

All About Math at Willard School

An Informal Coffee for
Willard School Parents
1/25/19

This Morning's Agenda

- * Welcome from Mr. Lucey and Dr. Price
- * Sharing from Our Parking Lots:
 - * Your Most Powerful Math Memory
 - * Questions About Math at Willard
- * Overview of Our Time Today:
 - * Goals, Tools, Rich Environments, Math At Home
- * Celebrating Math All Around

Goals and Tools

- * The Major Domains: Where we go in K to 5th
 - * Counting and Cardinality
 - * Operations, Algebraic Thinking, & Patterns
 - * Whole Numbers and Operations in Base 10
 - * Numbers and Operations with Fractions and Decimals
 - * Measurement and Data
 - * Geometry
- *By the End of Fifth Grade: Area and Volume, All Four Operations with Whole Numbers, Fractions, and Decimals, Measurement, Data, and Geometry*

How We Get There

- * Whole Group, Small Group, Flexible Group Instruction
- * Using assessments to individualize instruction
- * What is Response to Intervention (RtI) and when is it needed
- * Math Specialist observes, consults, models lessons, co-teaches, provides remedial instruction, creates extensions and enrichment as needed

MA Standards for Mathematical Practice

<http://www.doe.mass.edu/frameworks/math/2017-06.pdf>

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Rich Environments for Math Learning

Our Curriculum

- * CPS uses Everyday Math, 4th edition as its K-5 framework curriculum

EM4 Highlights:

- a spiral approach to instruction that supports progress toward mastery over the course of the school year
- Provides materials and guidance to differentiate instruction for a range of learners
- Lessons include direct instruction, hands-on, and inquiry-based experiences

Great Math Thinking from Fifth Graders

- * Courtney has 473 cartons of milk.
- * She sends $\frac{1}{3}$ to North Dakota, $\frac{1}{4}$ to Boston, and $\frac{1}{5}$ to California.
- * The rest went to Florida.
- * How many cartons went to Florida?

→ Key Skills: Problem Solving, 4 Operations with Fractions and Decimals, Rounding to Whole Number

Rich Environments for Math Learning Hands-On & Project-Based

- * Willard is providing hands-on experiences at each grade level that integrate Math into multi-faceted projects
- * Incorporating STEAM (Science, Technology, Engineering, Art, and Math) into these activities is a top priority.
- * A important goal is to give children opportunities to see Math at work “in real life”

Recent Examples of Project-Based Math at Willard

- * Geometry and Quilts (K-5)
- * Set and Costume Design, Grade 5
- * Constructing “Pressleyton,” the city of volume (Gr. 5)
- * Cans for Chickens, Grade 2,
- * Digi-Block Names, Grade 1
- * Pattern and Fabric Design, January
- * “Souper Bowl” Can Drive (K-5)
- * Graphing Historical Snowfall Data Grade 4
- * Creating the Fibonacci Garden (K-3)
- * Animal Research Projects, Grade 2

Rich Environments for Math Learning

Math Olympiad

- * Willard's Math Olympiad program is open to all Fourth and Fifth Graders
- * Meets Before School 2 Tuesdays per Month
- * Offers learners the opportunity to solve more complex Math problems, share strategies, and apply skills learned in class
- * Each month, there is a timed (30) minute Math challenge, that learners can participate in and earn points toward end of the year recognition

Math At Home

- * Sorting and Counting: Coins, Socks, Legos
- * Math in Real Life: Grocery Games, Estimating, Tipping
- * Patterns: Identifying, Creating, Analyzing
- * Board Games: Candyland, Twister, Mancala
- * Strategy Games: Continuo, Battleship, Ticket to Ride
- * Games with Dice: Shut the Box, Yahtzee
- * Card Games: Tens Go Fish, Double Compare, Cribbage
- * Cards and Dice to Reinforce Skills: Top It, Add Two, Multiply Two, Fact Practice
- * Don't Miss Great Math Books: Math Curse, Grapes of Math, A Grain of Rice

Thank You For Celebrating Math
With Us
This Morning!

