

Workshop 2

Mathematics:

A Community Focus

DESCRIPTION

As teachers, we often make assumptions about the knowledge children are exposed to at home. Sometimes it seems that we focus on only reading and writing; Marta Civil contends that we need to look more carefully at the *mathematical* potential of the home. Strong parent connections to the school are essential to children's learning. In this workshop, you will look at many aspects of children's informal (home) knowledge; you will see and hear from Dr. Civil, the teachers she works with, and a long-standing parent mathematics group; and you will also follow a teacher on a family visit. Dr. Civil writes and speaks eloquently about “unlearning normalized ways of seeing and documenting minority families.” She believes it is essential that schools learn to be more flexible and knowledgeable about students' homes.

DR. MARTA CIVIL

Associate professor of mathematics at The University of Arizona, Marta Civil specializes in mathematics education, and in particular, in mathematics teacher education for grades K-8 and in cultural and social aspects in the teaching and learning of mathematics. She has presented her work at national and international meetings and has several published papers and articles. Currently, she leads three funded projects—one on bridging in-school and out-of-school mathematics, another on parental involvement in mathematics, and a third on gender equity in science, technology, engineering, and mathematics. Most of her work has focused on working-class Latino communities.

Workshop 2 Timeline

Getting Ready

30 minutes

Your Mathematical Weekend

Last week's homework asked you to keep a list of your major day and evening activities for one weekend day. With the group, pool your weekend activities into one large list on chart paper or a chalkboard. Spend time identifying the mathematical underpinnings of as many of these activities as you can. For instance, did you do any sorting? Mapping? Spatial skills like packing or packaging? Sequencing? Finding patterns? What would you say were the mathematical (not only the arithmetical) activities you engaged in while you were just conducting your regular life?

Connecting With Parents

As a group, make a shared list of the kinds of parent involvement and parent activities that occur at your school. After you have completed the list, classify the activities according to location (home, school, or community); who initiates the contact (families or school); who attends (mostly families, mostly teachers); and who sets the agenda (home or school). Do you see any patterns in the data? What might explain what you see?

Workshop 2 Timeline

Watch the Workshop Video

60 minutes

Going Further

30 minutes

Reactions and Ideas

Talk with your group about the approaches that Dr. Civil and her colleagues are developing.

- What do you find striking about them?
- What questions does their work raise for you?
- What might you try or implement at your school site?

With your colleagues, think about and make a list of:

- factors that support teachers contacting families,
- factors that support families contacting teachers,
- factors that work against teachers contacting families, and
- factors that work against families contacting teachers.

For Next Time

Ongoing Activity

Reflective Journal

In your journal, think about your reaction to Dr. Civil's ideas. What do you find intriguing or challenging? Does her approach point to any possible next steps in your teaching?

Homework

Observe your own teaching during a mathematics or science class. What patterns do you see in the dialogue? (For example: Are you asking a lot of questions? Are you allowing much "wait time" after a question? [Three seconds is supposed to make a real difference in the number and quality of students' responses.] What kind of questions are you asking? Do students ever ask each other questions or challenge each others' ideas?)

Keep track of your data and some of your analysis in your journal.

Think of a discussion your class has had in mathematics or science. Jot down enough so that you will be able to remember it for group discussion during Workshop 3. What was so interesting about it? What was satisfying? What role did you play? What other aspects of the discussion were important to you?

Reminder: Sign up for a Web Buddy (see Workshop Components, p. 11).

Reading Assignment

To prepare for Workshop 3, please read the article by Carne Barnett and Alma Ramirez, "Fostering Critical Analysis and Reflection Through Mathematics Case Discussions," which can be found in the Appendix. As you read it, think about other professional development experiences you've had. How do they compare to what you are reading here?