

## CSUN Math Mini-Conference

Saturday, October 31, 2009

By [www.MrPassTeach.com](http://www.MrPassTeach.com)

### First Presentation:

Michelle Katz and Wendi Williams

She wanted to devise a way to quickly assess if certain “targeted” concepts had been grasped, so she developed this into an “action research project”.

They are 1-question quizzes. Either pass or fail. If students failed, they could make them up later (during school breaks) after they mastered the skill...

They realized that it was impractical to test every single skill, because that would eventually be too much (overwhelming). So they focused on “Key Standards”.

They took each standard one by one, and said “What do the kids *really need to know*? Can they *apply* it?” they would also devise different levels of problems from easiest to hardest difficulty for the same skill. Then they compared this to standardized tests to see that the level of rigor matched.

Students self-monitor their progress by using a stamp sheet, and they leave problems on the board for a while. This way, if some students are ahead, they can move on while the others still have the older problems accessible.

She says that these are very valuable with talking with parents, because long tests test many skills. Therefore it is hard to focus on what skills need improvement. In a parent conference, you can pinpoint *exactly* which skills need improvement.

### Second Presentation:

Maureen Burkhart

File: [“Burkhart Lemonade Student pages”](#)

Question- How much time did you spend with these worksheets? “With an Algebra readiness class it was a little bit of a review... With a block schedule I took 2 days. Approximately 3 hours, in this case.”

This is from an NCTM book activity, but she greatly expanded it with graphs, equations, etc.

### Third Presentation:

Sister Rita Basta

She works with pre-service teachers at CSUN.

One day she read an article about “Singapore math”. Students are very successful. Why? There are many possible reasons, a homogeneous group of students, etc. But the article observed that there were always “multiple pictures” for word problems. Students always think, “what picture would fit with this?”

Students draw rectangles of various sizes, and not individual “pieces” of the objects (that are being counted, for example). The drawing will make visual sense in terms of size.

She says, “once you’ve drawn the picture, don’t go back to the problem. This will confuse students that are lost. Also, don’t solve the problem *on* the picture itself. Write any equations off to the side of the page.”

#### **Fourth Presentation:**

Maureen Burkhart

Files: “[Burkhart%20Hopping%20Mad%20Student](#)” (pdf) and “[Burkhart%20Hopping%20Mad%20Teacher](#)” (pdf)

[mbrkhar@lausd.net](mailto:mbrkhar@lausd.net) (there is no “t” in the last name of her email)

#### **Fifth Presentation:**

Sid Kolpas- [skolpas@glendale.edu](mailto:skolpas@glendale.edu)

Bingo chips: refer to paper handout.

The universe has “got plenty of nothin” GERSHWIN!!! (I would play the song)...

Analogies to football- losing yards, gaining yards, etc.

“Opposites attract”, so if you have a red and a blue they combine and cancel each other out.

3 - (-2). “Subtract the opposite. Bring over some pairs of ‘nothing’ (since The universe has “got plenty of nothin”) and then take away the red chips you end up with positive.”

Or using **weight loss**- “you lose 2 pounds three weeks in a row.” Helps with “negative confusions”.

“Hopping” on the number line

“semantics” - a “minus” symbol doesn’t mean negative, but “opposite”. Just like English, you can give several examples of one word/symbol that has multiple meanings.

### **“The Creativity in math comes from different points of view”**

Second page- fill in quadrant 2 (the problematic one, where a negative times a negative equals a positive) “logically” after the others have been visually filled in from what the students know.

Last page-proves that all of the parts of this square (he says, “these things together”) will equal A-squared. So at the end he is left with a negative times a negative (-B times -B), and after everything else, students realize that the answer must cancel out the -B that is already in the equation. “So it must be positive B”. So, he says, “The kids really thought that was neat!”

### **Sixth Presentation:**

Stephanie Penniman

Use Algebra tiles with fractions.

You phrase the problem as, “What are you building?”  $4 \times \frac{1}{6}$  “You are building  $\frac{1}{6}$  four times.”

Note: Marylyn Burns has an activity called “wipe out” where they learn to become more familiar with all of the tiles.

“Why do we flip the fraction upside down when we multiply?”

Note: change multiplication to the word “of”.

$\frac{3}{7} \times 2 \frac{1}{3}$  the problem is designed so that when you “build  $2 \frac{1}{3}$  out of thirds” there are seven total pieces. Therefore, since the first fraction has 7 in the denominator, all you do is count the number that is in the numerator, and there is your answer.

“Algorithms don’t always match blocks...” But using select problems, you can familiarize students with the process.

$$\frac{2}{5} \times \frac{5}{6}$$

### **Seventh Presentation:**

Giovanni Trivino

From the Education Alumni Association

[Giovanni.trivino@lausd.net](mailto:Giovanni.trivino@lausd.net)

He mentioned that there are many services offered to teachers from this organization, such as job fairs, etc.

### **Eighth Presentation:**

Esther Kim and Wendy Schroeder

The power point will be posted online.

Working with an Algebra-readiness class of 8<sup>th</sup> graders

Low organizational skills...

So they tried weekly homework packets (borrowed from Brad Fulton)

Packets: get them on Monday, staple them together, and turn them in on Friday. Simplify problems and leave lots of room for extra work. They are easier to read for the teacher, and easier to work with for the student. They created large boxes with tables in Microsoft Word to separate problems.

First page is a cover sheet that includes the rubric that will be checked off when grading.

Very fast to grade the packets!!! She says that she graded several classes in 30 minutes. (I thought that students could possibly grading it themselves- self assessment?)

She says that the problems in Math textbooks are “cognitive level 1 and 2”, which don’t have many connections or problem solving skills.



Special problems are labeled “Worksheet of the week”, and is extra credit.

This stands for the

They don’t let kids take the work home that has already been graded, because it might “disappear”. At the end of the week, every student places their homework packet in their folder. These are excellent for parent conferences, and validating grades.

These teacher use “easy grade pro”, and always enter the incomplete work, and then they always keep the folders of student’s work in the classroom.

### **Ninth Presentation:**

Lynda Wormell

Warm-Ups that she says works well.

\*Note- She distributed a CD with approximately 30 or 40 pdf files.

Lots of critical thinking skills.

“Start with things that are easy.”

Sometimes you can let them physically stand up and turn around, etc.

There was one in which all answers could be correct. This is a fun exercise- you pretend to move on, and see if students stop you with their other answers or not. This can become a class debate/ discussion.

Sometimes you can just have a picture, and the directions simply say “sketch”. This is great for students that are unable to complete the other problems, but are talented artists.

The “secret word for the day” gets a prize. She had the word written on a card, and pulled it out of her pocket. “That was the secret word for the day”...

TOPS “Techniques of Problem Solving” publishes useful materials. Some of these are now out of print, but you can find them at your school on shelves...

### **Tenth Presentation:**

Marian Pasternack

She demonstrated a **great** exercise for working with powers!

First, she starts with vocabulary. There are two main words: base & exponent

After the vocabulary she has a little fun with the class. They have to try to describe how to create a “power of something” symbol. Every time they try to describe it, she finds a way to write it incorrectly! I think that this will help them remember the notation.

Now we start folding! Folding for a positive power, you count the number of sections that are made from each folds (each time, you fold the paper in half). For negative powers, you cut/tear along the last fold and “take it away”. Then you see what part of the original you have (fraction).

One audience member pointed out- “You could do the same thing with a PowerPoint- cut out the part and shade it- easier than ripping for some students.”

I thought of using a huge paper at the front of the room- and we complete the exercise together...

### **Eleventh Presentation:**

Naomi Fried-Kokason- Chatsworth High School T-cubed national instructor

[nfriedko@lausd.net](mailto:nfriedko@lausd.net)

The new Nspired has an extensive website. <http://www.ti-mathnspired.com/login/?next=/>

Student worksheets are on there- and Word Documents can be edited.

You can download an emulator for the class (or maybe it comes on the installation CD)

This is really cool! Much better, in my opinion, than overhead projector devices.

TNS document “exploring equations”- this includes “digital algebra tiles”.

### **Twelfth Presentation:**

Julie Kepier

Differentiated Instruction

Bingo- from “The Communicator” magazine

They can “make their own board”- you pass out a blank bingo card with no numbers, and they choose their own. “Any way you want to fill it in is fine. Just use one of each number- 1 to 25.”

She will sometimes have students work in pairs and each pair is given 1- a stack of problems- and 2- bingo cards. The students take turns picking up problem up and reading it. They both must agree on their answers.

### **Thirteenth Presentation:**

Laura Salas

Number tricks

This is a sort of “magic trick” where the teacher is “psychic” and can “guess your number”.

“Let me get into your head, and see..... What is your number? Is your number..... 7?” And you do this before the last step, so that they say, “No!” But you say, “Oh, I forgot- Now -----(the last step)”

Now you prove “Why does it work?” Turn each step into a table. The right column is called “Expression”, and it must be written in algebraic terms.

Then you can try testing multiple numbers at the same time in the calculator. THIS IS REALLY COOL! The way it looks in the calculator as you calculate the answers is great! First, you save a list of numbers that you are going to test. Then you calculate all of the operations one by one, and then, “MAGIC”, all of the answers are the same!