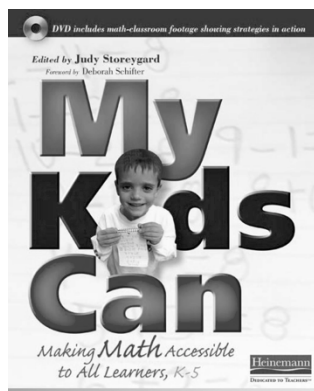


Guided Mathematics Groups: Differentiated Learning for Response to Intervention

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Five Guiding Principles



- Making Mathematics Explicit
- Linking Assessment and Teaching
- Building Understanding Through Talk
- Taking Responsibility For Learning
- Working Collaboratively

AGENDA

- **Definition and Purposes of Guided Math Groups**
- **Characteristics of Guided Math Groups**
- **Examples of Guided Math Groups: A glimpse into two classrooms**
- **Models of guided groups**
- **Supporting the Implementation of Guided Groups**

Definition of Guided Math

Guided Math is a structure based on the principles of guided reading groups in which a teacher supports students' development of math skills, strategies, and concepts within the context of a small group. Teachers facilitate this learning through focused conversations and targeted questioning.

Response to Intervention

- **Tier 1 High-Quality Classroom Instruction, Screening, and Group Interventions**
- **Tier 2 Targeted Interventions**
- **Tier 3 Intensive Interventions and Comprehensive Evaluation**

Purposes of Guided Math Groups

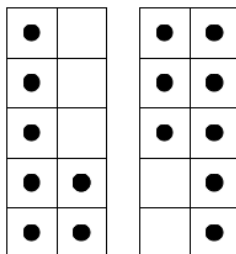
- To slow the pace down by providing extra practice in solving problems.
- To preview a game or activity so that students can follow directions and understand the purpose and concepts.
- To help students make connections between prior work and the lesson of the day.
- To give students the opportunity to rehearse presenting their strategies so that they can feel confident talking and showing their work in front of the whole class.

Difference from Traditional Math Grouping

- The groups are flexible. They change based on the teacher's ongoing assessment.
- They are like "mini-lessons", typically taking place as part of a math lesson to learn or practice specific strategies or concepts.
- The focus of the groups is on students' sense-making.

Quick Images

Activities that require students to reproduce a configuration of dots or determine the number of dots without counting.



Questions to Think About

- **What are the teacher's mathematical goals for the lesson?**
- **What are the moves and decisions that make the mathematics explicit?**

Why do you think he started by discussing an easier example?

What is the teacher trying to help the students pay attention to as they discuss this first easier example?

Quick Images Mathematical Goals

- Visualizing a quantity
- Adding up numbers by breaking them up in different ways
- Counting on from one quantity to another
- Counting in groups of 2s, 5s, and 10s.
- Building understanding of place value, by thinking of numbers in terms of 10s and 1s.

Teaching Decisions and Moves

- **Careful sequencing of images**
- **Asking questions that focus the students on developing strategies to recall the images**
- **Restating their descriptions of their strategies**
- **Pointing students towards thinking about 5s and 10s through his questioning**
- **Connecting their strategies from one quick image to the next to build on their prior knowledge**

The pieces get skinnier and skinnier...

What ideas would students engage with as they worked on the following:

Which fraction is larger $1/2$, $1/4$ or $1/6$?

- ✧ Building on an understanding of sharing and equipartitioning
- ✧ Interpreting the meaning of the numerator and denominator
- ✧ Understanding that a fraction is a number and a relationship
- ✧ Understanding that fractions refer to equal parts
- ✧ Visualizing fractions
- ✧ Relating a story context to a fractional amount
- ✧ Identifying relationships between unit fractions
- ✧ Ordering fractions and justifying their order through reasoning
- ✧ Using half as a benchmark
- ✧ Understanding what it means to have half a number

Which fraction is larger $\frac{1}{2}$, $\frac{1}{4}$ or $\frac{1}{6}$?

Keisha: $\frac{1}{2}$ is bigger because the denominator is a lot smaller and you get bigger pieces; the one makes it bigger

Tara : $\frac{1}{6}$ because 6 is a larger number than 4

Pete: You cut the pieces and you cut how many pieces there are for how many people. For one you cut 4 pieces and for the other you cut 6. Four is less but it is more.

Jhali: $\frac{1}{6}$ because they are five apart

Mark: $\frac{1}{2}$ because 2 is half of 1

What teacher moves would support this group of students during instruction?

- Repeating prior activities to assess understanding
- Assessing through talk
- Assessing new learning
- Pinpointing “conceptual breaks”
- Anticipating and planning for learning progressions (how children are building ideas)
- Guiding instruction based on formative assessments during guided group time

What might the structure of a guided group time look like?

- Time frame ranges.
- The bulk of the time is spent on the students **doing and talking** about the mathematics
- The teacher has set specific goals and makes those explicit to the group : *You will be working to tell a story that explains how you compare fractions like $\frac{1}{2}$ and $\frac{1}{4}$*
- The teacher models academic language and assist students in articulating their ideas.
- The teacher is able to adjust the guided group work to meet the level of understanding for the particular mathematical idea.
- Students have time to reflect on their learning, how to apply their new understanding and possible next steps.

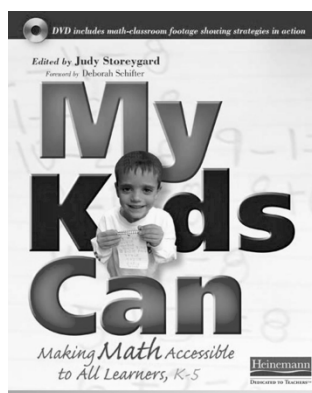
Models of Guided Groups

- **Morning/ Afternoon Math Club**
- **Additional math block time for guided groups**
- **Across classrooms guided groups**
- **Pull aside group following whole class instruction**
- **Planned guided groups following whole class instruction**
- **Math Menus for Small Group Targeted Instruction**
- **Tiered assignments for particular student needs**

Supporting the development of guided groups...

- **Assist classroom teachers in understanding how to use formative assessment**
- **Provide support for developing understandings of how particular math concepts develop**
- **Allow for time for collaboration and planning across classrooms**
- **Make explicit the role of guided groups in improving students' progress**
- **Model the use of small group time as part of professional development**

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- Questions?**
- Comments?**

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