Mathematics and Civic Engagement

http://tinyurl.com/or8946j

Keynote: Victor Donnay, Presentation, References, Handouts.

Engaging Mathematics Workshop

Agenda:

10:15 - 10:20 (5 minutes). Introduction.

10:20 - 11:00 (40 minutes). Engaging Math Faculty each facilitate a group. They will present one (or more) lessons and lead the participants through the lesson. Informal. Here are possible topics. Here is a draft worksheet that participants can fill in as they work through the lesson or think about modifying the lesson for their own school.

11:00 - 11:30 (30 minutes). Participants from each group report out to the whole group what their lesson was about.

11:30 - 11:40 (10 minutes). Individual work time. What have you learned?

11:40 - 11:45 (5 minutes). Share what you have learned with your group.

Presentations: Participant worksheet.

Alioune Khoule, Mangala Kothari, Marina Nechayeva, LaGuardia Community College, Elementary Statistics: Learning concepts through social and environmental issues.

1. Demographics of my class, my college and my neighborhood
2. Global warming
3. Basal Metabolic Rate (BMR)
4. Data Analysis Project - Historical Trends and Patterns in Temperatures around the World
5. Feedback sheet

Cathy Evins, Barbara Gonzalez, Roosevelt University,
College Algebra: Modeling the Chicago Homicide Rate

Frank Wattenberg, United States Military Academy,
Data analysis courses at all levels Keeling's Data and a Cautionary Tale.
Data and Analysis
Keeling Data in a Mathematica Notebook
Keeling Data in an Excel Spreadsheet
Keeling Mathematica Analysis -- Exponential
Keeling Mathematica Analysis -- Quadratic
Draining Experiment Data
Draining Experiment Analysis

Victor Donnay, Bryn Mawr College,

1. Arctic Sea Ice and Linear Equations Algebra 1 version (Algebra 1, Pre-Calculus and above), Teachers guide, Pre-Calculus version, Sea ice data
2. Atmospheric CO2 Levels and Rates of Change (pre-calculus, calculus, statistics), Teachers Guide, CO2 Data
3. Solar Panels, Energy and Area Under the Curve (pre-calculus, calculus), Teachers Guide, Sample Energy Bill, Power Data

4. Lightbulb Lesson: Is it "Worth it" to change to a new type of Lightbulb?

Tony Dunlop, Normandale Community College

Mathematics for the Liberal Arts

1. Mathematical modeling activities and data sets related to lake volume and species richness
2. Mathematical activities related to stormwater runoff
3. Reading material related to activities
4. Participant worksheet