IMPLEMENTING THE MATH WORKSHOP MODEL

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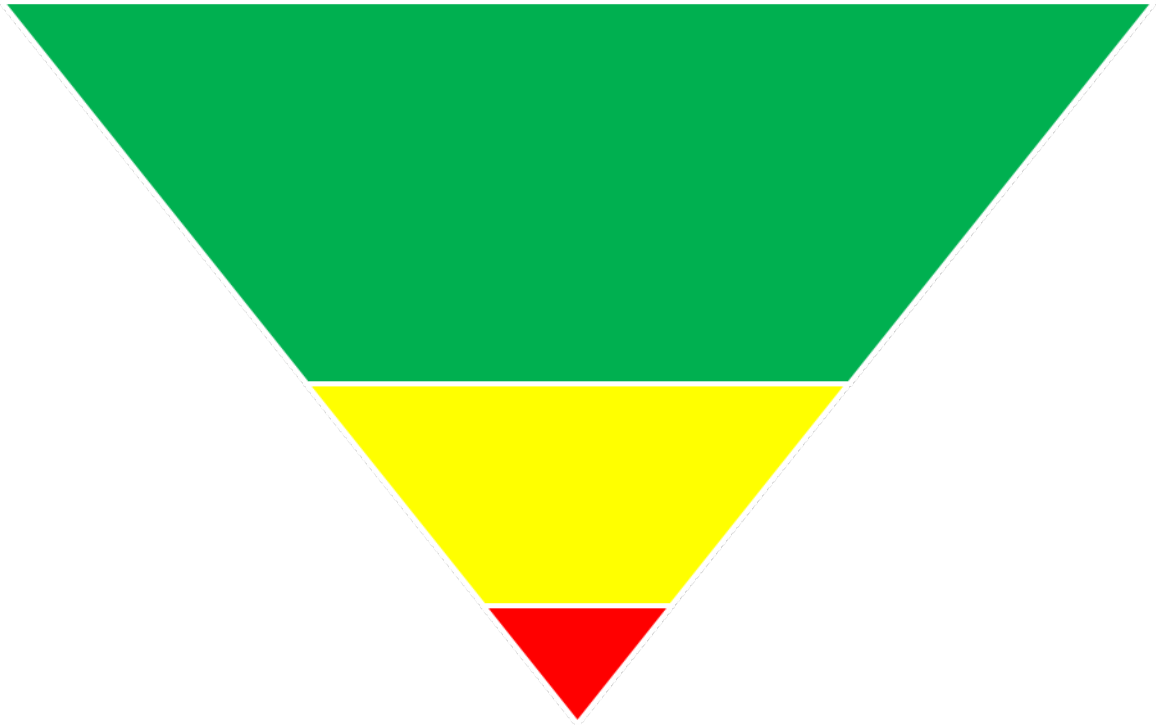
Learning Opportunities:

- Understand why Math Workshop is a valuable vehicle for learning
- Identify classroom arrangements, routines and procedures, and community building activities that will support Math Workshop
- Plan for a successful start to Math Workshop

Why Math Workshop?

Differentiation

Shoring Up the Core



“You don’t have an intervention problem, you have a ‘what you do all day long in the classroom’ problem.”

~ Buffum, Mattos, Weber (2012)

Traditional Math Lesson Structure

5 minutes	Warm Up
15 minutes	Homework Check
30 minutes	Teacher Model/Guided Practice Teacher stands at the white board or SMART board showing the steps of how to solve a particular problem. The teacher models other problems until he or she feels that the majority of the students comprehend the procedure.
10 minutes	Student Independent Practice Students attempt to solve problems in the same way the teacher solved them. The teacher walks around the room monitoring the students.
5 minutes	Assign Homework

Math Workshop Structures

TASK & SHARE		WHOLE – SMALL - WHOLE			SMALL GROUP WITH STATIONS OR TASK		
approx. 5-10 min.	**NUMBER SENSE ROUTINE**	approx. 5-10 min.	**NUMBER SENSE ROUTINE**		approx. 5-10 min.	**NUMBER SENSE ROUTINE**	
approx. 30 min.	**MATH TASK** One task is given, students work in collaborative groups. The teacher moves to small groups and provokes thinking through asking good questions. This task typically has multiple entry points, allowing for all students to have access to this problem. This could be a parallel task or open-ended question, one that supports differentiation.	approx. 15 min.	**FOCUS LESSON** Whole group focus lesson that is well planned to allow for differentiation.				
approx. 15 min.	**STUDENT SHARE** Students share out about the various strategies that were used. Students ask questions, clarify their thinking, modify their work, and add to their collection of strategies in their tool box.	approx. 30 min.	**GUIDED MATH** Teacher meets with groups of students in heterogeneous and/or homogeneous groups for small group instruction.	**STATIONS** Students are working on engaging activities that are mathematically purposeful. These activities could be in the form of a single, cognitively demanding question or a variety of stations in which student choice is a factor.	approx. 45 min.	**GUIDED MATH** Teacher meets with groups of students in heterogeneous and/or homogeneous groups for small group instruction.	**STATIONS** Students are working on engaging activities that are mathematically purposeful. These activities could be in the form of a single, cognitively demanding question or a variety of stations in which student choice is a factor.
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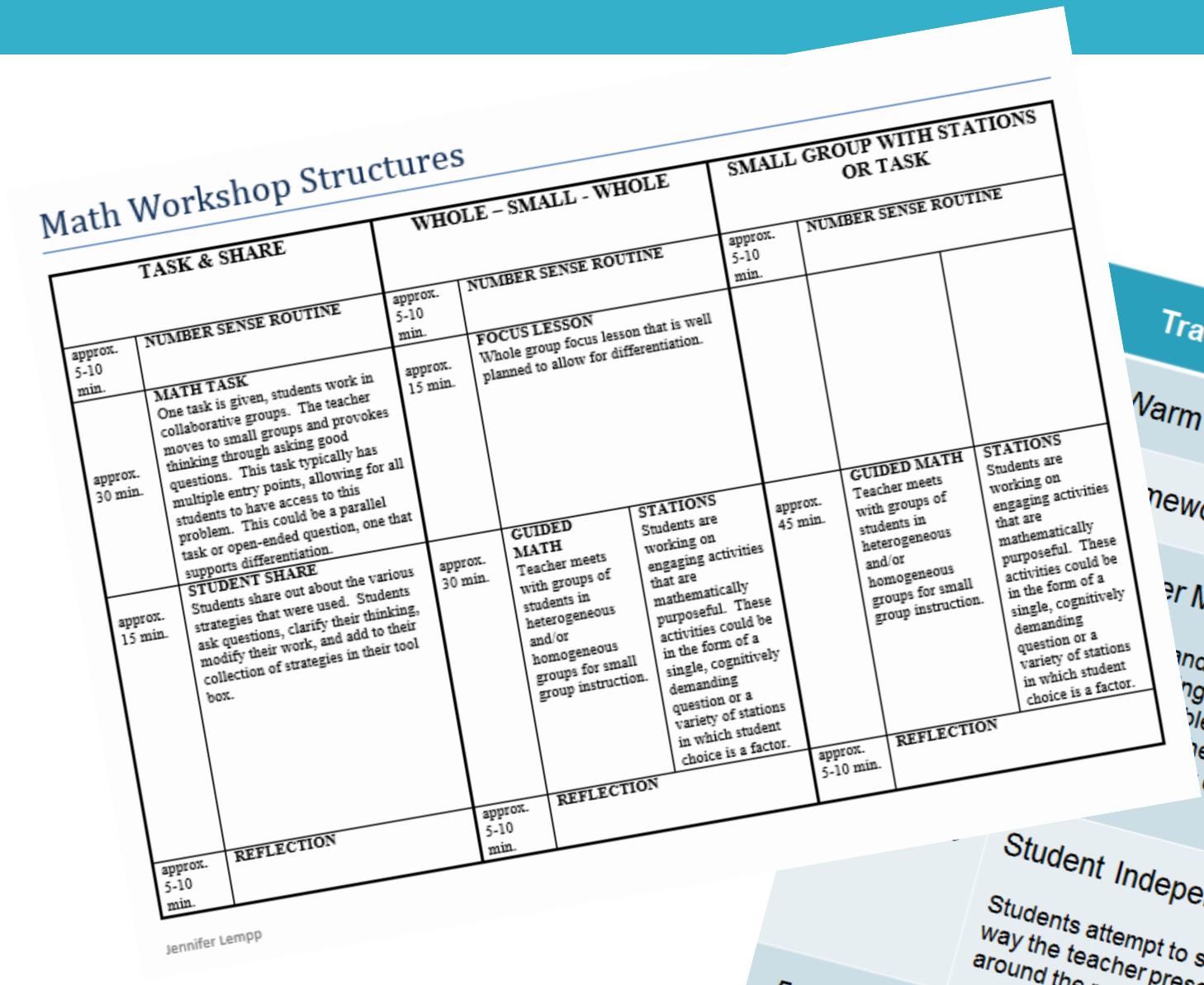

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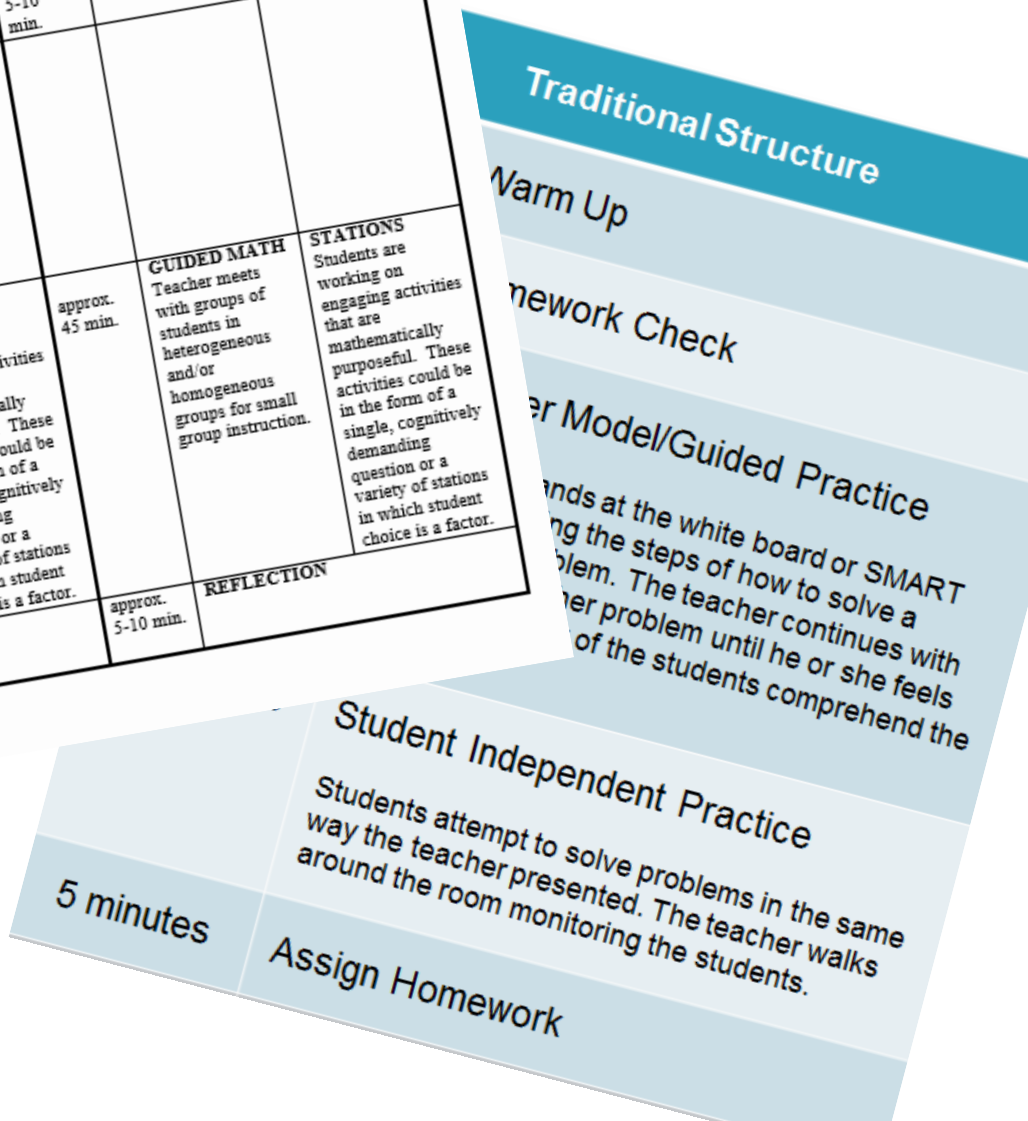


Let's Compare

Math Workshop

What it is NOT:	What it is:
• Teachers doing most of the math	• Students doing most of the math
• One assigned worksheet	• Student choice
• Teachers showing the procedure and talking about the steps to follow	• Students talking about their mathematical thinking and reasoning
• Teachers as holders of knowledge	• Teachers acting as facilitators – asking good questions
• Students working in isolation; sharing answers or strategies is cheating	• Students working collaboratively and learning from one another
• Teachers rescuing students	• Students struggling with challenging mathematics and learning from errors
• Teachers presenting to the whole class	• Teacher working with small groups
• Focused on procedural skill	• Focused on conceptual understanding

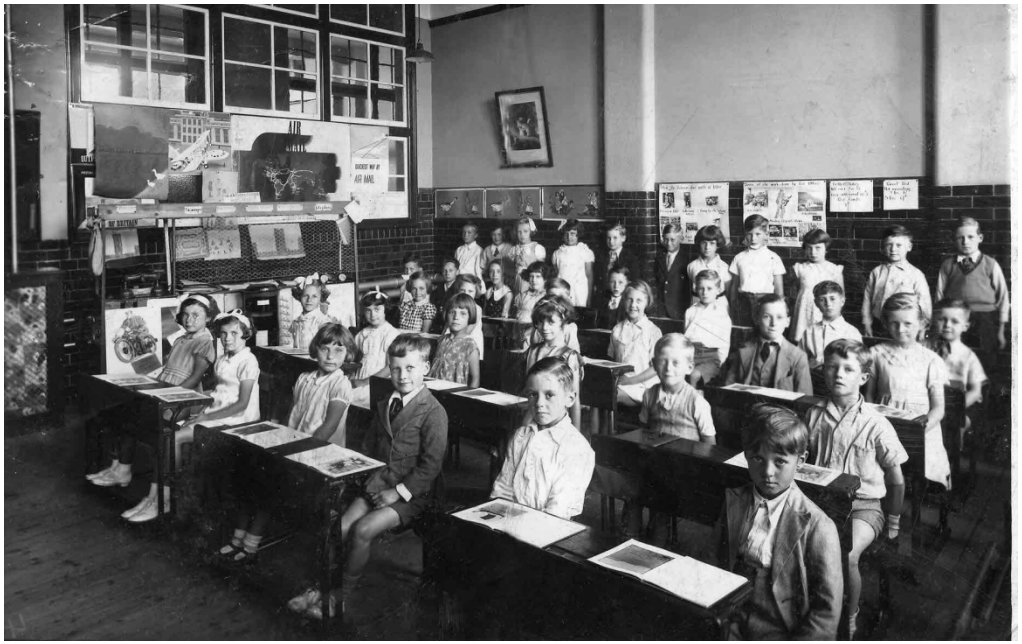
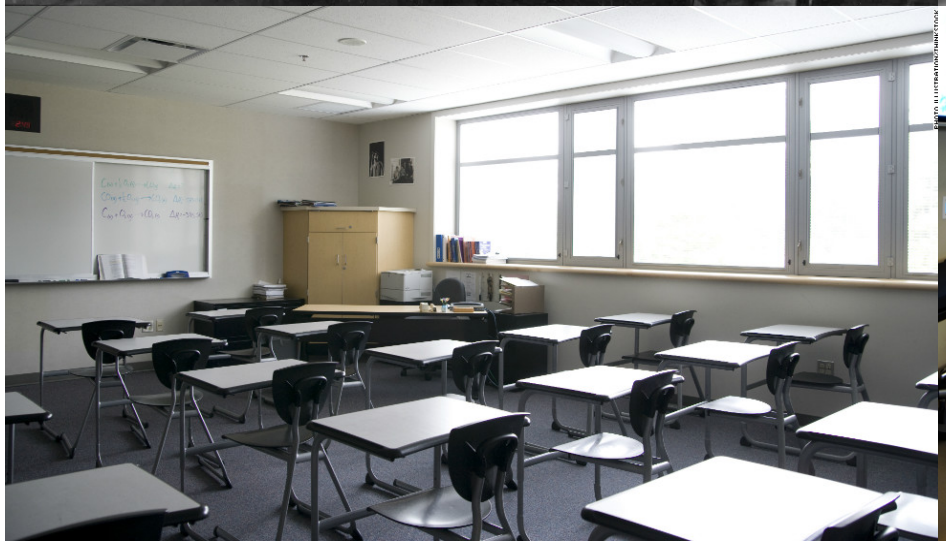


PHOTO ILLUSTRATION/THINKSTOCK


MODUTEC
PHILIPS
MAQUET



Math Workshop: 3 Buckets

CLASSROOM ARRANGEMENT

Setting the Stage for Math Workshop Success

A Place to Start Together

- Start your day with a Number Sense Routine such as Count Around the Room or Number Talk
- This is a student's first impression of the class

A Place for Learning Stations

- Engaging
- Meaningful
- Quality over Quantity
- Clear Expectations

A Place for Group Work

- Collaborative
- Problem Solving Tasks
- Games
- Clear Expectations

A Place for Guided Math

- Small Group instruction
- Conferences
- “Just Right”
- Anecdotal notes
- Fluid

A Place to End Together

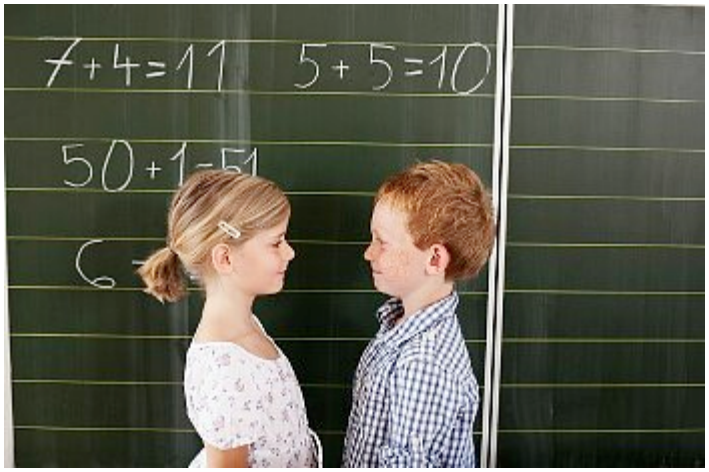
- Share Strategies
- Ask Questions
- Connect
- Reflect

ROUTINES & PROCEDURES

Structuring the Classroom So It Runs Smoothly

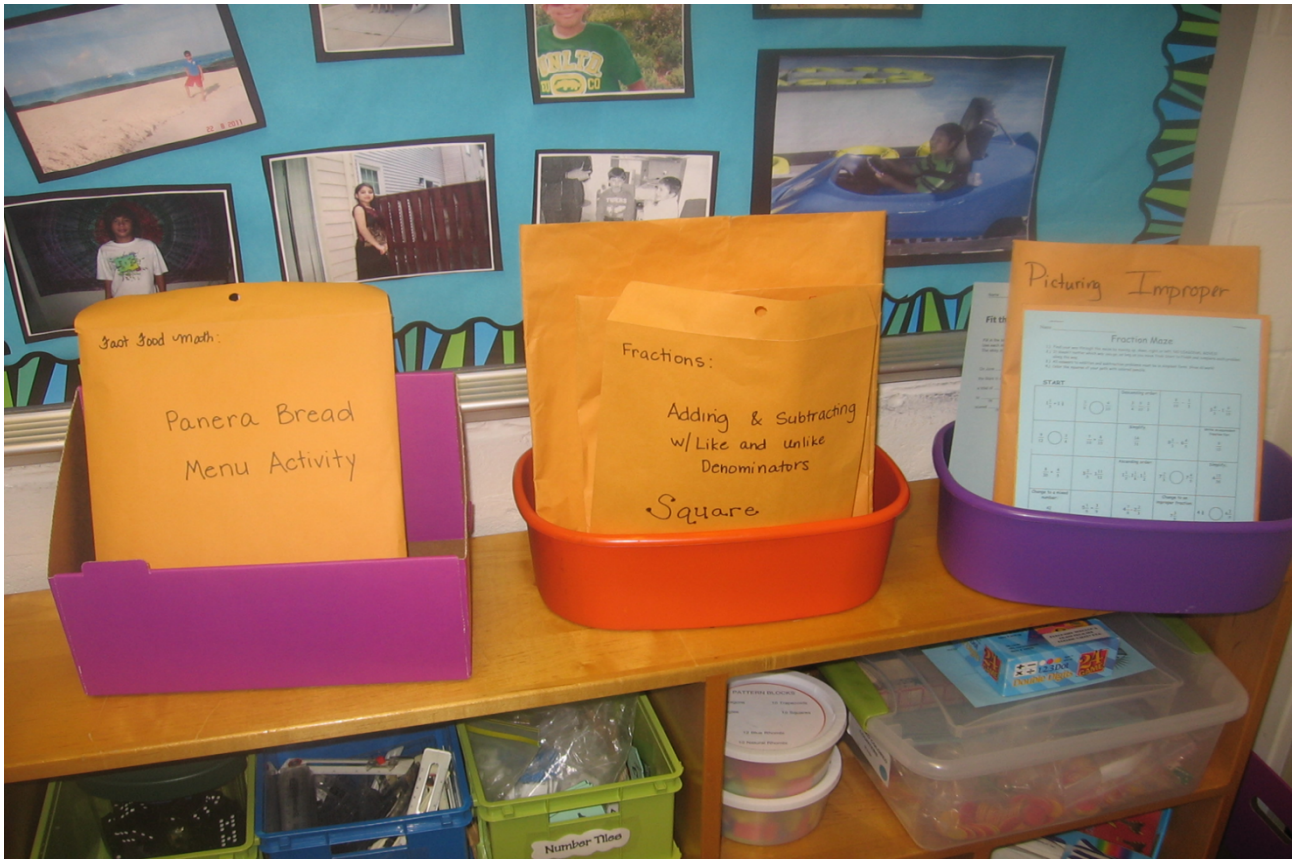
Routines and Procedures

- Where do I go?
- What can I do?
- How long do I do it?
- What do I do when I’m finished?
- Who can I work with?



Routines and Procedures

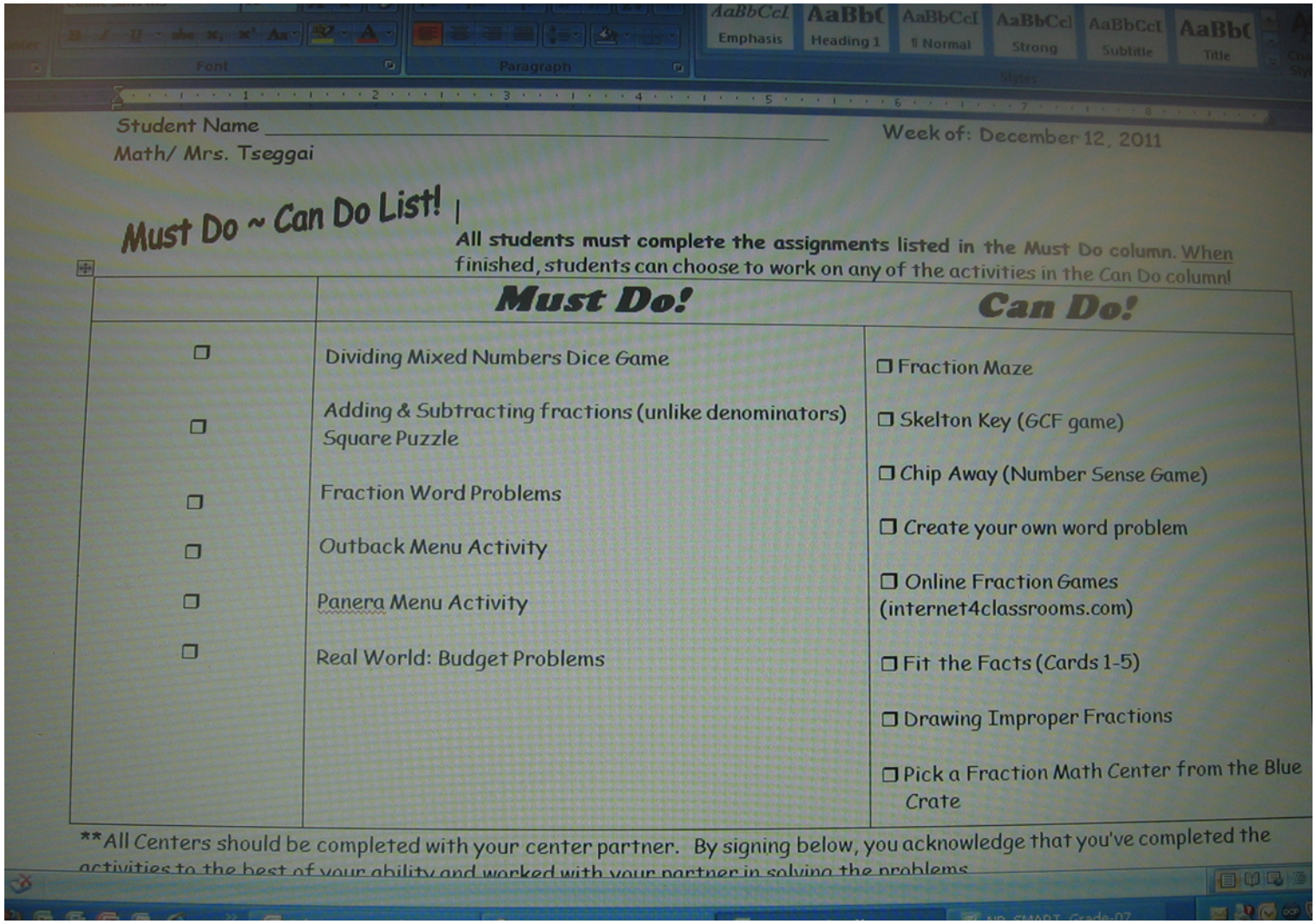
- Organize your materials
- Create a structure
  - Must Do ~ Can Do List
  - Think-Tac-Toe
  - Math Menu
- Explain the structure
- Practice the structure
- Provide feedback


Yaot Good Math:
Panera Bread
Menu Activity
Fractions:
Adding & Subtracting
w/ Like and unlike
Denominators
Square
Picturing Improper
Fraction Maze
START
Number Tiles


MULTIPLICATION
MENU
Array Games
Egg Factors
Cover 50
Division Match
Skip Counting
(with multiples book)
Array Games
Cover 50
Skip Counting
Division Match


GROUP 1
Kurtis
Rohan
Vinny
Sarah
GROUP 2
Hannah F.
Tallulah
Tatiana
Jason
GROUP 3
Katie
Matthew
Peter
Ashley
GROUP 4
Faisal
Grant
Hannah R.
DaNae
GROUP 5
Austin
Josh
Trey
GROUP 6


Math Workshop Stations



Student Name _____

Week of: December 12, 2011

Math/ Mrs. Tseggai

Must Do ~ Can Do List!

All students must complete the assignments listed in the Must Do column. When finished, students can choose to work on any of the activities in the Can Do column!

	Must Do!	Can Do!
❒	Dividing Mixed Numbers Dice Game	❒ Fraction Maze
❒	Adding & Subtracting fractions (unlike denominators) Square Puzzle	❒ Skelton Key (GCF game)
❒	Fraction Word Problems	❒ Chip Away (Number Sense Game)
❒	Outback Menu Activity	❒ Create your own word problem
❒	Panera Menu Activity	❒ Online Fraction Games (internet4classrooms.com)
❒	Real World: Budget Problems	❒ Fit the Facts (Cards 1-5)
		❒ Drawing Improper Fractions
		❒ Pick a Fraction Math Center from the Blue Crate

**All Centers should be completed with your center partner. By signing below, you acknowledge that you've completed the activities to the best of your ability and worked with your partner in solving the problems

Think-Tac-Toe

Benchmark Fractions	Watermelon Math	Fitting the Fraction
Multiplication Madness	Geoboard Area Shapes	This Plus That
Read all about it	Tech Station	Color the Fraction

Math Menu

Appetizers (choose 2)

-
-
-
-

Entrée (choose 1)

-
-

Side Dish (choose 2)

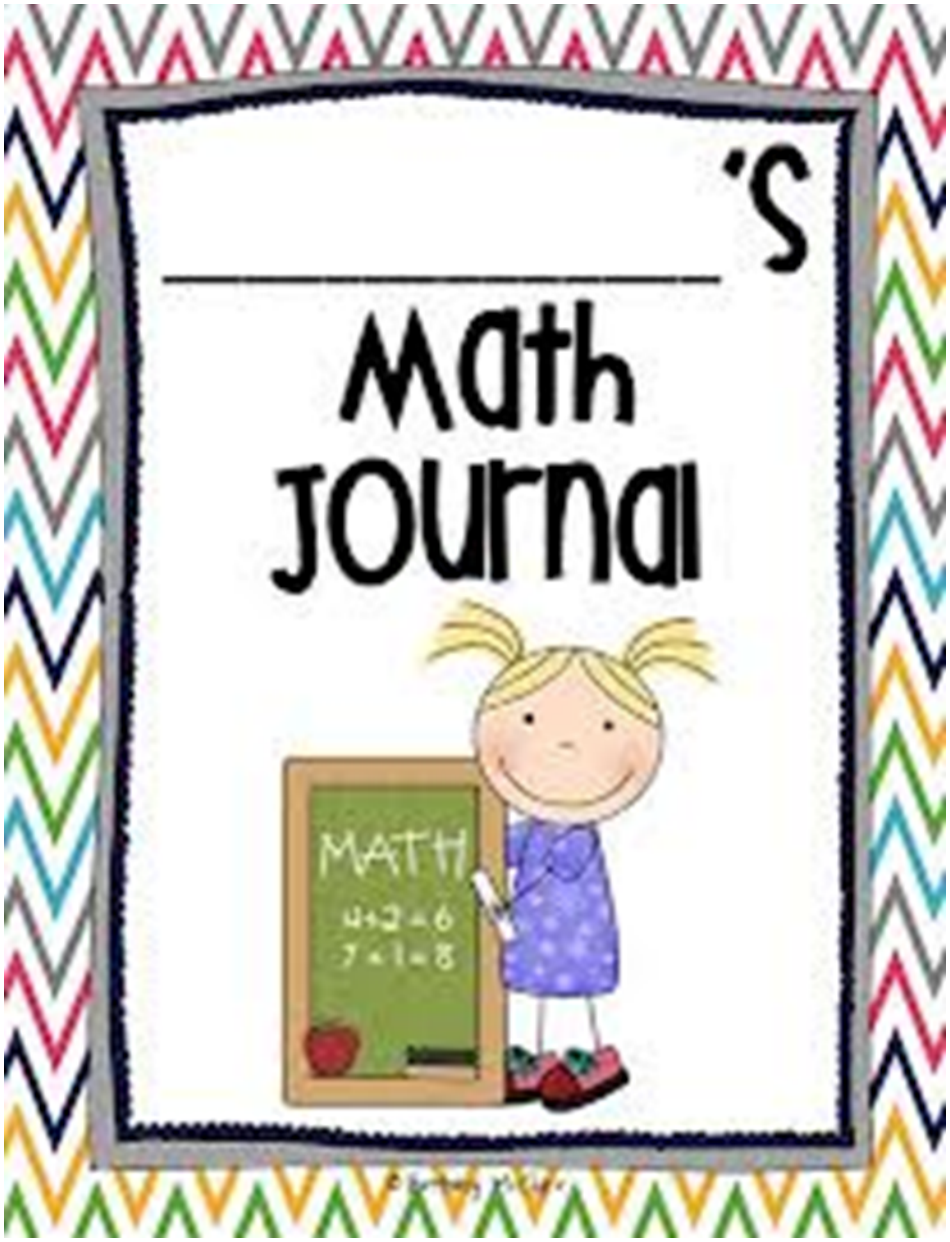
-
-
-
-

Dessert (choose 1)

-
-

Math Journals

- Solve problems
- Explain thinking
- Ask questions
- Record someone else's strategy
- Reflect on learning



Where do I find ideas for Stations?

- Number of the Day

- Estimation Stations

- Counting Bins

- Daily Data

MATHEMATICS COMMUNITY

Creating Opportunities for Student Discourse

Culture of Mathematics

- Math is not my thing….
- I was never good at math anyway….
- I'm not a math person…..
- He gets that from me; I wasn't good at math either…

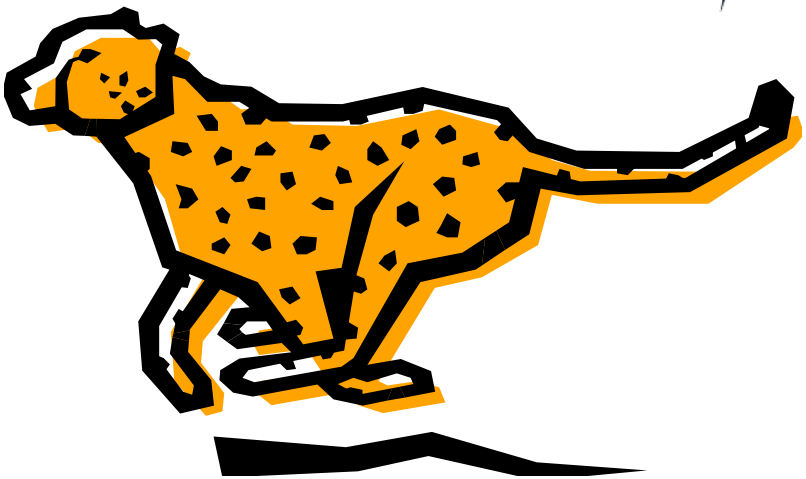
Culture of Mathematics

I don't know **YET**

The difference between NOT knowing and not knowing **YET**.

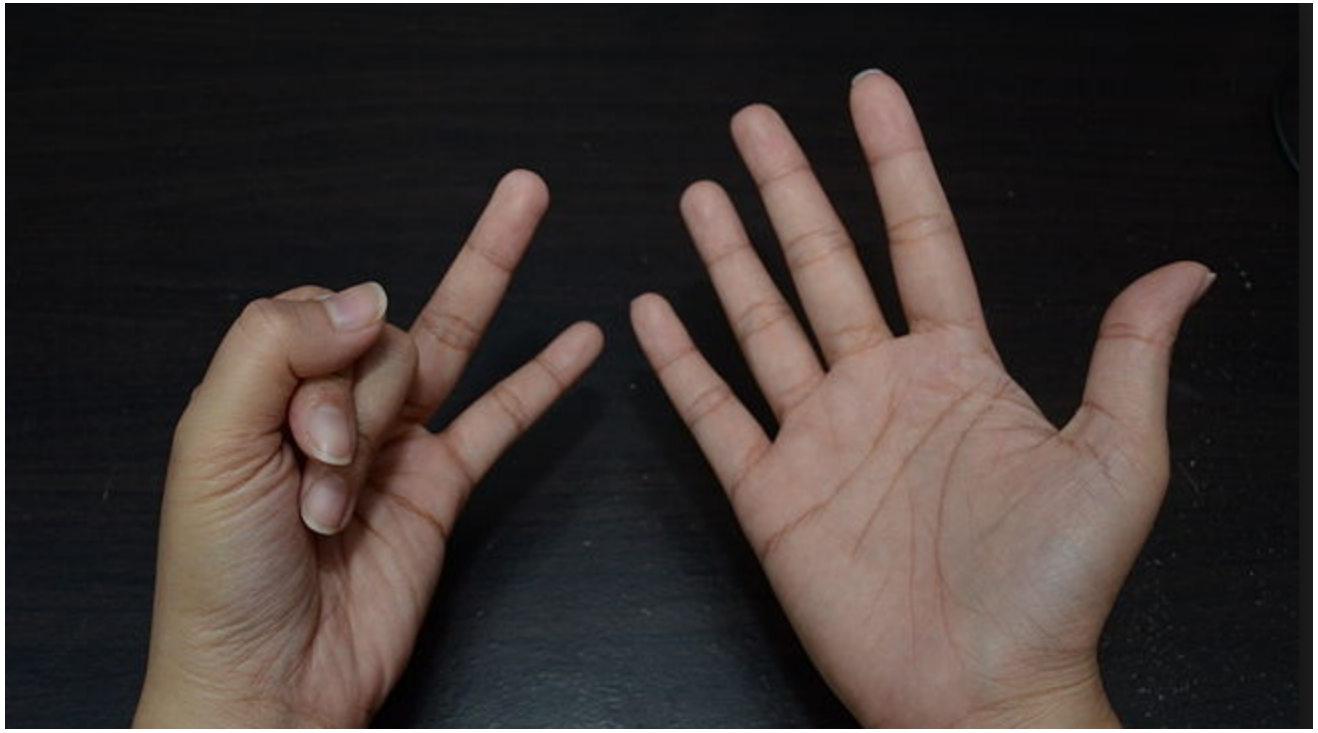
Decrease anxiety → Increase engagement → Promote growth mindset → Increase achievement

Which does not belong?



Which does not belong?

Show me….



Number Talks

234 + 126 =

Tasks with Multiple Answers:

- I have one dollar in coins. What coins might I have?
- 14 = _____. You fill in the blank.
- Perimeter is 24. What are the dimensions?

How do we build it?

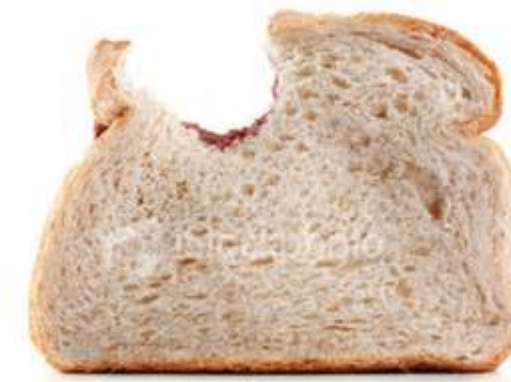
- Use Sentence Frames
  - I had a different idea. I was thinking…
  - I would like to add on to what ___ said….
- Don’t say anything a student can say
- Make a commitment to stop rescuing students

How do we build it?

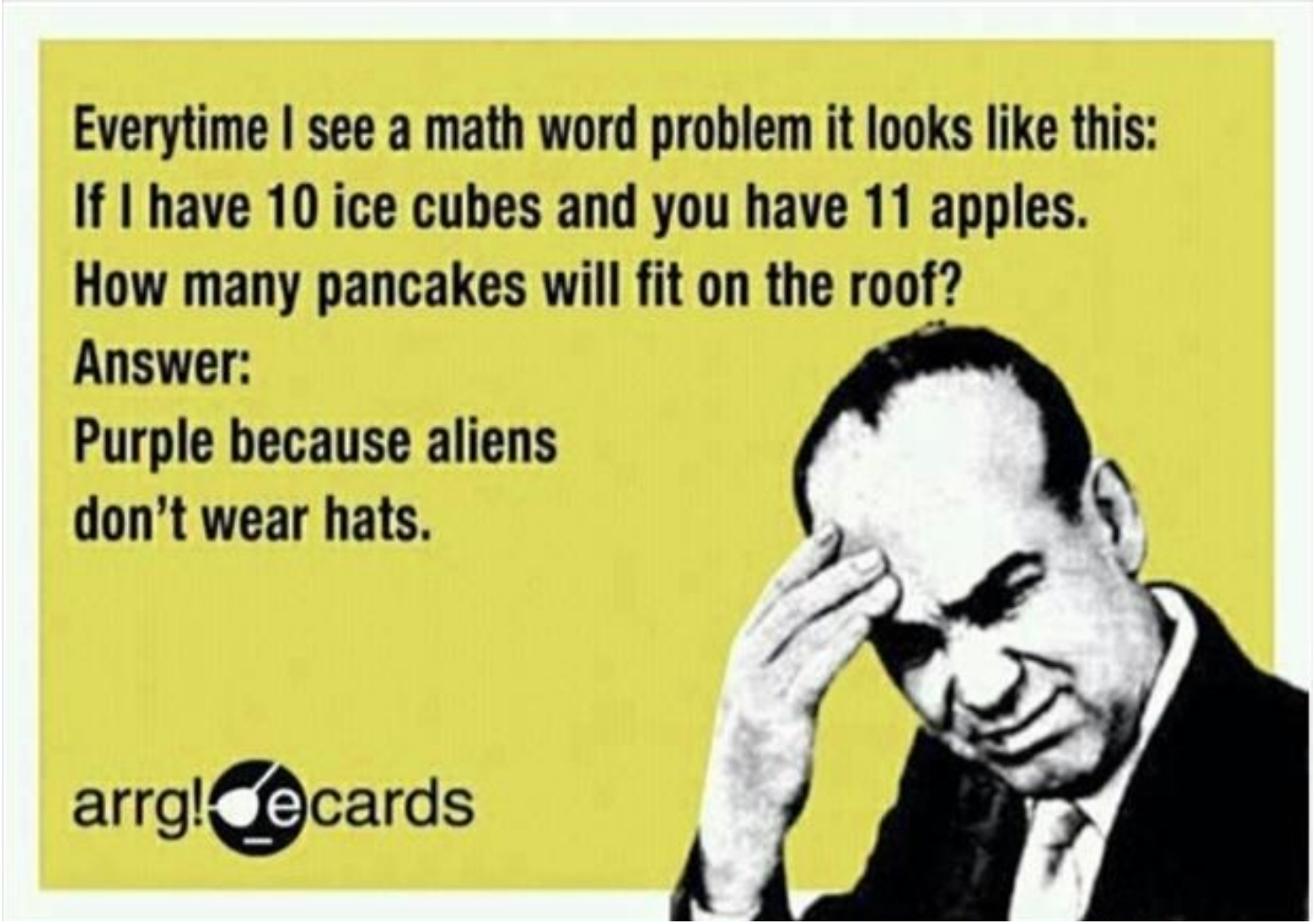
- Promote conceptual understanding by encouraging a variety of strategies and/or solutions
- Require students to listen to each other and try to understand each others' strategies

That First Month:

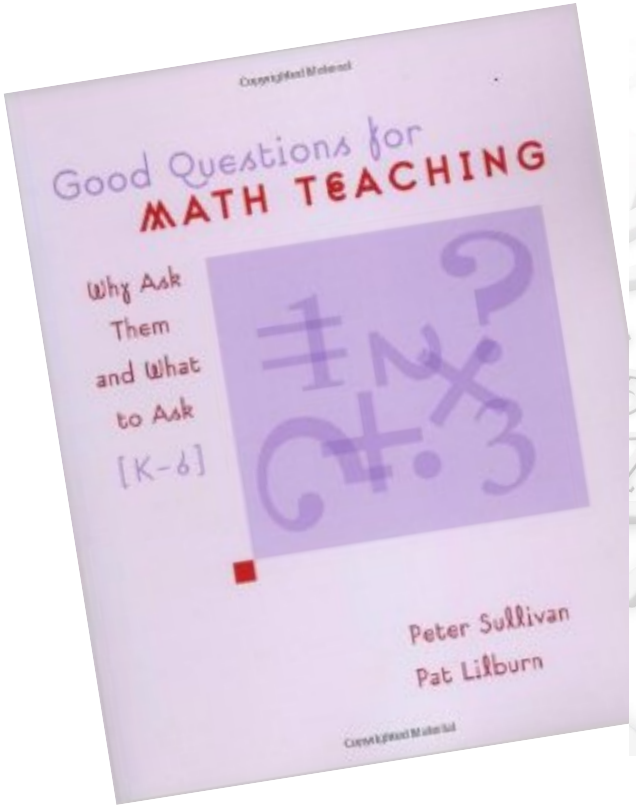
- Establish and Practice routines and procedures
- Start with one learning station – no small groups
- Move to 2-3 learning stations – plan to pull one small group per day
- Bite off only as much as you can chew!

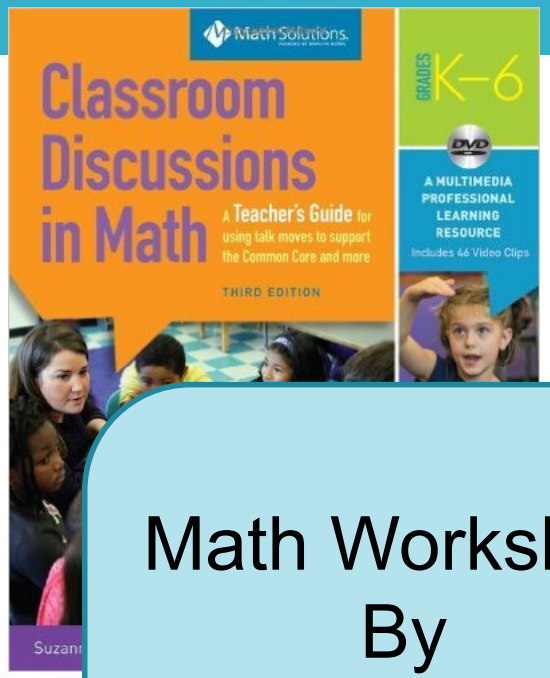


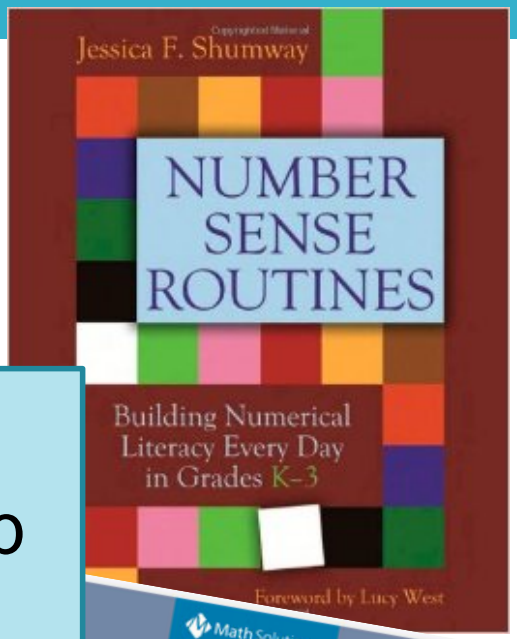
Let's Put a Stop To These Feelings



My "Go To" Resources







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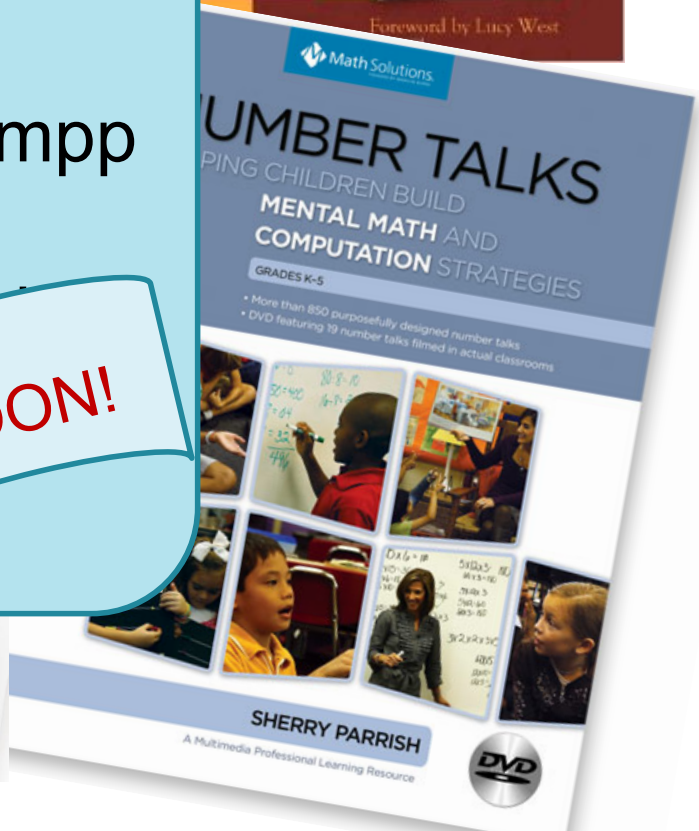
COMING SOON!



Thank you

Contact me:

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Evaluations and Wrap-Up

Digital Handouts Available At:

www.modelschoolsconferenc.com

Please fill out the evaluations:

http://tinyurl.com/MSC16eval

Paper or MSC APP

Thank you for a great session!