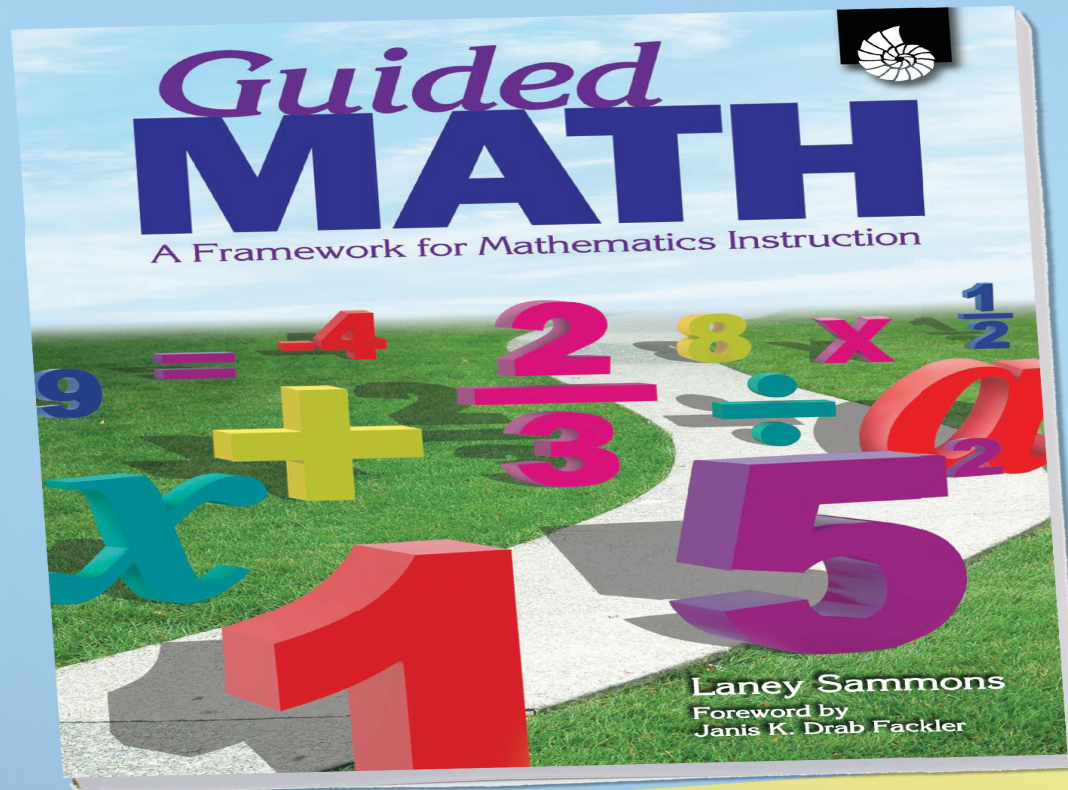


Book Study for

Session 1



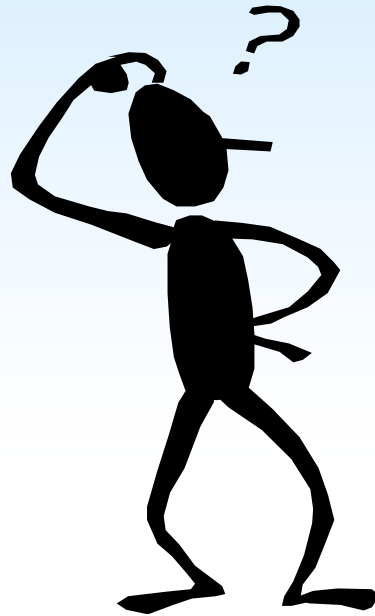
The Sessions

- Dates – **Tues. Jan. 28, Feb. 11 and April 1**
- @SBO 4:00 – 6:00
- **Today – Introduction, overview of Guided Math**



Purpose

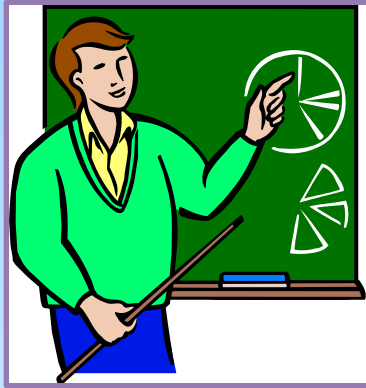
How can we effectively teach math when we have a classroom of students at many different levels of achievement?



Introduction

1. Describe one negative and positive experience you have had while differentiating math instruction.
2. Currently, do all students in your class feel they can learn math?
3. Explain your familiarity with Guided Math.





The Traditional Approach to Teaching Math

- Large group instruction
- All students work on the same level
- Often instruction and practice is from text book
- Emphasis on paper and pencil work
- One correct answer
- Individual work



Does this approach work?

- Successful for some students
- Less successful for those who quickly acquire mastery
- Even less successful for struggling students
- Encourages emphasis on computation skills
- Little opportunity for communication
- More emphasis on evaluation, rather than assessment for learning



How can we...?

- Reach students at all levels of achievement
- Provide diverse methods of learning
- Allow more opportunities for observation and communication by students
- Encourage active engagement by students



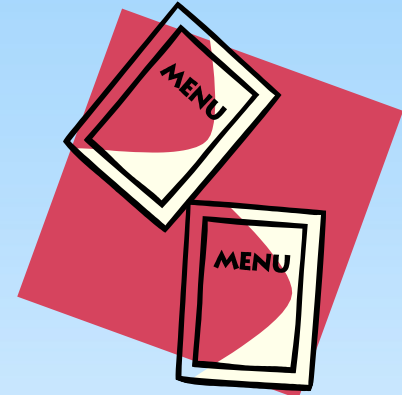
What is Guided Math?

A flexible instructional framework that enables teachers to:

- determine students unique needs
- address those needs through a combination of whole class instruction and small group instruction



Menu of Instruction



- Whole class instruction
- Small group guided instruction
- Math Workshop (independent work or work in cooperative groups)



Components - Guided Math

- Assessment
- Possible Rotations or Organization for implementation
- Whole Class Instruction
- Math Warmups
- Math Workshop/Math Work stations/Centres
- Guided Math Lesson/Small Group Instruction
 - Managing, Template for Before During After
 - Resources (Leaps and Bounds)



Whole Class Instruction



- *What are some advantages*
 - Captures everyone's attention at once.
 - Quick way to present same information to all.
 - Builds mathematical community by creating common experiences.
 - More time can be devoted to the lesson.



Whole Class Instruction



What are some challenges

- Fails to target students varying levels of competency
- Difficult to maintain attention of all.
- Communication opportunities limited.
- Minimal descriptive feedback from the teacher or peers.
- Ongoing assessment is more difficult.
- Students may engage in work based on a misunderstanding and then practice incorrect methods.





Effective Uses of Whole Class Instruction

- Introduction of a new series of lessons with an activating strategy to generate interest, enthusiasm, and curiosity
- Use of literature to teach a math concept
- Review of previously taught and mastered skills to ensure maintenance
- Preparing a class for cooperative group work; providing common knowledge about requirements
- Some assessments



Represent 24 in as many ways as you can

Hours in a day



$$12 + 12$$

$$20 + 4$$

$$25 - 1$$

I might expect

Twenty-four



0	0	0	0	0
0	0	0	0	0

0	0	0	0	0
0	0	0	0	0

0	0	0	0	

$$8 \times 3$$

Christmas Eve



Small Group Guided Instruction





Small Group Guided Instruction

- Is similar to guided reading, but composition of the groups may be even more fluid
- Homogenous, flexible grouping by level of achievement
- Requires assessment to determine each student's level
- Provides scaffolding to support the learning efforts of students
- Encourages exploration of math concepts in a risk-free learning environment



Small Group Guided Instruction

- Introduction of new concepts
- Practice of new skills
- Instruction with manipulatives
- Intensive instruction for students having difficulty mastering concepts
- Introduction of activities that will later become independent work during math workshop/ centres
- Informal assessment
- Re-teaching based on results of formative assessment



How can you assess students to determine grouping prior to and during instruction?

- Observation of an assigned task
- Written explanation of understanding by students in their math journals
- Pre-assessment
- Formative test results
- Performance in earlier work on sequential math concepts
- Checklist
- Conferencing



Math Workshop

Centres/Workstations etc.

- Students work independently, in pairs, or in groups.
- Procedures and routines must be established and practiced.
- Activities should provide opportunities for exploration or practice of mastered skills.



Math Workshop Activities



- Follow-up work from small group lesson
 - Seat work etc.
- Problems of the Week
- Math games
- Work with manipulatives
- Math journals
- Multidisciplinary Connections (where Language Arts, Science or Social Studies relate to Math)
- Children's literature
- Technology



Gradual Release of Responsibility

- *Whole Group Instruction*
 - Highest level of teacher support
 - Teacher modeling and think-alouds
 - Mini-lessons, direct instruction
- *Small Group Guided Instruction*
 - Moderate level of teacher support
 - Scaffolded instruction tailored to individual needs of students
- *Math Workshop*
 - Lowest level of teacher support
 - Independent work by individuals or groups



Classroom Management

Accountability

- Rubric with criteria
- Managing the paper work
- Completing work for next time
 - Record math problems on labels and stick in math book if incomplete



Name _____

Work Stations Rubric

Date _____

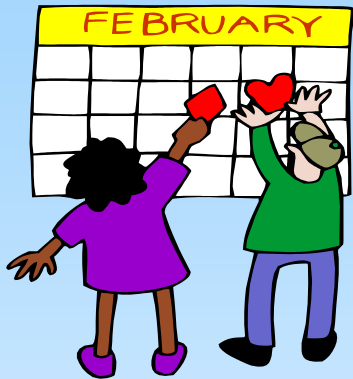
	1	2	3	4
Tuesday My Points _____	I was not on task for the majority of math workshop. OR I did not give my best effort.	I was on task for the majority of math workshop. I usually gave good effort on my work.	I was on task the entire duration of math workshop. I usually gave good effort on all of my work.	I was on task the entire duration of math workshop. I gave my best effort on all of my work.
Tuesday My Points _____	The majority of my work was not accurate OR I did not complete the majority of my tasks.	Most of my work was accurate, but I did not complete all of my tasks.	Most of my work was accurate, and I completed all of my tasks.	All of my work was accurate and complete.
Thursday My Points _____	I was not on task for the majority of math workshop. OR I did not give my best effort.	I was on task for the majority of math workshop. I usually gave good effort on my work.	I was on task the entire duration of math workshop. I usually gave good effort on all of my work.	I was on task the entire duration of math workshop. I gave my best effort on all of my work.
Thursday My Points _____	The majority of my work was not accurate OR I did not complete the majority of my tasks.	Most of my work was accurate, but I did not complete all of my tasks.	Most of my work was accurate, and I completed all of my tasks.	All of my work was accurate and complete.



Organization/Planning

- Use templates to keep track of groups and lesson goals
- Other?



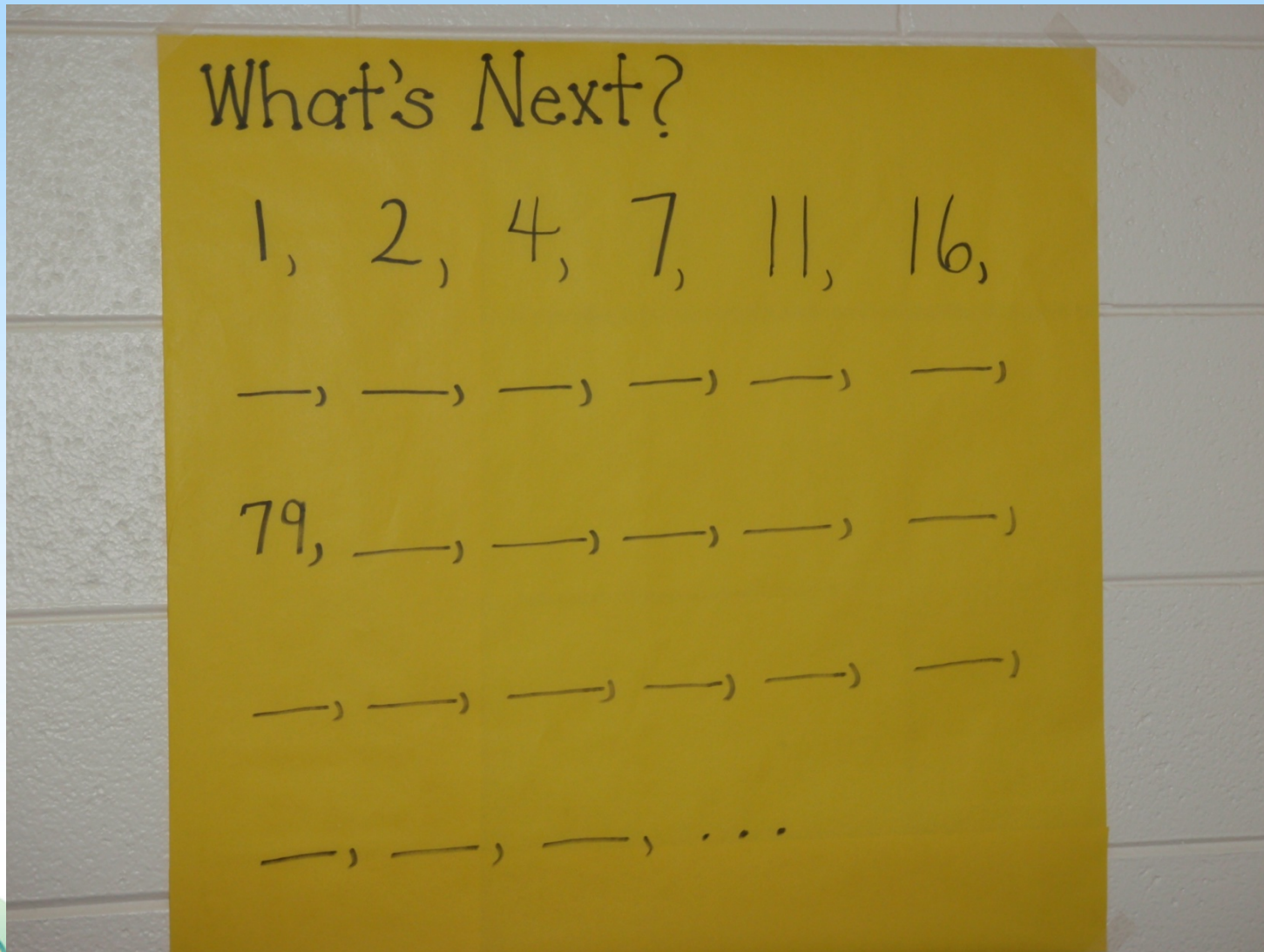


Morning Math Warm-ups

- Mathematical Stretches
- Mathematical Current Events
- Math-Related Classroom Responsibilities
- Calendar Board



Mathematical Stretches



What's Next? Stretch

Mathematical Stretches

Have you ever gone fishing?

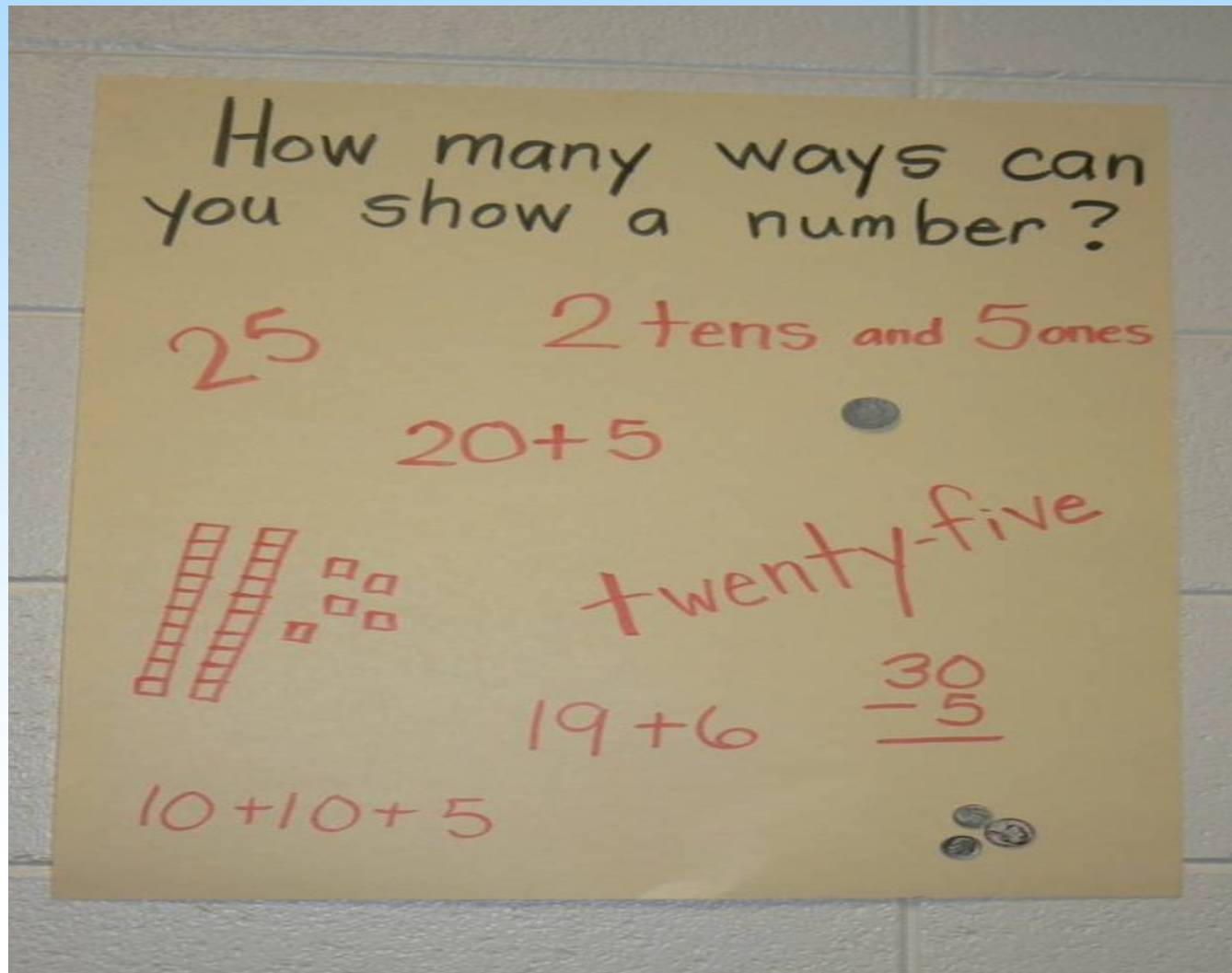


yes	no
Ms. Scroggs	Alex
Alisha	A'Kendia
John Thomas	Casey
Richard	Sara
Kevin	
Hayes	
Emily	
Brittany	
Jalen	
Laney	
Jaidah	
Chad	
Summer	



Data Collection and Analysis Tasks

Mathematical Stretches



Number of the Day Stretch

Math Workshop/Math Work Stations/ Centres

- Math journals
- Games
- Open Questions
- Classroom management



Possible Next Steps...

- **Baby** steps
- First month
 - Build up your math games
 - Teach them
 - Implement morning stretches
- What resources do you already have?
- What resources do you need?



5 3 1 Activity

- 5 Great Ideas
- 3 Must Try
- 1 Question



For next session...

Feb. 11

Before next session, please read chapters 1-3

Discussion Questions - Be ready to share your thoughts

