

# Captain Elementary Stakeholders Mathematics Update

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# Agenda

- Implementation
- K-12 Curriculum
- Hands-On Activity- Word Problem
- Break-Out Sessions
- Q & A
- Articles to take home
- Bedtime Math-A Resource for Parents

# Kindergarten Implementation 2013-2014

- This May, kindergarten teachers will end their first year of implementing the Math in Focus text series.
- August 2013 the kindergarten teachers and elementary mathematics specialists participated in a half-day of training. The trainer identified components of a model lesson and shared differentiated learning activities and centers specifically for kindergarten students who enter our classrooms at diverse levels of exposure to mathematical concepts.



# Kindergarten Implementation 2013-2014

- The kindergarten teachers have noted that the Math in Focus text series explicitly teaches mathematics vocabulary and emphasizes fluency with comparison language.
- “We feel the children have a better understanding of addition and subtraction. For instance, they are seeing combinations of 5 and 10 easily. We also feel the students have a better understanding of what a number is; for instance 5 is actually 5 of something, and teen numbers are 10 plus some more. They also have a better understanding of more, fewer and how many.”

1<sup>st</sup>-5<sup>th</sup> Grade

## Year Two of Math In Focus Implementation

- A trainer who has also taught Math in Focus in second grade and provided intervention services for fourth and fifth grade students spent  $\frac{1}{2}$  in day August 2013 with first through fifth grade teachers new to the District or new to teaching Math in Focus for their 2013-14 grade level assignment.
- This professional development experience started with teachers re-examining the Common Core State Standards for Mathematical Practice. She also discussed the components of an effective differentiated lesson, made recommendations for pacing, and identified components of the text series that could be used for ongoing assessment.

## Year Two of Math In Focus Implementation

- Ms. Caracciolo, math coordinator, continued to provide in-house professional development throughout the year for K-5 teachers to support them in implementing Math in Focus.
- The two driving questions for the work that day were: At each grade level, how are we explicitly teaching problem solving strategies? How do those strategies align and support the Common Core State Standards for Mathematical Practice?
- Lesson Structure
- Teach/Learn, Guided Practice, Let's Practice (Independent) Workbook (In Class), Extra Practice
- Games, Hands-on, Let's Explore, Re-teach, Enrichment

# 8 Mathematical Standards

- Make sense of problems and persevere in solving them
- Reason abstractly and quantitatively
- Construct viable arguments and critique the reasoning of others
- Model with mathematics
- Use appropriate tools strategically
- Attend to precision
- Look for and make use of structure
- Look for and express regularity in repeated reasoning

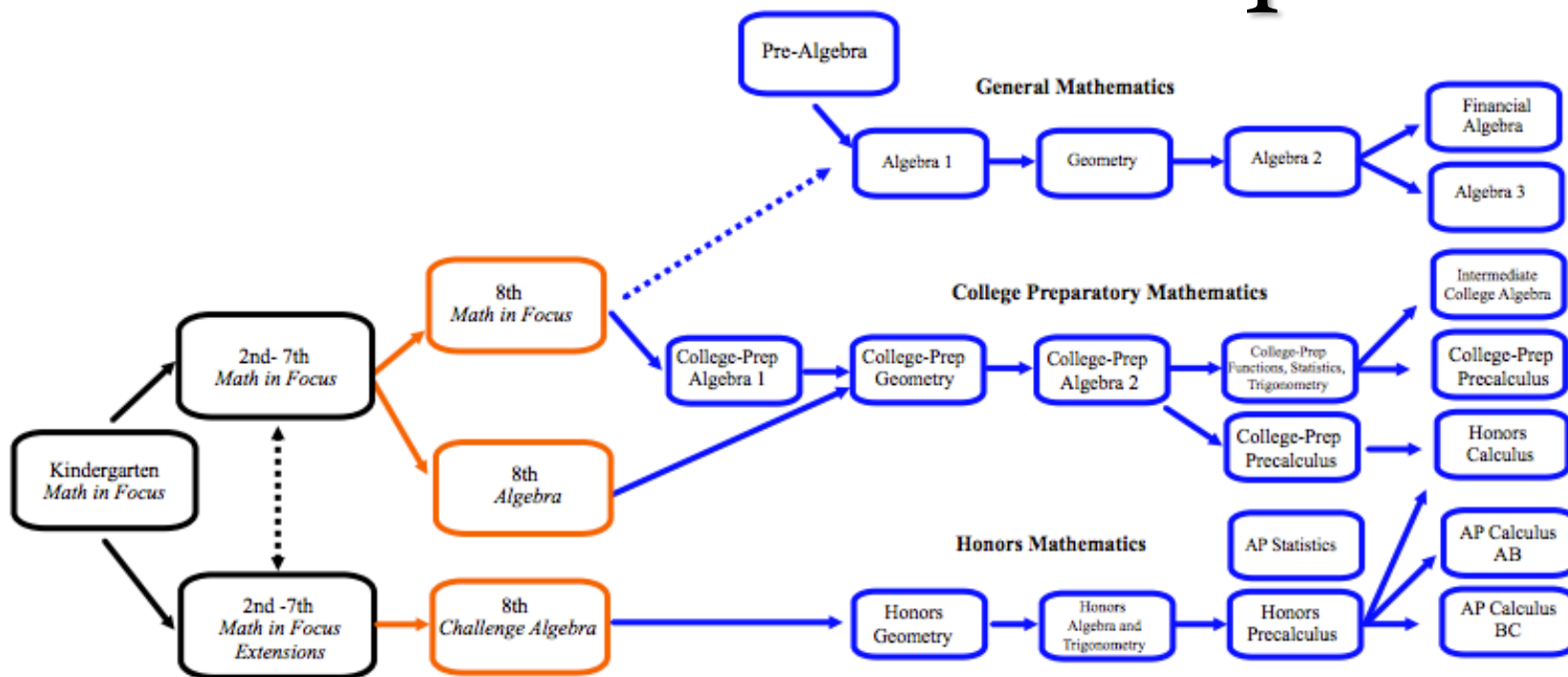


# 8 Mathematical Standards

- <http://www.scholastic.com/teachers/top-teaching/2013/03/guide-8-mathematical-practice-standards>



# 2014-2015 K-12 Mathematics Sequence



# K-12 Curriculum Map

	K	1	2	3	4	5	6	7	8	9-12	
Numbers & Operations	Cardinality & Ordinal Numbers										Number and Quantity
	Counting, Number Sets, Number Representations, Compare & Order Numbers, Place Value										
	Whole Number: Addition, Subtraction										
	Whole Number: Multiplication, Division						Computation with Rational Numbers				
	Estimation and Mental Math										
	Money				Decimal Concepts, Operations, & Applications						
	Fraction Concepts, Operations, & Applications										
Algebraic Thinking	Ratio, Rates, Proportions & Percent										Algebra & Functions
	Patterns & Properties										
	Algebraic Relationships and Models							Functional Relationships			
Geometry & Measurement	Number Sentences, Equations & Inequalities										Geometry
	Time & Temperature						Lines & Angles				
	Size & Position		Lines & Angles								
	Shapes						Circles				
	Length & Distance						Polygons				
	Perimeter & Area										
	Capacity, Surface Area, Volume						Solid Figures				
	Weight/ Mass										
			Congruence & Similarity						Congruence & Similarity		
Data Analysis					Transformations				Transformations		Statistics and Probability
					Coordinate Geometry						
	Collect, Classify, Organize, Represent, Interpret & Analyze Data										
Probability					Investigate Outcomes & Express Probability				Statistics and Probability		



# Can you solve this problem? (without using Algebra)

Tim saved \$600 to buy a new bike and helmet.  
He spent  $\frac{2}{5}$  of his money on the bike. He  
then spent  $\frac{1}{4}$  of his remaining money on the  
helmet.

How much did Tim spend on the bicycle and  
helmet altogether?

How much money did he have left over?

# Break-Out Sessions

## We want your feedback!

- What would a math night look like for parents in the future?
- What information or support do you need about Common Core?
- What are successes and challenges with the current curriculum?
- How can teachers and the math specialist continue to support you and your child with the math curriculum at home?



# Q & A Take Home Articles

- “Raise The Bar On Problem Solving” by Lisa England
- “Singapore Math: Using the bar model approach, Singapore textbooks enable students to solve difficult math problems-and learn how to think symbolically” by John Hoven and Barry Garelick

# Bedtime Math

