitable for students with little or no background or prerequisites. ENVR 109 and GEOS 107 are applicable to the Geography BA degree; BIOL 109 is not open to Biology BS majors.

## SCIENCE COURSES FOR SCIENCE TEACHERS

Credits/Points: Each course is valued at 2 points on the NJ State HOUSE Matrix (3 or 4 college course credits each).

**ENVR 109** The Human Environment (3 semester hours) is an interdisciplinary course that explains the human impact on the natural environment. Interconnections between natural processes and human activity are explored with emphasis on developing the skills necessary for critical evaluation of environmental issues. The class will provide teachers with the tools to address issues related to Core Curriculum Content Standards for World Languages 7.2, Science 5.10 and Social Science 5.2. The course meets Montclair State's GenEd 2002 Social Science requirement.

Instructor: Dr. William Thomas, director of the New Jersey School of Conservation.

**GEOS 107** Planet Earth (4 semester hours) 5.9 is an introduction to the physical characteristics of the planet earth, with a focus on processes and interactions of the atmosphere, hydrosphere, lithosphere, and biosphere. An understanding of the human impact on these systems is also developed and maintained in perspective. Meets GenEd 2002 Natural/Physical Laboratory Science requirement.

Instructor: Dr. Gregory Pope, Associate Professor and Chair in Earth & Environmental Studies.

**BIO 109** The Living World (4 semester hours) 5.5 provides students an opportunity to learn about the biological and environmental components of life and how these components interact to affect their own lives. Meets GenEd 2002 Natural/Physical Laboratory Science requirement.

Instructor: Dr. Scott Kight, Associate Professor and Chair in Biology.

Each of the courses is introductory and suitable for students with little or no background or prerequisites.

**ENVR 109** and **GEOS 107** are applicable to the Geography BA degree; **BIOL 109** is not open to Biology BS

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## MATH COURSES FOR MATH TEACHERS

**MATH 507** Geometry for Middle Grades 4.2. Topics are fundamental concepts of geometry, the use of geometric thinking as a problem-solving tool, and methods and techniques to stimulate student understanding and application of these concepts and skills. Teachers learn to guide students in development of spatial sense and the ability to use geometric properties and relationships in problem solving in mathematics and in everyday life.

Instructor: Mrs. Nancy Schultz.

**MATH 508** Data Analysis and Probability in the Middle Grades 4.4. Topics include the basics of collection, summarization, interpretation of data, and the fundamental ideas of probability. Sampling techniques, experimental design, graphical and numerical summarization of data and the basic ideas of drawing conclusions from data are discussed. Methods for teaching these concepts in the middle grades are discussed in tandem with presentation of the material.

Instructor: Dr. Ken Wolff.

CUSP Staff

**PRISM Office:**

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OUTREACH TEAM

**MATHEMATICS**

Nancy Schultz  
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**SCIENCE**

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**ADOPT-A-PROFESSOR**

Ann Marie DiLorenzo, Ph.D.  
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**CUSP**

Creative University-School Partnerships  
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College of Science and Mathematics  
Blanton Hall - Atrium  
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**On the CUSP** is a vehicle for sharing program plans and events. Your contribution to **On the CUSP** is important to us. Share your school's successes! Items received by the 10th of the month will be included in the next month's issue, based upon space availability. Submissions should be identified by the district, school, principal, teacher(s), and date of event.

Send submissions to: [PRISM@mail.montclair.edu](mailto:PRISM@mail.montclair.edu)

**Math & Science Summer  
Institutes will be  
announced in a later issue.**

**These Institutes will be  
offered in August 2005.**

# WE'VE MOVED!!

PRISM is Now Located  
in the New  
Bristol-Myers Squibb Center  
for  
Science Teaching and  
Learning  
Blanton Hall - Atrium  
(across from parking lot #17)

Come and Visit Our New  
State-of-the-Art Facility

**REMINDER:** *The next PRISM Partners meeting/workshop is Tuesday, March 22, 2005,  
Bristol-Myers Squibb Center, Blanton Hall - Atrium*