

creating balance in an unjust world



conference on math education and social justice

April 4 - 6 • Brooklyn, NY



Welcome Message

“Leading societies have commanded mathematical skills that have brought them advantages in medicine and health, in technology and commerce, in navigation and exploration, in defense and finance, and in the ability to understand past failures and to forecast future developments.”

- The National Mathematics Advisory Panel (NMAP), March 2008

Thank you for joining us at our second annual conference on math education and social justice! Over the course of this weekend, we will continue to build on the inspiring work that began with over 500 people last April 2007. Throughout this weekend you will have the opportunity to network with hundreds of other participants from around the globe, learn about opportunities to engage in math projects with community organizations, attend more than a dozen student-facilitated workshops, and return to your community with an action plan for “Creating Balance in an Unjust World.”

As the NMAP recently wrote, mathematics is a critical component for future development – but who’s future is our nation truly concerned about, and what definition of development are we using? This year’s conference comes as California prepares to slash \$4.8 billion from the education budget, on the heels of the 5th anniversary of the War in Iraq, and with the announcement that 1 in 100 Americans are now in prison (with much higher rates in communities of color). But we must do more than understand these failures.

Never before has it been so important for our young people to be mathematically numerate and to interact with their world with sharp problem solving and critical thinking skills. We must reclaim the use of mathematics as a tool to be used not only in the development of commerce and defense, as the NMAP suggests, but for the development of equity and justice.

Thank you for embarking on this mission with us.

Becky, Beth, Charlotte, Erica, Geoff, Jonathan, Kari, Marilyn, Micia, Taeko, Sam, Sara, Sendhil, Swapna and Tara

Conference Schedule

Saturday, April 5

8:00 - 9:30	On-Site Registration/Breakfast
9:30 - 11:00	Opening Plenary/Keynote Speaker (Gymnasium)
11:00 - 11:15	<i>break</i>
11:15 - 12:45	Workshop Session #1
1:00 - 2:00	<i>Networking Lunch (Gymnasium)</i>
2:00 - 3:30	Workshop Session #2
3:30 - 3:45	<i>break</i>
3:45 - 5:15	Workshop Session #3

* Exhibitor Hall open from approximately 8 - 5:30

Sunday, April 6

10:00 - 11:30	Panel
11:30 - 1:00	Action Groups

General Information

CONFERENCE WEBSITE:

www.radicalmath.org/conference

JOIN THE LIST-SERV:

<http://groups.google.com/group/RadicalMath>

CONFERENCE HOST SITES:

Vanguard High School

<https://www.edline.net/pages/vanguard>

Vanguard High School is a public Title I 9th - 12th grade school in Manhattan. We believe that small, intellectual school communities provide effective education for students and we value the goals that help make young people lifelong learners, productive citizens, and lead personally satisfying lives. We expect that the practice of exhibition work based on inquiry, presentation and reflection will be a part of the performance based assessment students experience during their time at Vanguard. We are a member of the New York Performance Standards Consortium, and Performance-based Portfolio assessment continues though all four years and across all disciplines. In mathematics students engage in both group round tables as well as individual oral defense presentations.

Long Island University, School of Education

www.brooklyn.liu.edu/education

LIU School of Ed has a complete urban focus and prepares teachers, counselors, administrators, and school psychologists for the adventure of urban education. A strength of the LIU/Brooklyn School of Education is that many of their future and practicing educators are themselves urban dwellers, immigrants, or members of a wide variety of ethno-linguistic and racial groups. They bring to the University the experiential knowledge of diverse urban communities essential to educate the children and families in these communities.

WWW **RADICAL** **MATH** .ORG

An Online Tool for Teaching Math and Social Justice



Over
2,000,000
hits!!!

A searchable database of:

- **lesson plans**
- **projects**
- **articles**
- **graphs**
- **research**
- **data sets**
- **websites**

info@radicalmath.org

Host Schools

Institute for Collaborative Education (6 - 12)

New York, NY
ice.r9tech.org

East Side Community High School (6 - 12)

New York, NY
www.eschs.org

Fannie Lou Hamer Freedom High School (9 - 12)

Bronx, NY
718.861.0521

Muscota New School (K - 5)

Brooklyn, NY
www.muscota.org

The Earth School (K - 5)

New York, NY
www.theearthschool.org

Vanguard High School (9 - 12)

New York, NY
www.edline.net/pages/vanguard

Urban Academy High School (9 - 12)

New York, NY
www.urbanacademy.org

The Ella Baker School (K - 8)

New York, NY
212.717.8809

The Coalition of Essential Schools congratulates Radical Math for creating opportunities to think deeply and collectively about math and social justice!

Creating Balance in an Unjust World attendees can join with CES to create small, equitable, and personalized schools for all students and communities.



CES Small Schools Summer Institute: The Essentials of Small Schools: Principles and Practices for Equity and Achievement

July 14-18, 2008, Portland, Oregon

School-based teams, school systems, and individuals creating new small schools or large-school conversions can come to Summer Institute to network, gain capacity and information, and galvanize school development work.

Online registration begins May 1, 2008 at www.essentialschools.org.

CES Fall Forum: Live It. Learn It. Change It.

November 6-8, 2008, Charlotte, North Carolina

The Coalition of Essential Schools invites you to Fall Forum to connect with thousands of K-12 educators, students, parents, and other leading thinkers who are changing lives through learning.

Learn more at www.essentialschools.org. Call for Proposals opens on April 2, 2008, and the deadline is May 14th.

Affiliate with CES!

Affiliate with CES to join the powerful and growing CES network and school transformation movement. To find out more, visit us online at www.essentialschools.org.

Coalition of Essential Schools
1330 Broadway, Suite 600
Oakland, CA 94612
p. 510.433.1451, f. 510.433.1455
www.essentialschools.org



Speakers & Panelists

Joan Countryman (*Keynote Speaker*)



Joan Countryman is the former Head of Lincoln School in Providence, Rhode Island, a position she held for 12 years until her retirement in 2005. Previously, Joan served as Assistant Head for Academic Planning and Director of Studies at Germantown Friends School in Philadelphia, where she taught mathematics from 1970 to 1993. Since August 2006, she has served as consultant and Interim Head of the Oprah Winfrey Leadership Academy in South Africa.

She is the author of “Writing to Learn Mathematics” (1992), “Is Gender an Issue in Math?” in *Math and Science for Girls* (1993) and “Black Images in American Literature” (1977).

Joan Countryman grew up in Philadelphia and was the first African-American graduate of Germantown Friends School. She received her B.A. from Sarah Lawrence College, a Master’s from Yale University, and studied at the London School of Economics as a Fulbright Scholar.

Rochelle Gutierrez (*Panelist*)



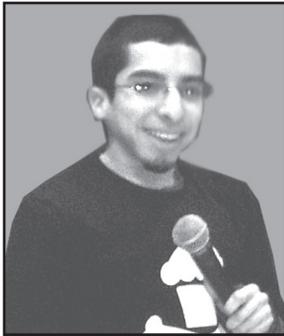
Rochelle Gutierrez is an Associate Professor of Curriculum & Instruction at the University of Illinois at Urbana-Champaign. Her research focuses on the structural and pedagogical factors involved in equity for marginalized students, especially African American and Latina/Latino students. She also focuses upon understanding the organizational, cultural, and pedagogical aspects of high school mathematics departments that support students of color and students in poverty taking high levels of mathematics by grade 12.

Chad Milner (*Panelist*)



Chad Milner currently serves as the National Coordinator of Programs for the Young People's Project Inc., an outgrowth of the Algebra Project. He is himself an Algebra Project alumni and a graduate of Stanford University. Chad has been involved with YPP since the late nineties. In addition he was a secondary mathematics teacher in the Boston Public Schools, and in work related to community development and youth empowered education and action.

Hector Acevedo (*Panelist*)



Hector Acevedo is currently a College Math Literacy Worker with the Young People's Project. Born in El Salvador Hector moved to Cambridge, MA in the 6th grade and became involved with the project as a workshop participant at a local youth center. He went on to be trained and work as a Math Literacy Worker through high school in the program and is now a senior at Hamilton College majoring in Women Studies.

Elizabeth Yeampierre (*Panelist*)



Elizabeth C. Yeampierre, a Puerto Rican civil rights attorney born and raised in New York City is Executive Director of UPROSE, Brooklyn's oldest Latino community based organization. In 1996, Elizabeth helped shift UPROSE's mission to organizing, advocacy and developing intergenerational indigenous leadership through activism. UPROSE focuses on environmental, economic and social justice. Elizabeth received her BA from Fordham University and her JD from Northeastern University School of Law.

Bob Peterson (*Panelist*)



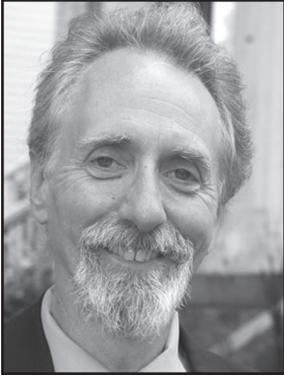
Bob Peterson teaches 5th grade at La Escuela Fratney, a twoway bilingual public school in Milwaukee, Wisconsin. He is a founding editor of *Rethinking Schools*, and is a frequent writer and speaker. He is a co-editor of “Rethinking Mathematics, Teaching Social Justice by the Numbers” with Rico Gutstein. Bob co-edited “Rethinking Columbus: The Next 500 Years” and “Transforming Teacher Unions: Fighting for Better Schools and Social Justice.” In 1995 he was selected as Wisconsin Elementary Teacher of the Year.

Nahyshene Molina (*Panelist*)



Nahyshene Molina is a Puerto Rican American and a Senior at George Washington High School. Since the age of 10, Nahyshene has been a part of FUREE. As the daughter of a founding member of FUREE, Nahyshene, along with her brothers, always came to FUREE with her mother. Nahyshene has been representing FUREE and the youth of her community at the NYC Urban Youth Collaborative - a group of student organizations working together around safety issues in our high schools.

Monty Neill (*Kickoff Event Speaker*)



Monty Neill, Ed.D., is currently Executive Director of the National Center for Fair & Open Testing (FairTest). He has initiated national and state coalitions to work toward fundamental change in the assessment of students and in accountability. He currently chairs the Forum on Educational Accountability, an alliance working to overhaul federal education law (the No Child Left Behind Act, in particular) based on the Joint Organizational Statement on NCLB, signed by nearly 150 national groups. Monty authored “Implementing Performance Assessments: A Guide to Classroom School and System Reform”, and “Testing Our Children: A Report Card on State Assessment Systems”, the first comprehensive evaluation of all 50 state testing programs.

Louis Delgado (*Kickoff Event Speaker*)



Louis Delgado is the founder and principal of Vanguard High School in New York City. He has established his high school as one of the Coalition of Essential Schools where teaching and learning is personalized in conjunction with universal course of study. Students at Vanguard High School engage in Performance Based Assessment and must pass 5 Graduation Oral Defense presentations to committees of teachers, peers, parents, and community members. From 1984-1993, Louis Delgado worked at City School in New York, NY as the Director of the Executive Internship Program. He received his BA in education from Brooklyn College, his M.A. in Education at Hunter College, and in 1992 he received his MA in Administration and Supervision Pace University.

Justice, Not Just Tests Kickoff Event

Vanguard High School
317 East 67th St
New York, NY 10021

This groundbreaking evening brings together students and educators from around the country to share and discuss alternatives to high-stakes, standardized testing that can be used in the math classroom. Co-sponsored by the New York Collective of Radical Educators (NYCoRE).



SCHEDULE:

5:30 - 6:00 Snacks

6:00 - 6:30 Speakers/Performers

6:45 - 8:15 Mini-Workshops

PERFORMERS/SPEAKERS:

Zora Howard and Marne Bruckner
2007 NYC Urban Word Poetry Slam Members

Monty Neill
Executive Director, FairTest

Louis Delgado
Principal, Vanguard High School

PARTICIPATING SCHOOLS/ORGANIZATIONS:

- What Kids Can Do / SAT Bronx (Bronx, NY)
- El Puente Academy for Peace and Justice (Brooklyn, NY)
- Vanguard High School (New York, NY)
- East Side Community High School (New York, NY)
- Urban Promise Academy (Oakland, CA)
- John Muir Middle School (Los Angeles, CA)
- Greater Lawndale/Little Village School for Social Justice (Chicago, IL)

RESOURCES:

PerformanceAssessment.org
FairTest.org
UrbanWordNYC.org
NYCoRE.org



Session 1 11:15 - 12:45

Consensus is the Answer Key: Empowerment in the Math Classroom

(Pratt 617)

Math's unwritten curriculum teaches students there is one right answer, found as quickly as possible, using a previously-memorized formula. This often disempowers students, leaving them with the belief that they "can't do math." In our classrooms, students grapple with challenging problems and come to conclusions based on consensus, like real mathematicians. Students often say this experience transformed their view of math and themselves. The workshop will include a model lesson, discussions, current students sharing their personal experiences, a former student reflecting on her high school math education from ten years ago, and ways to tailor these concepts to your school or life.

Sarah Bertucci (with students), Pine Ridge School, Williston VT
sbertucci@yahoo.com

Teaching Fractions using Rational Number Project Curriculum: The Experience of Fifth Grade Lebanese Students and Teachers (HS 118)

This presentation will reveal findings of a research study on the effects of using a research based curriculum on the acquisition of fraction related concepts by fifth grade students in five high poverty suburban schools in Lebanon. Participants will be exposed to the challenges and opportunities that teachers and students confronted when using a non traditional, research-based curriculum. In a school system saddled with the self-defeating pessimism that accompanied decades of civil war, teachers and students see themselves as detached and incapable of any contribution in any mathematical inquiry. One of the implications of this study is that democratic, well designed, and well supported instructional improvement efforts carried out in the math classroom, can have positive effects on student performance, particularly in poor schools.

Iman Chahine, University of Minnesota, Minneapolis MN
chah0005@umn.edu

The People, The Problems, The Panthers

(Pratt 120)

This session is designed to teach participants how to use the history of the Black Panther Party to fuel an algebraic curriculum. Educators at every stage will be presented with ideas to help empower their students. Infused with literacy and art the workshop will provide hands-on examples to engage student's different learning styles. Through a medley of activities participants will cover topics including, but not limited to, functions, graphs, equations and statistics. Though many of the examples will pertain to a high school curriculum the examples can be easily adapted for elementary and middle grades.

Kameelah Dixon, Performing Arts & Technology High School, Brooklyn NY
kameelah.dixon@gmail.com

Developing a Criticalmathematical Literacy through Real Real-Life Word Problems

(Pratt 422)

We will discuss how studying real real-life math word problems can deepen understanding and support action for justice in the world. The main goal of my criticalmathematical literacy curriculum is not to understand math concepts better, but rather to understand how to use math ideas in our struggles to make the world more just. In other words, the overarching focus is not “Do the real real-life math word problems make the math more clear?” Instead, the focus is “Do the real real-life math word problems make the social justice issues more clear?” And, further, does that clarity of understanding lead to action to make the conditions analyzed more just?

Marilyn Frankenstein, College of Public and Community Service—University of Massachusetts/Boston
marilyn.frankenstein@umb.edu

Rethinking Mathematics: Teaching Social Justice by the Numbers

(Pratt 420)

Veteran teacher Bob Peterson will share stories and lessons from his quarter of a century of teaching 5th grade in inner city Milwaukee Public Schools. Peterson, who co-edited, *Rethinking Mathematics: Teaching Social Justice by the Numbers*, will explore the power and importance of connecting the teaching of mathematics with issues of social justice. The session will include sample lessons, sharing by participants, and discussion of dilemmas faced by teachers engaging in this kind of work.

Bob Peterson, *Rethinking Schools* and La Escuela Fratney, Milwaukee WI
repmilw@aol.com

Beyond the Math Classroom: Financial Literacy as a Social Justice Tool

(Pratt 121)

This session will focus on how financial literacy and justice topics can be incorporated into the math classroom. These topics include calculating the true cost of rent-to-own stores, comparing check cashers versus banks or credit unions, understanding credit card offers, and assessing the benefits and dangers of tax refund loans. Using these day-to-day examples not only prepares students for real-life math but also enables discussion around broader economic justice issues that particularly affect low-income communities and neighborhoods of color, including redlining, community reinvestment, and income inequality.

Rebeca Gamez & Saari Nafici

Neighborhood Economic Development Advocacy Project (NEDAP), NYC
rebeca@nedap.org, saara@nedap.org

Mathematics and the Iraq War

(Pratt 618)

The American occupation of Iraq has produced massive casualties and refugees, cost hundreds of billions of dollars, and engendered debate over the accuracy and keeping of statistical data on these issues. Linear equations are a way to explore and

make predictions about the war and to make its impact accessible in the algebra classroom. We will look at basic data about casualties and costs available easily on the web, explore the associated political controversies, and examine a variety of class activities utilizing this data for their mathematical and political content.

Karl Schaffer, De Anza College, Cupertino CA

schafferkarl@fhda.edu

Social Critique through Mathematics: Empowered 8th Grade Students Explore and Analyze their Communities using Algebra (Pratt 519)

This student-led session will take on high rates of homelessness and teenage suicide through mathematics. Eighth graders from Oakland, California, labeled Far Below Basic (FBB) in math, have not only engaged in algebraic concepts, but have created their own PowerPoint presentations that critique major societal issues prevalent in their community. Their teacher, Mrs. Jazmín Preciado-Cruz, degree in Architecture, will merely be one of the presenters in this empowering student-centered presentation...a must see!

Jazmin Preciado, Urban Promise Academy, Oakland CA

jpreciado01@yahoo.com

How Do You Know? Bringing Proof into a Progressive Curriculum through Logic Puzzles (Pratt 521)

For mathematicians, proof lies at the very heart of mathematical activity, yet for any number of reasons, math students, and especially students who have been traditionally underserved by the educational system, get very little exposure to, and practice in, proof. When they do, it is often in the context of geometry, and presented in a way that bears little resemblance to what mathematicians do when they engage in proving. The logic puzzles we will solve and explain in this workshop can be used to bring high-level proof to a greater range of students in an engaging, demanding, and accessible way.

Rob Wieman, University of Delaware, Newark DE

gomathman@yahoo.com

Session 2 2:00 - 3:30

Preparing Educators to Teach for Social Justice: Exploring the Intersections between Teacher Beliefs, Social Justice and the Development of a High School Mathematics Curricular Unit (HS 119)

This session reports on an ongoing study exploring the developing identities of seven NYC public high school mathematics teachers as agents of change. Meeting regularly, the teachers and researcher discuss issues of teaching mathematics for social justice, explore activities/lessons around this issue and are creating a unit of study that meets high school level mathematics standards while addressing a social justice issue affecting the lives of their urban students. The session explores the math teachers' growing awareness of /concerns about infusing issues of social justice into their teaching and includes discussion about the curricular unit that the group is creating.

Lidia Gonzalez, Cuny Graduate Center, New York NY
euclid6675@aol.com

Gentrification and Water Conservation: Sparking Mathematical Interest through Important Real World Applications (Pratt 120)

Gentrification is when low-cost, physically deteriorated neighborhoods undergo physical renovation and increase in property values, along with an influx of wealthier residents who may displace prior residents. Water Conservation includes reduction of fresh water through technological or social methods, and how poor lack of water affects certain areas. (Wikipedia) This presentation explains how to teach about applied mathematics in a high school setting (various levels) and numerous projects that can be used to engage. Pre-Calculus students will present their findings on two topics, how they used and created mathematical formulas, and their conclusions. Resources and Handouts will be given.

Sarah Gorena, Irving High School, Irving TX
bywayofmedia@gmail.com

Using Mathematics as a Weapon in the Struggle for Social Justice: Free the Jena Six!

(Pratt 420)

High school students will lead participants through the Jena Six mathematics project they completed in September 2007. The project's purpose was to raise the question (by analyzing the mathematics of the jury selection process): Did Mychal Bell (first of the Jena Six to be tried) receive a fair trial? Students will help participants understand the project's mathematics and also how and why the project was structured as it was. Session goals are that participants better understand a) how to develop/teach social justice mathematics projects; b) what students can learn from them; c) how to connect them to students' lives.

Rico Gutstein, Veronica González, Amparo Ramos, Rut Rodríguez, George Carr, Greater Lawndale/Little Village School for Social Justice, Chicago IL

gutstein@uic.edu

Discovering Self via Mathematics: Using Alternative Assessment in Gauging Student Performance

(Pratt 121)

Many products of both classroom and out-of-classroom activity are indicators of students' mathematics learning. Evidence of such learning can be found in activities such as oral presentations, written papers, journal entries, artwork, poetry, and student-developed games. Alternative assessment affords students various types of resources that foster student curiosity, provide direction, and support exploration. Incorporating new approaches and modifying existing methods to assess my students is an ongoing process that benefits all involved in the learning process. The ideas and models presented during this session are intended to be adaptable, practical, and realistic for educators at all levels.

Karen Ivy, New Jersey City University, Jersey City NJ

kivy@njcu.edu

Institutional Authority in the Mathematics Classroom and Reform Oriented Pedagogy: A Discussion of Theory and Research with Practical Implications

(Pratt 422)

Recent issues about how best to foster relational understanding of mathematics and mathematical agency in students may be understood in terms of the location and nature of authority within the educational experiences of students. Using a perspective of critical theory I will advocate an analysis of research that will provide a context for the development of a discussion around the following issue: Can pedagogical approaches mitigate the impact of institutional Authority in the Mathematics Classroom and increase the understanding and achievement of students? This workshop will involve a review of video case studies, analysis of relevant literature and participant reflection and discussion with the goal of fostering an ongoing conversation within the larger community.

Geoff Kent, University of Sussex, UK
g_kent_77@yahoo.com

How Much Can You Tell Them? Challenges in Designing Social Justice Mathematics Lessons for Elementary Students

(Pratt 519)

This interactive session will explore the challenges and benefits of having preservice elementary teachers design mathematics lessons using social justice issues as the context. Participants will use the critique of various social justice lessons to explore this issue. The lessons will be provided by the facilitators and were designed by preservice elementary teachers, one of whom is a facilitator. Participants will be encouraged to offer suggestions to extend and/or revise the lessons to include other math concepts, social issues, and disciplines. We will also work to ensure the lessons are age-appropriate, mathematically sound, and socially just. Participants are encouraged to bring examples of their own for review and revision.

Joan Kwako, University of Minnesota, Minneapolis MN
jkwako@d.umn.edu

Movie Math: Using Social Justice Media in Your Classroom

(Pratt 521)

This workshop will encourage educators to use media in their classrooms as a way to prompt students to think about real life equity issues. The non-fiction film, *Waging a Living*, which chronicles citizens' struggles to make a living wage, will serve as a case study. Participants will watch clips from the film and discuss the economic justice issues presented and review the companion lesson plan, which makes suggestions on how to incorporate mathematical concepts into students' daily lives. Participants will have the chance to share with each other and the facilitators in this interactive workshop.

Eliza Licht, Jessica Lee, and Irene Villasenor

New America Documentary/P.O.V., New York NY

elicht@pov.org, villasenor@pov.org, jlee@pov.org

Mathematics in the Humanities and Social Justice Conversation: The Bard Clemente Course

(HS 118)

Since its inception in New York City in 1995, the Bard College Clemente Course in the Humanities has been offering low-income adults the opportunity to study moral philosophy, American history, literature, art history and expository writing at the college level for college credit. In 2007 Rutgers University - Camden introduced "Explorations of American Freedom", a Clemente course focusing on issues of freedom and justice in American history, including issues involving science and mathematics. In this session the Rutgers course director and the participating mathematician will discuss the interplay of mathematics, the humanities, and social justice issues in the course.

Joan Lukas, UMass Boston, Boston MA/Philadelphia PA

joan.lukas@verizon.net

Diane D. Turner, Temple University, Camden, NJ

ddturner@temple.edu

The Mathematics of Marriage Inequality

(Pratt 618)

Many legal and financial protections are attached to marriage for the purposes of aiding and protecting families; yet the Defense of Marriage Act and other obstacles to same-sex marriage, deny families headed by same-sex couples access to these benefits and protections. In this workshop, participants will explore the financial differences between families headed by heterosexual and homosexual couples. Working with real data and statistics, as revealed in various formats, the participants will utilize pre-algebra mathematics to develop models representing the financial impact of marriage inequality. Additional explorations more appropriate for higher grade levels will also be presented and discussed.

Brian Miller

Bloomfield High School / Montclair State University, Bloomfield NJ

millerb8@mail.montclair.edu

From Distraction to Direct Action: Maththatmatter

(Pratt 617)

Maththatmatters: 50 lessons linking math and justice issues for students in grades 5 through 9 will change the way you understand teacher/student roles, classroom space and the potential of math education. See how “pizza party math” (measuring hamster wheel circumferences or calculating the time it takes a snail to travel from Toronto to New BloYork) undermines youth empowerment. Get hands-on experience with tried-and-tested lessons that teach math better, achieve cross-curricular outcomes and ignite interest. The workshop will include a case study of grade 7 & 8 students in an extended cross-curricular project to address domestic violence with direct action.

David Stocker, City View Alternative High School, Toronto CANADA

dstocker@cyberus.ca

Session 3 3:45 - 5:15

You Gotta BE the Problem: Problem Solving for Social Justice in an Adult Basic Education (ABE) Class

(Pratt 420)

The Immokalee farmworkers pick, carry, and load tomatoes in central Florida. They haven't gotten a pay raise since the 1970's, but Burger King is refusing to meet their demand of one more penny per pound. What happens when a class of adult learners in a welfare-to-work program in New York City explores the mathematics of the farmworkers' struggle? Using drama and art, students "enter" the world of the problem. As they deepen their understanding of the quantitative and social situation of the farmworkers, they see connections to their own lives. We will look at the problems, show video clips of the class, and provide handouts.

Charlie Brover, *cbrover@yahoo.com*

Nathan Stevens, *richardholdsthewand@gmail.com*

NYC Math Exchange Group, New York, NY

Discounting Iraqi Deaths: A Societal and Educational Scandal

(HS 119)

In a recent survey, Americans were asked to estimate the number of excess civilian deaths in Iraq since the invasion. The median estimate of about 10,000 is inaccurate, according to the most scientific information available, by a factor of about 100. The story of how Iraqi deaths have been ignored will be discussed in terms of media coverage and political responses, rampant misunderstanding of survey methodology, the sociology of scientific publishing, the difficulty of finding "truth" in the Information Age, and the implications for (mathematics) education of informed and critical citizens, including the feasibility of teaching about this topic.

Brian Greer, *brian1060ne@yahoo.com*

Swapna Mukhopadhyay, *swapna@pdx.edu*

Portland State University, Portland OR

The Genius of Practicality: The Usefulness of Pre-Theoretical Mathematics

(HS 118)

The session will engage the group in conversation and discovery of mathematics before the use of theory. People like the Yoruba (masters of commerce) and the Chinese (masters of the magic square) used mathematics as a means of maintaining and enhancing their everyday living. The workshop will focus on various cultural groups and their practical use of mathematics prior to the desire for pseudo-infinite replication and space.

Sugar Johnson

From Afros to Shelltoes: Art, Action and Conversation, New York NY
sugarjohnson@hotmail.com

Social Justice in the Mathematics Classroom: Powerful Lessons for Today's Realities

(Pratt 120)

Is Social Justice an integral part of your mathematics classroom? Two exciting social justice mathematics projects will be discussed. In the first, participants will learn about a professional development institute that provides a forum for teachers to collaborate around issues of equity and social justice. In the second, Modern Connections to the Mis-Education of the Negro, participants will be introduced to mathematical activities available in the study guide accompanying the 75th anniversary of Carter G. Woodson's book- The Mis-Education of the Negro. Participants will leave with ideas for working with other teachers on these issues and tools on how to address social justice in their mathematics classrooms.

Carolee Koehn, UCLA

koehn@gseis.ucla.edu

Joi Spencer, University of San Diego

joi.spencer@sandiego.edu

Brett Davis

brettdavis418@yahoo.com

Math in Fiction: Secrets, Lies and Algebra

(Pratt 422)

In this interactive workshop, participants will explore how access to algebraic conceptual understanding can be enhanced by using creative writing and other literacy strategies. We'll examine how the reading and writing of math-based fiction can engage students and deepen their understanding of math concepts. Wendy Lichtman, author of the Do The Math series—middle-grade novels in which the main character uses mathematical allegories to help her navigate the interpersonal storms of her urban middle school, and Camsie Matis, an experienced middle and high school math teacher, will present ideas involving the intersection of literacy and math.

Wendy Lichtman, HarperCollins Publishers, Berkeley CA

wlichtman@aol.com

Camsie Matis, East Side Community High School, New York, NY

camsie.matis@gmail.com

Mathematics for Human Rights

(Pratt 519)

The workshop explores an interdisciplinary view of human rights education in elementary public schools by analyzing the hidden curriculum in terms of equality and social justice. Using methods of dialogue, peer-group knowledge and problem posing, the participants experience activities and mathematical problems aimed to teach human rights. For example, exploring accessibility of children with special needs by using probability and statistics. The workshop offers a glimpse into the work done in one elementary school in Jaffa (Israel), where Jewish and Arab children from marginalized communities study together. Principles of Critical Pedagogy will be applied in the workshop.

Tamar Margalit, Kibbutzim College of Education, Tel-Aviv ISRAEL

tami@criticalpedagogy.org.il

The Flagway Campaign: A Youth-Centered Game as a Catalyst for Math Literacy (Gymnasium)

There are many different ways to create a cultural context in which mathematics emerges naturally from students' experience. One method used by YPP and the Algebra Project is to create mathematically rich games and experiences. The Flagway Game was developed by Bob Moses in 1995 and is used by YPP as a organizing and math literacy tool. Through the Flagway games and league, The Young People's Project seeks to create an opportunity for students throughout the nation to learn and celebrate learning math, in the same way that they learn and celebrate learning basketball. The league will initially target students in grades 3 – 6 and will radically change how and what students learn about their 1st 150 numbers.

Chad Milner & Students, The Young People's Project, Cambridge MA
cmilner@typp.org

Gender Equity in the Math Class: How Social Justice Math Helps Girls (Pratt 521)

This interactive workshop provides strategies for working toward gender equity in the math class. After starting middle school, girls consistently under-perform in math class and on standardized assessments. Participants will learn some background information about girls' psychological and social development as it relates to math education, and will receive some practical ideas to implement in their classroom. I will illustrate how applying a feminist approach to the teaching of mathematics, and incorporating social justice/global ed. concepts into math courses can create an environment that is more conducive to all learners. This workshop will provide teachers with strategies and resources that they can use in their teaching.

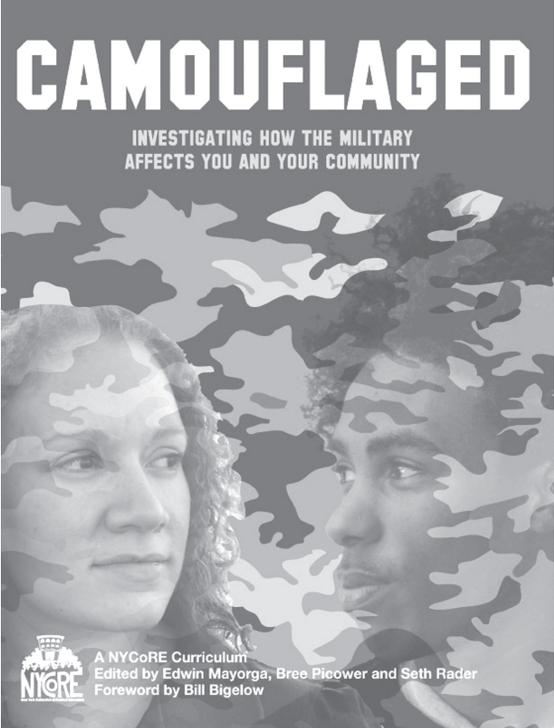
Michelle Munk, The Linden School, Toronto CANADA
munkmichelle1@yahoo.ca

Doing Mathematics for Social Justice Across the School: Lessons From The First Three Years

(Pratt 617)

The presenters are students, teachers, and a university faculty support person from the Little Village/Greater Lawndale High School for Social Justice in Chicago. Together, we will share what we have learned in analyzing the first three years of doing mathematics for social justice in a new, social justice high school born out of a community struggle. We will describe our context and provide evidence and describe/analyze factors that that have influenced our growth and development. We will discuss “success” and challenges, and will invite session participants to help us reflect on them and on future directions. Finally, we will pose to participants how our learning might be most helpful to others.

Joyce Sia, Matt Crye, Jon Reitzel, Rico Gutstein & students
Veronica González, Darnisha Hill, Rut Rodriquez, George Carr
Greater Lawndale/Little Village School for Social Justice, Chicago IL
idajoyceasia@yahoo.com



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Edited by Edwin Mayorga, Bree Picoover and Seth Rader
Foreword by Bill Bigelow

Notes

Notes

Math that Matters

A TEACHER RESOURCE LINKING MATH AND SOCIAL JUSTICE

BY DAVID STOCKER

In *Maththatmatters*, teacher David Stocker has crafted 50 thoughtful and accessible lesson plans that explore the links between mathematics and social justice. This is an innovative and indispensable tool for those passionate about education, mathematics, social justice, civic engagement, and interactive and involved classrooms.

"MATHTHATMATTERS BRINGS TOGETHER MATH AND SOCIAL JUSTICE, IN A WAY THAT MAKES THEM BOTH MORE COMPELLING, AND THE WORLD A LITTLE MORE UNDERSTANDABLE."

—LINDA McQUAIG

I'd like to purchase copies of *Maththatmatters* for \$24.95 per copy plus 5% GST and shipping costs

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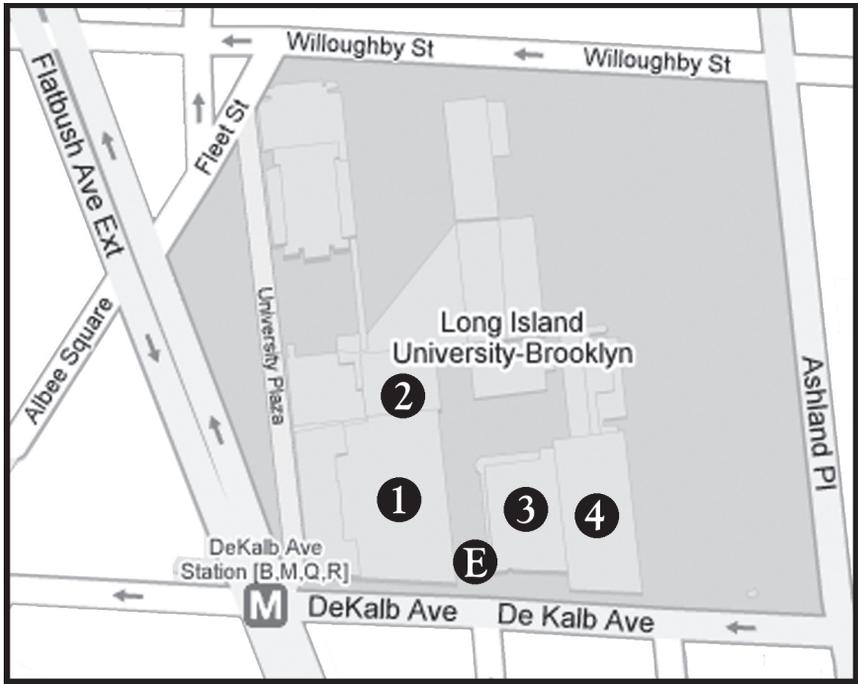
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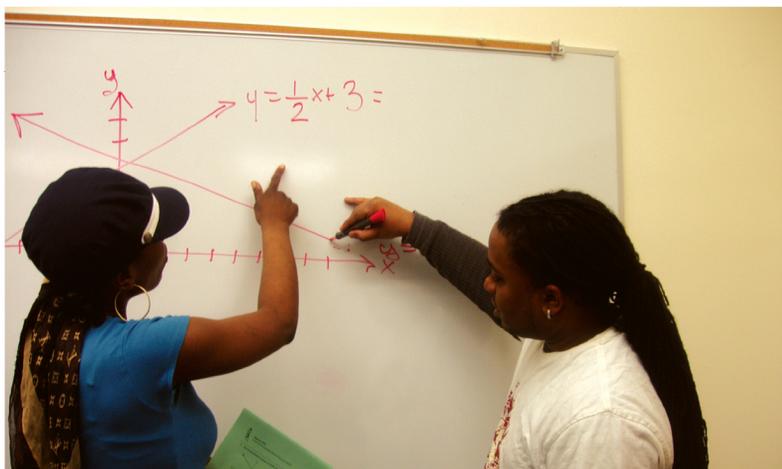


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- E** Entrance Gate (*on DeKalb Ave*)
- 1** Gymnasium (*Keynote, Panel, Registration, Vendors, Networking Lunch*)
- 2** Pratt Building (*workshops*)
- 3** HS Building (*workshops*)
- 4** LIU Parking Lot*

** There is free parking for conference participants. Drive past the outdoor lot on DeKalb Ave and turn into the indoor lot on the right.*



Three Ways to Become a High School or Middle School* Math Teacher at Long Island University's School of Education

1. If you have at least 18 undergraduate credits in Math and a B.S. degree. . . Get your M.S.ED. at LIU in Adolescence Urban Education (34-42 credits). You will be eligible for teacher certification when you graduate! (Or, you can get Internship Certification after 18-21 credits and start working as a math teacher while you finish your degree.)

2. If you have a Master's degree in Math. . . Study for a second Master's at LIU in Adolescence Urban Education (28 additional credits). You can get Internship Certification after 12 credits and start working as a math teacher while you finish your degree!

3. If you are an undergraduate at LIU majoring in Math... Add on a second major in Adolescence Urban Education (30 credits) to your first major. You will be eligible for teacher certification upon graduation!

Contact Professor Sara Salloum for more information
718-780-4371 sara.salloum@liu.edu



*For Middle School Certification 7 additional credits needed.