

**Equity Studies
Research
Center**

Sisters In Science:

**A Newsletter Promoting Gender Equity
in the Science Classroom**

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Information Box:

Would you like to submit an article?

Do you have any questions or comments about our newsletter?

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ESRC Hosts First Annual Women in Science Conference

By: Victoria Dell'Era

On November 11, 2005, the Equity Studies Research Center (ESRC) in collaboration with campus wide faculty organized a conference entitled "Fostering Women's Success in Science." The conference was geared towards science educators.

Research shows that in our society, boys will perform at higher levels than girls in the areas of math and science. Fortunately, many theories are being created to determine different ways to increase the performance of our female students in these areas. The plan is to provide equality in the classroom.

Many theorists believe lower achievement among girls has much to do with self-esteem and belief in one's abilities. If girls do not believe they have the ability to exceed, chances are they will live up to the expectation that they will not do as well as their fellow male students.

The conference brought together women scientists, science educators, science practitioners and students who were all interested in equity. What do we mean by equity? In this sense, we are referring to gender equity in



Panel Presenters L-R: [Discussant] Ruta Sevo, National Science Foundation; Judith S. Bond, President of the American Society of Biochemistry & Molecular Biology; Patricia Campbell, President of Campbell-Kibler Associates, Inc.; Preeti Gupta, Vice President of Education at the New York Hall of Science; Sandra K. Masur, Professor of Ophthalmology and Cellular Biology at the Mount Sinai School of Medicine; Diane Pillersdorf, Regional Instructional Supervisor for Science in Region 5; Kathryn Scantlebury, Associate Professor of Chemistry and Secondary Science Education Coordinator at the University of Delaware.

our classrooms. Gender equity involves fairness and equality between the males and females in the classroom including the process and content involved in a teacher's lessons, examples, and assignments.

After greetings from Dr. Penny L. Hammrich, Director of the ESRC and Dean of the Division of Education, President James Muyskens, and Provost Evangelos Gizis welcomed the conference participants. Participants then took part in a panel discussion which included seven women currently involved in the area of science and science education. The panelists discussed their beliefs as

to why there is such a low participation of women in science, what causes the discouragement, what teachers can do to increase interest, and the unhealthy messages that exist in our society.

The conference contained six strands focusing on different areas of women in science. One strand entitled "Teacher as Researcher" focused on classroom issues from the elementary level through higher education specifically focusing on the teacher and ways to improve their instruction.

Another strand entitled "Women Scientists" brought

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Region 5 Research Incentive Pilot Program Winners

By: Victoria Dell'Era

In April of 2005, the Research Incentive Pilot Program was made available to teachers in Region 5. This program provided an opportunity for teachers to develop and implement an equity focused practice-based research study. Each teacher was encouraged to submit their proposal as the sole researcher or in collaboration with another teacher.

The top five proposals were selected to receive an award of \$2000 each to carry out their reserach.

The winners of the Research Incentive Pilot Program were Marsha Marx and Maryanne McCarthy from P.S. 64Q; Larissa Steele from P.S. 197Q; Bernel Connelly-Thomas from P.S. 327K; Ruth Parker and Maxine Cameron from P.S. 108K; and Jean Stabinsky and Michael Fricano from P.S. 13K.

The proposal submitted by Marsha Marx and Maryanne McCarthy entitled "Green Thumbs Up" was developed to encourage the lowest achieving students to increase their math, literacy and science skills as well as their interest levels by participating in an interactive year round school flower garden. Lowest achieving girls (and boys) will receive additional science and math support through a multidisciplinary and multi modality approach to learning.

Larissa Steele's proposal "Seeing Ourselves as Scientists" has been designed to foster the belief that each student already is a scientist who observes, questions, experiments, problem-solves and then thinks more about the physical/natural parts of his/her world. In order for students to obtain this belief, they will wear lab coats and be photographed as they carry out their role as scientist.

Ms. Bernel Connelly-Thomas entitles her project "Levers, Pulleys, Wheels and Axles: How Simple Machines Move Girls Toward Science." Students will use their knowledge of physics and tools to create a machine that makes life easier at home or at work. Students will be given hands on problems to solve using simple machines consisting of wheels, axles, and pulleys. This project will help research which conditions provide the best learning environment for female science students, while providing girls with practical experiences using tools that are generally male specific in an attempt to bridge the gap.

In an attempt to bridge the gap between SIFE (Students with Interrupted Formal Education) and other students, Ruth Parker and Maxine Cameron have created a plan to provide supplemental services to these students by setting up an extended day Science program. SIFE students usually function

below grade level in reading, math and the content areas, particularly science. Being in this program will expose these students to hands-on activities, as well as the opportunity of participating in a small group, without the pressure or embarrassment of having to use and follow specified scientific procedures of a large group.

Jean Stabinsky and Michael Fricano have developed a project that concerns environmental education. The idea is to introduce students to vermicomposting with red wiggler worms. By encouraging the use of worm bins in classrooms, children will learn how compost made by worms benefits organisms. This project is intended to teach that all neighborhoods can benefit from the efforts of environmental education. The goal is to teach that all people are entitled to healthy environments. Children will learn to value the lives of worms and all animals on earth. Through this projects students will be taught respect for biodiversity, and conservation and equity.



Achieve Gender Equity in Your Classroom

By: Victoria Dell'Era

Gender equity has come a long way since the end of Home Economics for girls and Shop for boys, but inequality still exists in our schools.

Gender bias is so elusive, therefore many teachers are completely un-

aware that it is taking place in their classrooms.

Gender equity involves more than the idea of change. It means self-evaluating and planning how to carry out and promote equitable teaching strategies. Check your classroom for subtle

stereotypes in your posters, displays and books. Be careful in your choice of words and steer clear of gender stereotypes.

Your time and attention to your students' needs can be both powerful and beneficial.

Region 5 Scholars Academy

By: Michelle Ariano

Scholars' Academy, located in Rockaway Park, Queens, is the first school in New York City to partner with the Sisters in Science in the Community program (SISCOM). Scholars' Academy is a new school catering to gifted students in grades 6-7. Their curriculum focuses on a wide range of interdisciplinary education; exposing students to a variety of foreign languages, technology, and non traditional sports.

SISCOM, an innovative program using sports as a vehicle for learning science and math concepts, will collaborate with science, math, and physical education teachers to effectively deliver science instruction and increase students' achievement in math and science. SISCOM's interest is to promote equitable avenues for all students to pursue academic success in science and mathematics. Students will learn about the mechanics, sci-

ence, and mathematics of golf, fencing, basketball, and tennis. Each sport will be the focus of learning for a five week period.

To kick off the year with Scholars' Academy, SISCOM hosted a Back-To-School event at the NY Hall of Science, where students, staff, and families were in attendance. The event

included tours of the NY Hall of Science, activities and demonstrations led by NY Hall of Science staff, and a sports raffle giveaway featuring a grand prize of two tickets to a New York Knicks basketball game.

The year has continued with special sports day events such as "Tuesday

Night Golf" at the Brooklyn Golf Center. For five weeks, students were able to practice their swings, putting, and other abilities with skilled golf instruc-

tors. Families were also able to join in the fun and practice their expertise of the sport. The special sports day events allow students to engage in the sport they are actually learning.



SISCOM will be working with Scholars Academy throughout the rest of the 2005-2006 school year. In the Spring, other outings are planned such as attending a fencing match, a college basketball game, and a visit to the National Tennis Center in Flushing Meadows Park, Queens.

ESRC's Hosts First Annual Women in Science Conference

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women scientists from across the nation to Queens College. Dr. Zahra Zakeri from the Biology Department worked with her students to provide brilliant sessions loaded with scientific information. While these sessions were informative providing both information on research and current science-driven careers, they also provided proof to the women of today that they can in fact become successful in the field of science.

The other strands included Equitable Curriculum, Informal and Formal Science Programs, and Hands-On Science demonstrations.

The conference participants attended lunch with the keynote speaker, Dr. Kim Tolley. Dr. Tolley is the Professor and

Director of MEd and MAT programs in the School of Education and Leadership of the University of Notre Dame De Namur in California. In her keynote address, Dr. Tolley situated current discourse about gender differences in science and mathematics in a historical context. Although female participation in science and engineering fields has improved over the past forty years, significant gaps remain in male and female attainment. Drawing from historical, pre-college enrollment trends, Tolley argued against three prevailing contemporary myths about the pre-college education of girls.

The ESRC is planning to host another conference next year focused on other issues of equity.



Keynote Speaker: Dr. Kim Tolley, Professor and Director of MEd and MAT programs in the School of Education and Leadership of the University of Notre Dame De Namur in California.

