

The left side of the page features a decorative design consisting of several vertical stripes of varying shades of light blue and teal. Overlaid on these stripes are several solid teal circles of different sizes, arranged in a vertical, slightly staggered pattern. The largest circle is at the top, with smaller ones below it.

# **GUIDED MATH AND MATH WORKSHOP**

**A Common Core Approach to Mathematics  
Instruction**

ONLY IN MATH PROBLEMS CAN YOU BUY  
60 CANTALoupES AND NO ONE ASKS  
WHAT THE HELL IS WRONG WITH YOU.



SCHULZ

PEANUTWEETER.COM

@KARIMI

"As challenging as it must have been to write and finesse the adoption of the **Common Core State Standards**, that accomplishment is nothing compared to the work of teaching in ways that bring all students to these ambitious expectations. **The goal is clear. The pathway is not.**"

-Lucy Calkins, Mary Ehrenworth, and Christopher Lehman  
**Pathways To Common Core**

[www.sprinkleteachingmagic.blogspot.com](http://www.sprinkleteachingmagic.blogspot.com)



# COMMON CORE MATH K-5: THE SHIFT

- Greater focus on fewer topics
  - In grades K–2: Concepts, skills, and problem solving related to addition and subtraction
  - In grades 3–5: Concepts, skills, and problem solving related to multiplication and division of whole numbers and fractions
- Coherence: Linking topics and thinking across grades → <http://www.examiner.com/slideshow/required-fluencies#slide=1>
- Rigor: Pursue conceptual understanding, procedural skills and fluency, and application with equal intensity

(<http://www.corestandards.org/other-resources/key-shifts-in-mathematics/>)



# LAYERED STANDARDS BY GRADE LEVEL

Grade	Required Fluency
K	Add/subtract within 5
1	Add/subtract within 10
2	Add/subtract within $20^1$ Add/subtract within 100 (pencil and paper)
3	Multiply/divide within $100^2$ Add/subtract within 1000
4	Add/subtract within 1,000,000
5	Multi-digit multiplication
6	Multi-digit division Multi-digit decimal operations
7	Solve $px + q = r$ , $p(x + q) = r$
8	Solve simple $2 \times 2$ systems by inspection



# WHAT DO THESE SHIFTS MEAN FOR US AS TEACHERS?

- We cannot rely on simply teaching students a formula to answer math problems anymore.
- Students will often need to learn these concepts at varying paces, as not all students will master a deep understanding at the same time.



# MATH WORKSHOP: A SMALL-GROUP APPROACH TO TEACHING MATH

- Similar to readers and writers workshop
- Format:
  - Students receive a 10 minute, whole-class minilesson
  - Students meet with teacher in small group for 15 minutes, then engage in independent practice of concept
  - Students not meeting with teacher are engaged in independent math stations
  - During last 5 minutes, teacher provides whole-class review, closing, and possible preview of next lesson



## SO, TO BREAK IT DOWN:

- 1 Hour of Math Instruction:
  - 10 minute minilesson (whole-class)
  - 3 (15 minute) small group meetings with teacher (45 minutes total)
    - Other students doing independent practice or stations
  - 5 minute closing





# WHY CONSIDER A WORKSHOP APPROACH TO MATH INSTRUCTION?

- Each student receives small group, need-specific instruction, followed by independent worktime
- Allows for students to be rotated/moved to different groups by lesson or unit
- Students are engaged at all times in mathematics practice, and concepts are reinforced daily in stations
- Students are motivated by the rotation, and manage themselves with little need for teacher interruption



# BUT MY DISTRICT USES A TEXTBOOK!



- Not necessarily Common-Core Aligned
  - Textbook companies use keyword searches to call their book “Common-Core Aligned.”
  - Use your best judgement.
- As long as you are teaching the topics and the vocabulary in book, you can supplement to fit workshop model.
  - key shift is alignment across grade levels
    - students need to know strategies and vocabulary specific to your textbook/common core)



# WHAT MIGHT THIS LOOK LIKE IN A CLASSROOM?

- 2<sup>nd</sup> grade: Lesson: Adding 3 digit numbers without carrying
  - 12:30-12:40 Minilesson
  - 12:40-12:55
    - Group A: Meet with Miss Schertz
    - Group B: Flashcard Station
    - Group C: Math Game Station
    - Group D: Work at Seat
  - 12:55-1:10
    - Group A: Work at Seat
    - Group B: Meet with Miss Schertz
    - Group C: Flashcard Station
    - Group D: Smartboard Station
  - 1:10-1:25
    - Group A: Flashcard Station
    - Group B: Work at Seat
    - Group C: Meet with Miss Schertz
    - Group D: Math Game Station
  - 1:25-1:30 Review/Closing



## EACH GROUP'S LESSON:

- Group A: Review 2 digit addition and start 3 digit addition without carrying
- Group B: 3 digit addition without carrying
- Group C: Quickly go over 3 digit addition without borrowing and start 3 digit addition with carrying in the ones/tens.
- Group D: 3 digit addition with carrying in ones/tens.



# HOW TO GROUP STUDENTS:

- Put students in groups of no more than 6 students
  - In my classroom, this means I have 4 groups
  - Students move up or down by unit-of-study based on their need



# HOW DO I GET STARTED?

- Choose your first unit of study.
- Use a pretest to figure out where students are at.
  - Example: in kindergarten, for a unit on counting, you might use a blank hundreds chart as a pretest
- Group students:
  - Group 1: Students who can count to 10 or less
  - Group 2: Students who can count between 10-50
  - Group 3: Students who can count between 51-100
  - Group 4: Students who can count above 100
- Plan lessons and choose materials
  - If you are required to have grades, choose the materials that you will grade



# HOW DO I GET STARTED? CONT.

- Choose stations.
- Spend 1 week teaching students routines and how to work in stations
- Teach!
- Assess.



# GUIDED MATH – SMALL GROUP INSTRUCTION

- Guided Math is:
  - a method in which teachers assess students and group them according to their proficiency level.
  - homogenous, yet fluid
  - analogous to Guided Reading (Fountas & Pinnell, 2001)
  - an opportunity to closely observe student work and provide strong support for struggling students (Sammons, 2010)





# PLANNING THE LESSON (SAMMON'S GUIDED MATH – 2010)

- Determine big ideas (based on student need and standards)
- Decide criteria for success
- Use assessment information
- Choose specific teaching points for each group
- Prepare differentiated lessons; gather materials.

(Sammons, 2010, p. 157)

<http://www.triblocal.com/plainfield/community/stories/2011/02/liberty-third-grade-class-makes-gains-with-guided-math/>



# QUICK STATION IDEAS

## Must-Haves:

- Meet with Miss Schertz
- Work at Seat (Independent Work Time)

## Other Options:

- Flashcard Station
- Math Game Station
- Smartboard Station
- Writing About Math
- Reading About Math



A	Monday	Tuesday	Wednesday	Thursday	Friday
First Station	Meet with Miss Schertz	Meet with Miss Schertz	Meet with Miss Schertz	Meet with Miss Schertz	Meet with Miss Schertz
Second Station	Work at Seat	Work at Seat	Work at Seat	Work at Seat	Work at Seat
Third Station	Flashcard Station	Smartboard Station	Flashcard Station	Math Game Station	Flashcard Station

B	Monday	Tuesday	Wednesday	Thursday	Friday
First Station	Flashcard Station	Smartboard Station	Flashcard Station	Math Game Station	Flashcard Station
Second Station	Meet with Miss Schertz	Meet with Miss Schertz	Meet with Miss Schertz	Meet with Miss Schertz	Meet with Miss Schertz
Third Station	Work at Seat	Work at Seat	Work at Seat	Work at Seat	Work at Seat

C	Monday	Tuesday	Wednesday	Thursday	Friday
First Station	Working at Seat	Working at Seat	Working at Seat	Working at Seat	Working at Seat
Second Station	Math Game Station	Smartboard Station	Flashcard Station	Math Game Station	Smartboard Station
Third Station	Meet with Miss Schertz	Flashcard Station	Meet with Miss Schertz	Flashcard Station	Meet with Miss Schertz

D	Monday	Tuesday	Wednesday	Thursday	Friday
<b>First Station</b>	Working at Seat	Working at Seat	Working at Seat	Working at Seat	Working at Seat
<b>Second Station</b>	Flashcard Station	Math Game Station	Book Station	Flashcard Station	Book Station
<b>Third Station</b>	Smartboard Station	Meet with Miss Schertz	Smartboard Station	Meet with Miss Schertz	Math Game Station



# TIPS:

- Choose stations that:
  - you don't need to change often
    - students know routines and can get started quickly and independently
    - much less time consuming for you → more time spent planning quality small group lessons
  - don't require paperwork
    - too much paper going through room
    - have to worry about collecting/grading/checking/returning



# WHERE DO I GET MY MINILESSONS?

- Textbook
  - If your district uses a textbook, it is easy to use the introduction to a lesson, along with a few problems on the smartboard/whiteboard to create a minilesson
- Make your own to supplement textbook, if necessary
- Websites such as SmartExchange
- Brainpop and Brainpop, Jr. have great math videos to help create minilessons



# HOW DO I ASSESS?

- Diagnostic assessment:
  - Can happen at beginning of each unit/quarter/semester
- Formative assessments:
  - Independent work
  - Station quick checks
    - Journal checks
    - 1 minute math-fact fluency checks
- Summative assessments:
  - Unit tests



**\*And of course, informal observation of students!**



## RESOURCES:

- Van de Walle, J., Karp, K. & Bay-Williams, J. (2011). Elementary and middle school mathematics: Teaching developmentally. Pearson: New York.
- Sammons, L. (2010). Guided math: A framework for mathematics instruction. Shell Education: Huntington Beach, CA.
- Diller, D. (2010). Math work stations: Independent learning you can count on, K-2. Stenhouse: Portland, ME.
- Hernandez, T. (2011). Liberty third grade class makes gains with guided math. *Chicago Tribune*.  
<http://www.chicagotribune.com/news/local/suburbs/plainfield/>



Questions?

