West Cook Mathematics Initiative

Maywood – Melrose Park – Broadview
Board of Education Meeting
November 8, 2012

WEST40
Intermediate Service Center No. 2

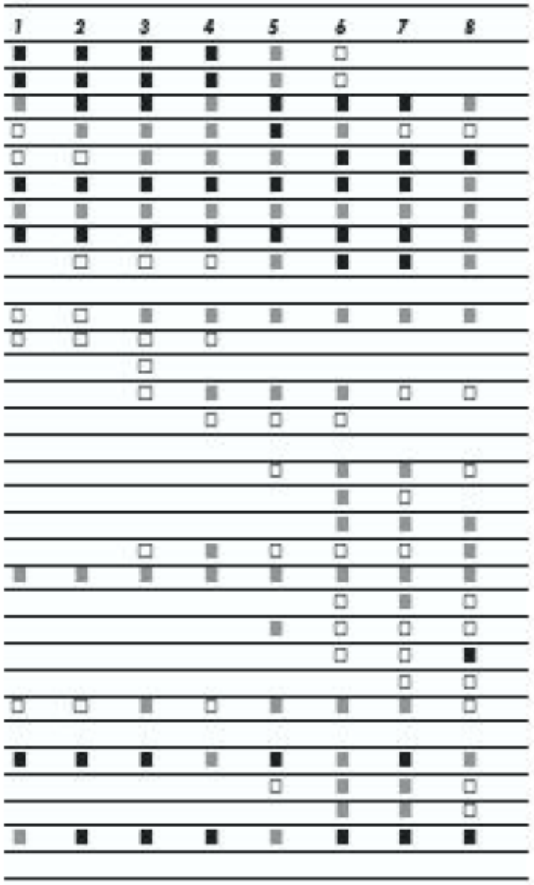
THE CHICAGO COMMUNITY TRUST

Learning Sciences Research Institute
The University of Illinois at Chicago

The shape of math in A+ countries

Mathematics topics intended at each grade by at least two-thirds of A+ countries

Mathematics topics intended at each grade by at least two-thirds of 21 U.S. states



[1] *Schmidt, Houang, & Cogan, "A Coherent Curriculum: The Case of Mathematics." (2002).*

WCMI

- Overview of WCMI
- Professional Development Opportunities
- Coaching Supports
- Transitioning to the Common Core State Standards for Mathematics
- Proviso Articulation
- Year Four and Beyond

WCMI: What Is It?

- A partnership among 11 west Cook County districts to improve the teaching and learning of mathematics in grades six through nine

- A subset of 3 WCMI districts is participating in Cohort One of the K-5 component. Two additional districts are beginning this work.

WCMI - Participating Districts

Project	District	District Name	Cluster
WCMI	87	Berkeley	209
WCMI	89	Maywood-Melrose Park-Broadview	209
WCMI	91	Forest Park	209
WCMI	92	Lindop	209
WCMI	93	Hillside	209
WCMI	99	Cicero	201
WCMI	100	South Berwyn	201
WCMI	103	Lyons	201
WCMI	201	Morton	201
WCMI	209	Proviso	209
WCMI	401	Elmwood Park	401

Theory of Action

District	• District collaboration that leverages expertise and resources
Administrators	• Strong, supportive instructional leadership
Teachers and Teacher Leaders	• High quality instruction
Students	• Improved student achievement

West Cook Mathematics Initiative WCMI 3/4

WCMI Project Goals

- Establish a community of school districts and practitioners in west Cook County that works together on mathematics improvement.
- Develop joint solutions to commonly held problems involving the preparation for algebra in the middle grades and the teaching of algebra in 8^{th} and 9^{th} grades.
- Strengthen the districts' capacity to support improved mathematics instruction and retain highly-qualified staff.
- Support a range of mathematics improvement activities as part of a common, comprehensive mathematics initiative among participating districts.
- Improve student outcomes and success in mathematics.
- Build districts' capacity to gain a deeper understanding of the CCSSM, and their capacity to implement the CCSSM in their districts, schools, and classrooms.
- Extend project to support teaching and learning in kindergarten through grade five.

Partners

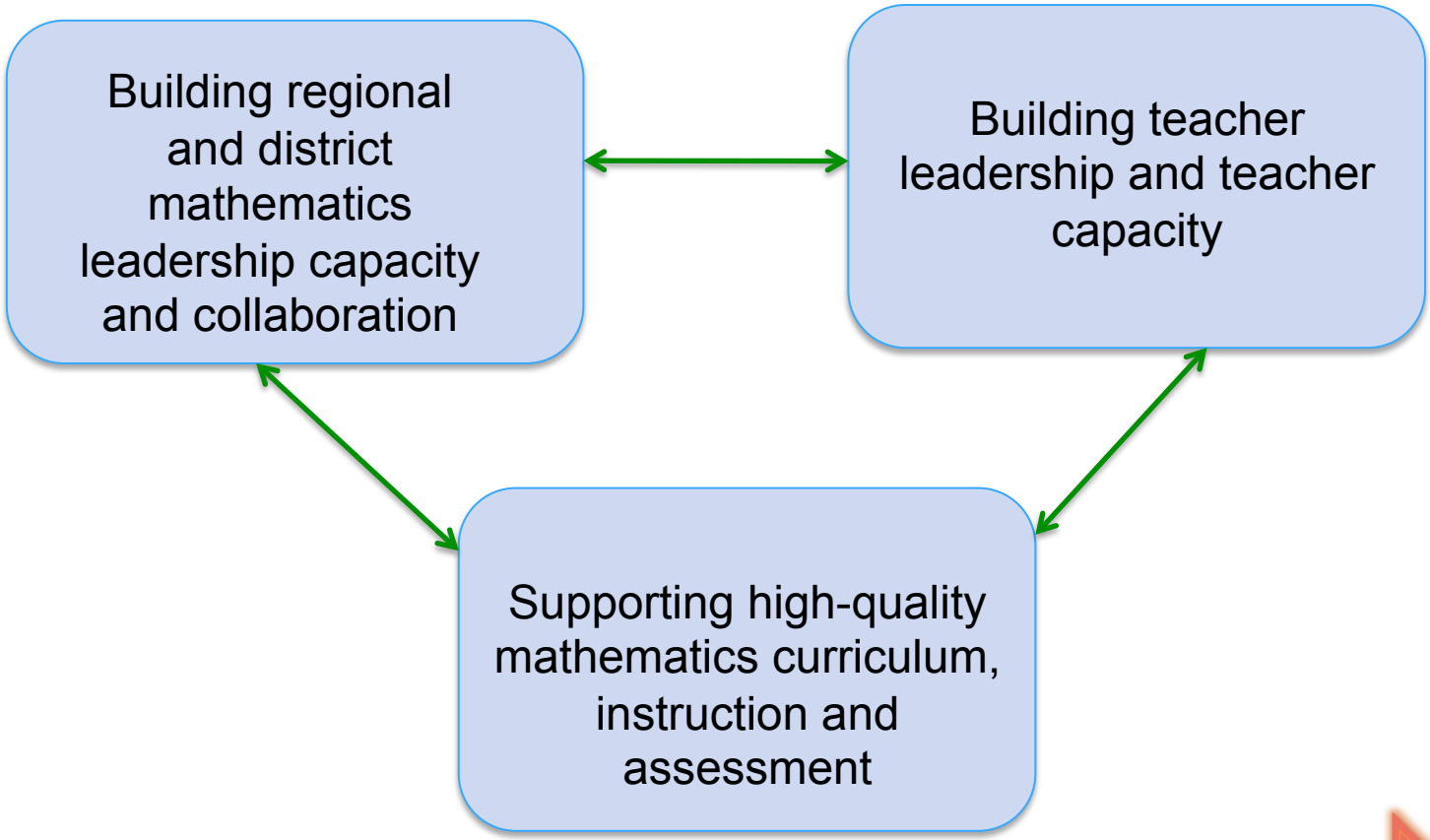
- West 40 Intermediate Service Center
- Participating west Cook County districts
- University of Illinois at Chicago Learning Sciences Research Institute (LSRI)
- The Chicago Community Trust

Support for SCMI and WCMI is provided by the Searle Funds at The Chicago Community Trust.

What's Involved

- Comprehensive
  - Teachers and teacher leaders
  - Curriculum and instruction
  - District/school leadership
  - District/school organization
  - District/school support for instruction and teachers
  - Intensification and acceleration
  - Articulation
  - Assessment
  - Other consensus issues identified by districts

Year Three – Sustaining Improvements



Sustaining Leadership and Collaboration

Advisory Board

Building regional and district mathematics leadership capacity and collaboration

Administrator Institutes

District Lead Networking

Administrator Breakfasts

District Leadership Teams

DLT Institutes – Cluster Articulation

Strengthening teacher leadership and teacher capacity

Building teacher leadership and teacher capacity

Teacher Leadership Academy

Coaching

Teacher Professional Development

Peer Visits and Collaboration

University Courses

Supporting high-quality mathematics curriculum, instruction and assessment

Implementation of MARS tasks and lessons

Supporting high quality mathematics curriculum, instruction and assessment

Optional Instructional Units

Common Cross-District Assessments

Curriculum Review

Intensified Algebra

Opportunities for Professional Development and Collaboration

- District Lead
- Administrators – District and School Level
- Teacher Leaders
- Teachers of Mathematics

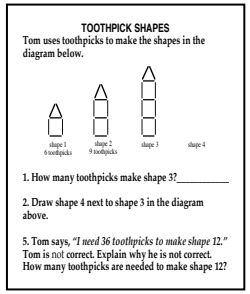
Coaching Supports

Nancy Mueller supports District 89 at many levels:

- Cross - District
- District
- School
- Classroom

The Formative Assessment Process

MARS Tasks



TOOTHPICK SHAPES

Tom uses toothpicks to make the shapes in the diagram below.

shape 1 6 toothpicks | shape 2 9 toothpicks | shape 3 | shape 4

1. How many toothpicks make shape 3?_____

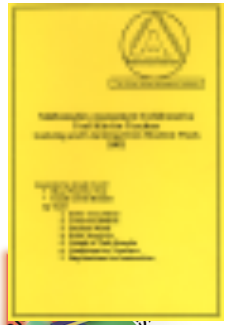
2. Draw shape 4 next to shape 3 in the diagram above.

5. Tom says, *"I need 36 toothpicks to make shape 12."* Tom is not correct. Explain why he is not correct. How many toothpicks are needed to make shape 12?

Examine Student Work

Scoring and Student Works Protocols

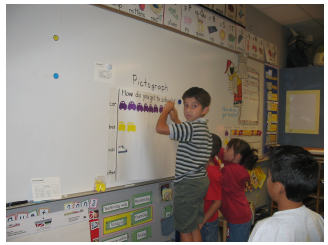
Inform Teacher Knowledge



Tools for Teachers and PD Materials

Inform Instruction

Re-engagement Lessons



Administer Tasks

Formative Assessment Cycle

Common Core Standards

Supporting the Transition to the Common Core – Some Examples

- Students are engaged in MARS tasks and formative assessment lessons.
- Teachers are attending professional development designed to build their capacity.
- Teachers are beginning to implement the Common Core State Standards for Mathematics in their classrooms.
- Teachers will be administering a common assessment aligned to the CCSSM.
- Teachers are in various stages of implementing *Connected Mathematics* in their classrooms.
- Administrator professional development is focused on instructional supervision and connected to the CCSSM.

Proviso Articulation

Representatives from the WCMI Proviso cluster districts meet regularly to focus on mathematics improvement and the transition from the middle grades to high school.

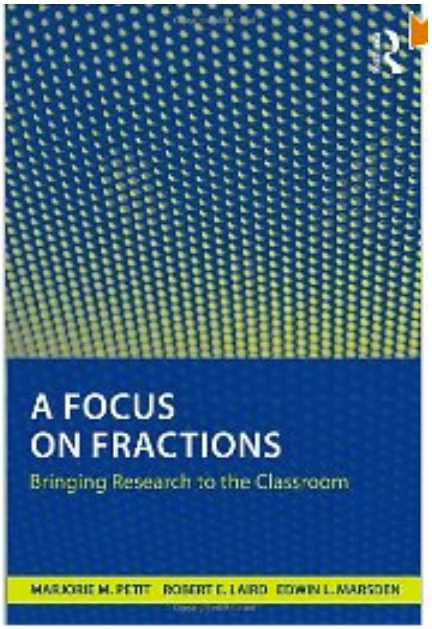
Year Four and Beyond

- Work will continue and be adapted based upon progress and program evaluation.
- Questions?
- Thank you for your participation!

The sum of $\frac{1}{12}$ and $\frac{7}{8}$ is closest to

A. 20
B. 8
C. $\frac{1}{2}$
D. 1

Explain your answer.



Petit, Laird and Marsden, 2010