



# **Aligning Harrison's Mathematics Program to the Common Core**

December 10, 2014

Michael Greenfield, Assistant Superintendent for Curriculum

Dennis Kortright, Director of Mathematics

Kelly Malczewski, HHS Mathematics Teacher

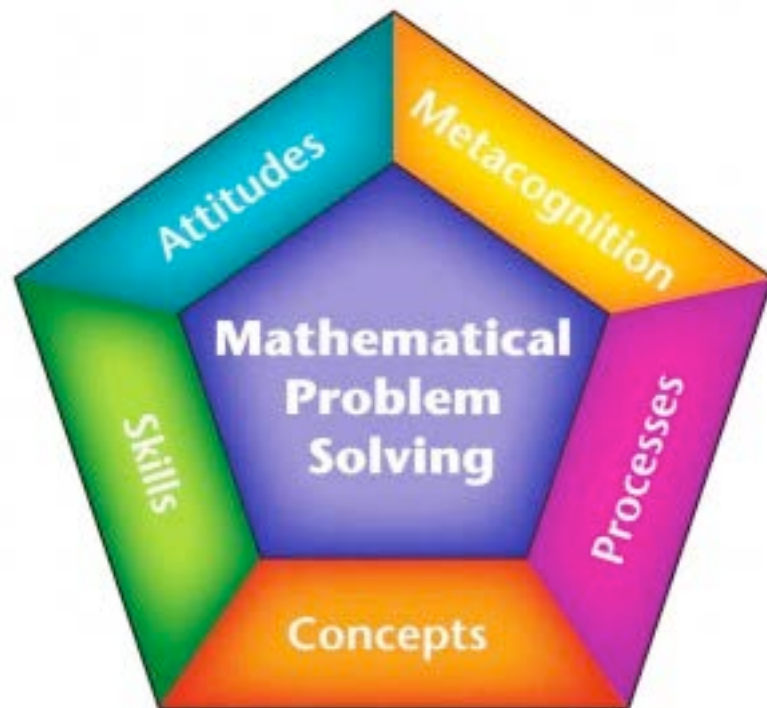
Anne Abrams, Purchase School Teacher

Cindy Neese, Preston School Teacher



# Presentation Overview

- Aligning Harrison's Program to the Common Core Standards
- Historical Context
- Program Evaluation Process
- *Why Math in Focus?*
- Implementation Plan



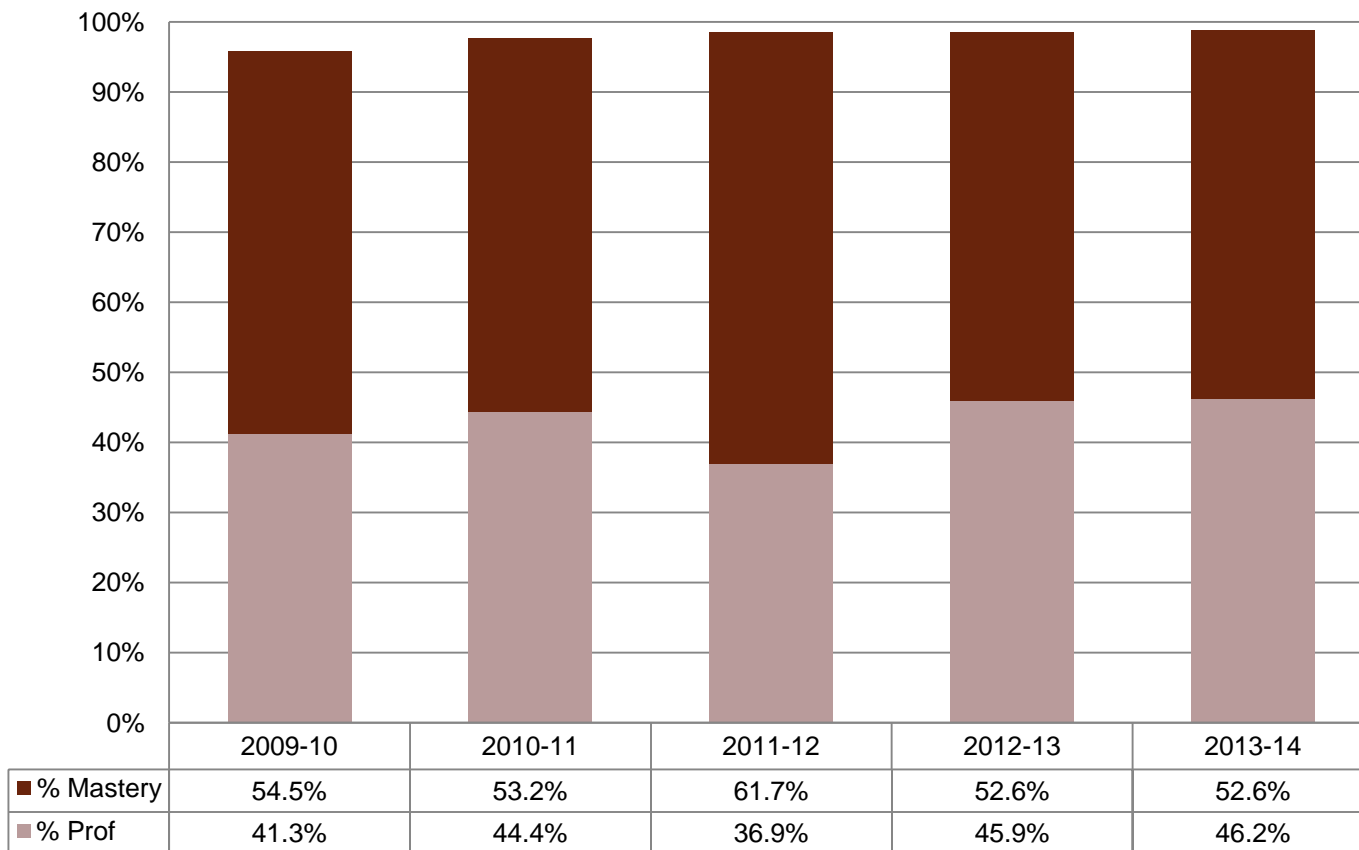


# Common Core Math Standards





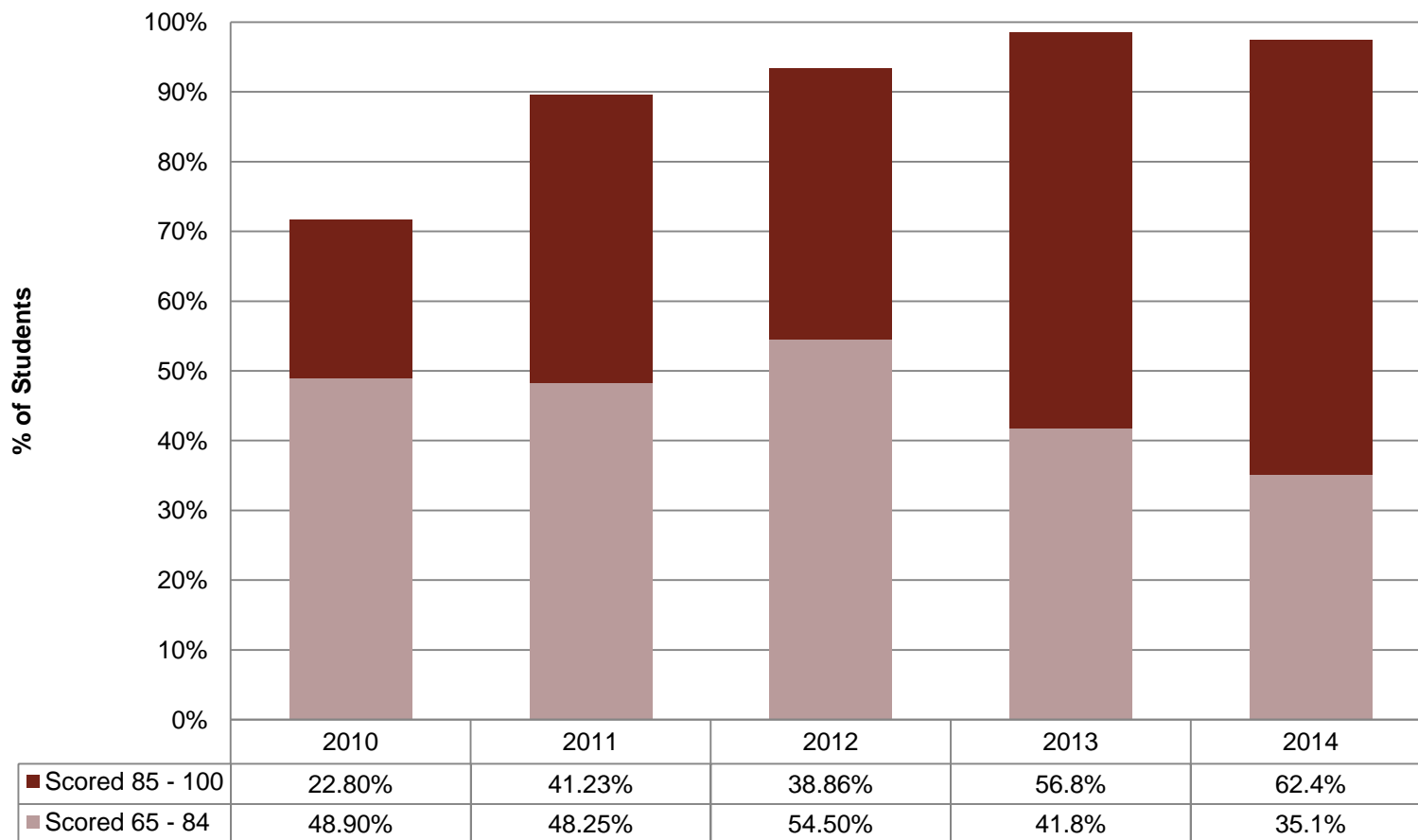
# Integrated Algebra – 8<sup>th</sup> Grade



**99% Proficiency**  
**53% Mastery**



# Geometry

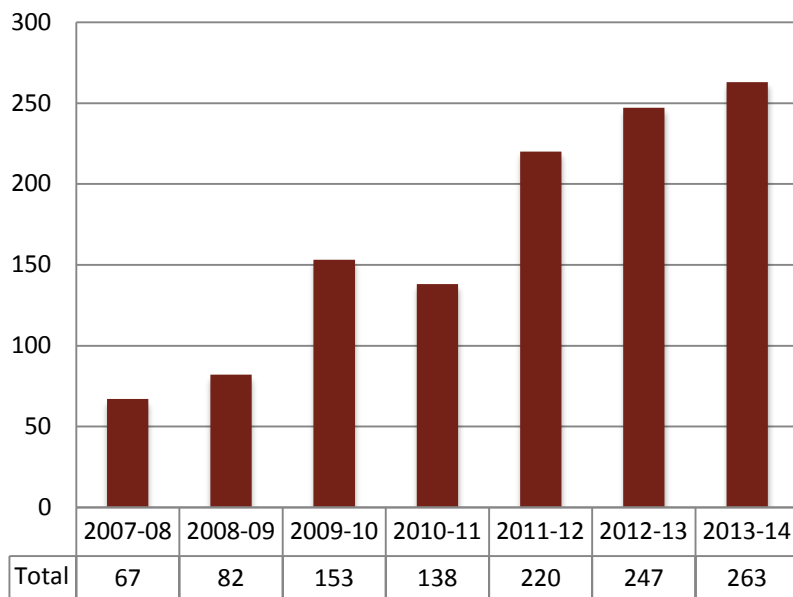


**Proficiency and Mastery : 98% and 62%.**  
**Largest number of students scoring mastery: 126.**



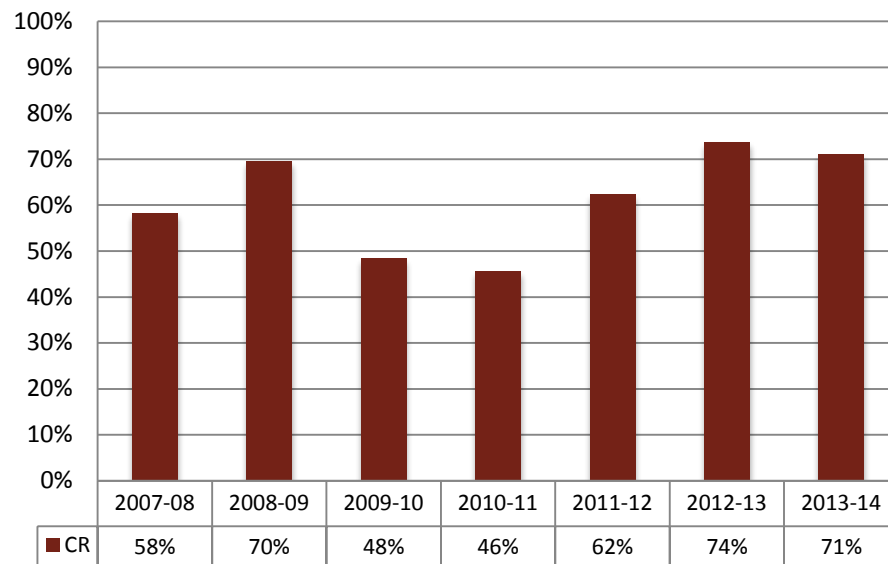
# AP/IB Math Exams Meeting College Readiness Standards

## AP/IB Math Enrollment



First year of IB  
Program  
2011/12

## AP/IB Math College Ready



First year of IB  
Program  
2011/12

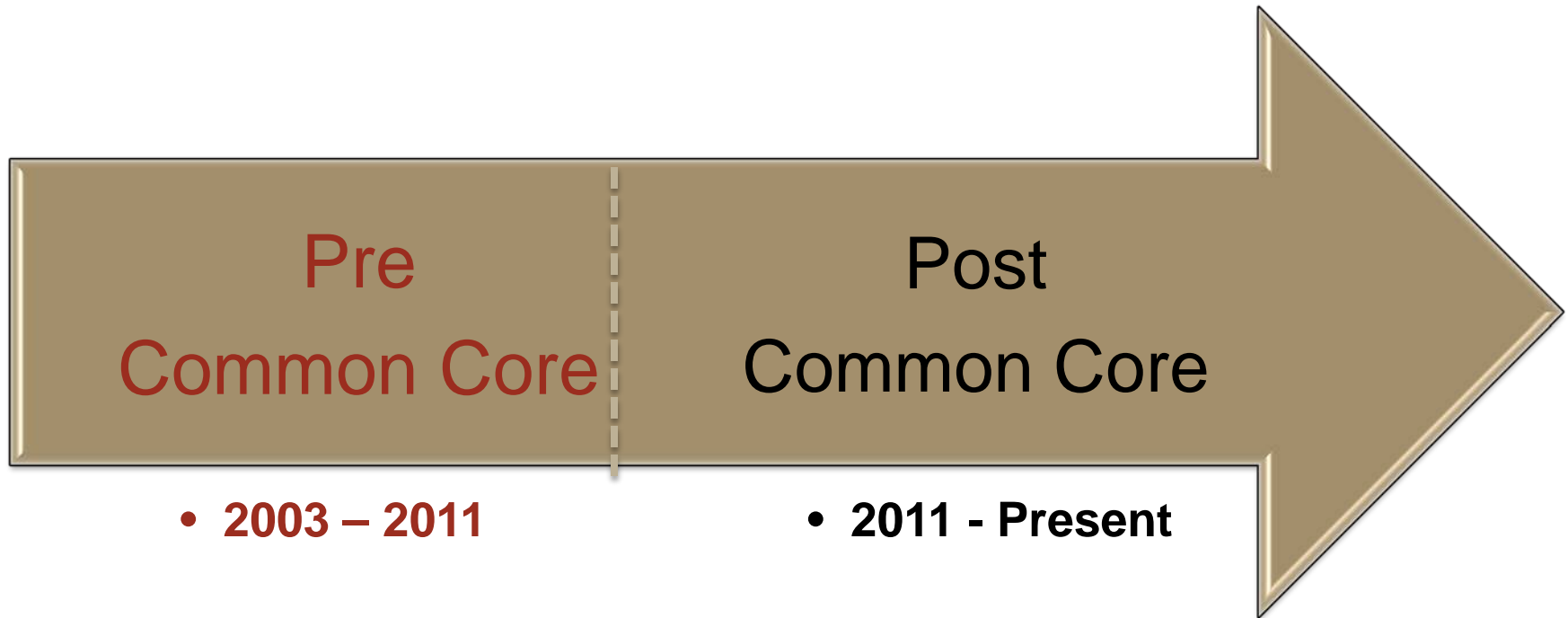


# Program Evaluation Process...





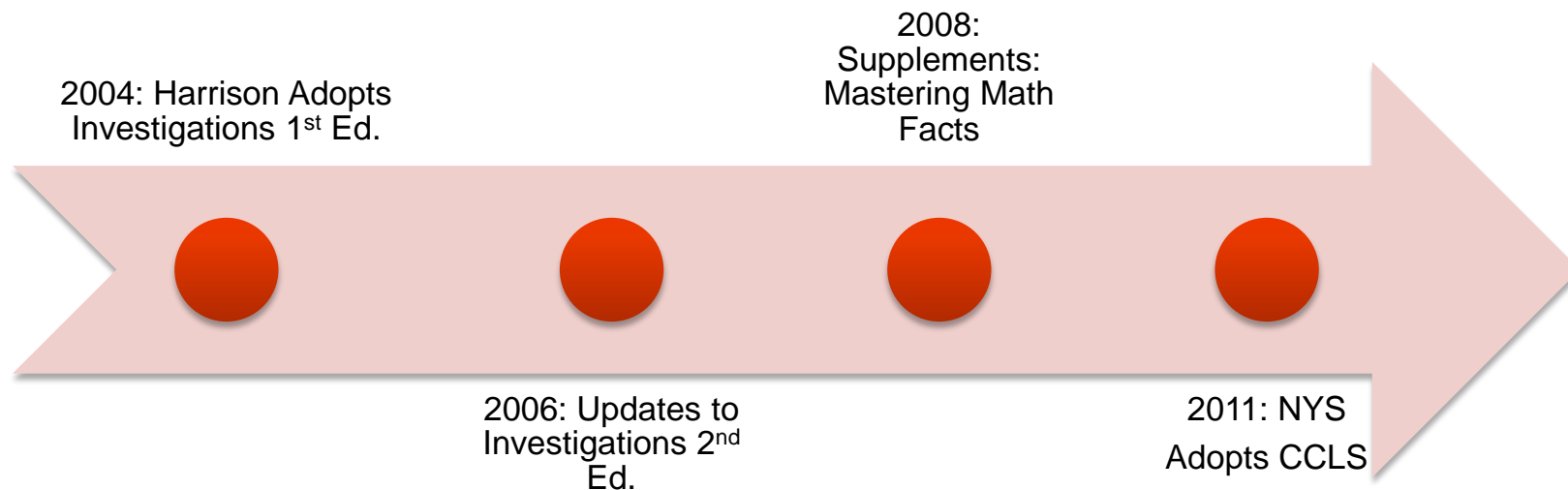
# Elementary Math Timeline







# Elementary Math: An Historical Context





# Math Audits

- 2005: Harrison HS
- 2006: LMK
- 2007: Elementary
- 2009: K-12
- 2010: Tri-State Consortium



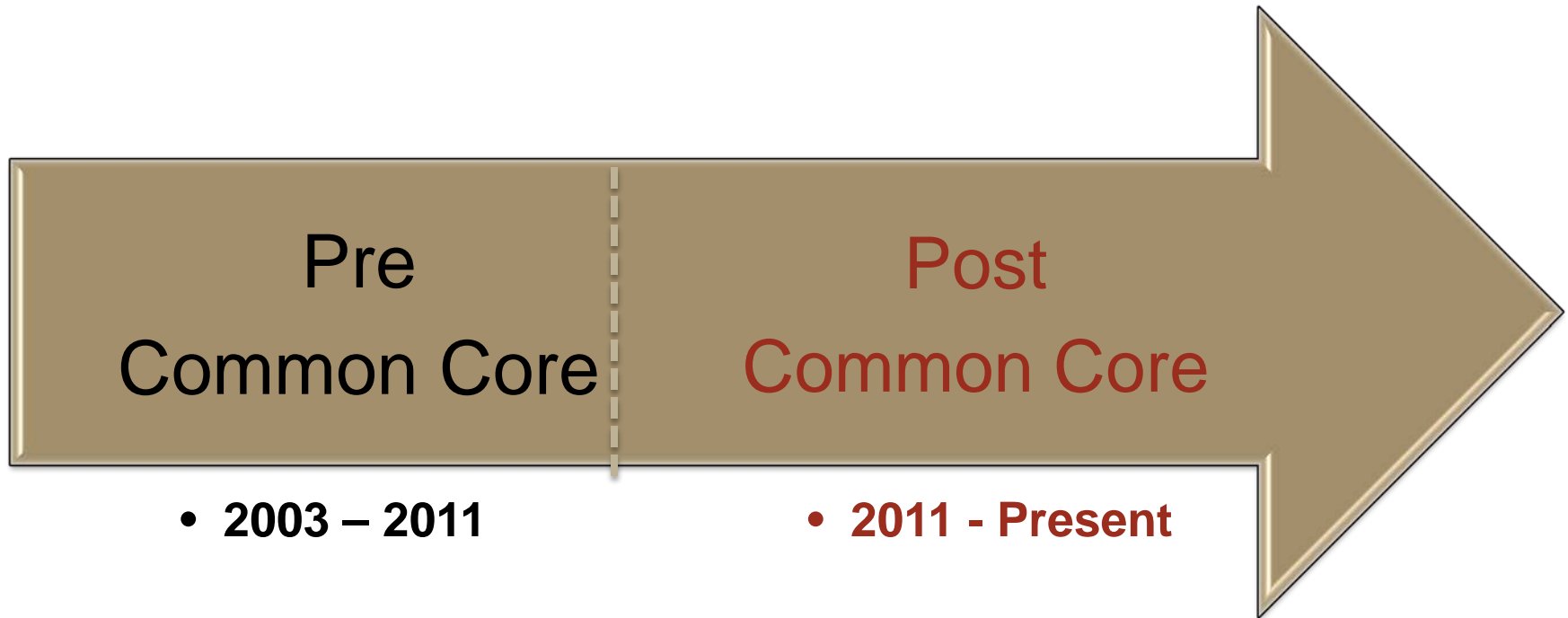


# Commendations from Elementary Math Audit

- ✓ Teachers view and behave toward students with a deep respect for them as thinking human beings.
- ✓ Teachers continuously and pervasively bring the mathematical thinking of students to the center of the classroom in a safe and caring environment.
- ✓ Teachers hold students accountable for their mathematical thinking and consistently probe for students' mathematical articulation and explanation, allowing multiple, appropriate mathematical representations and strategies.



# Elementary Math Timeline





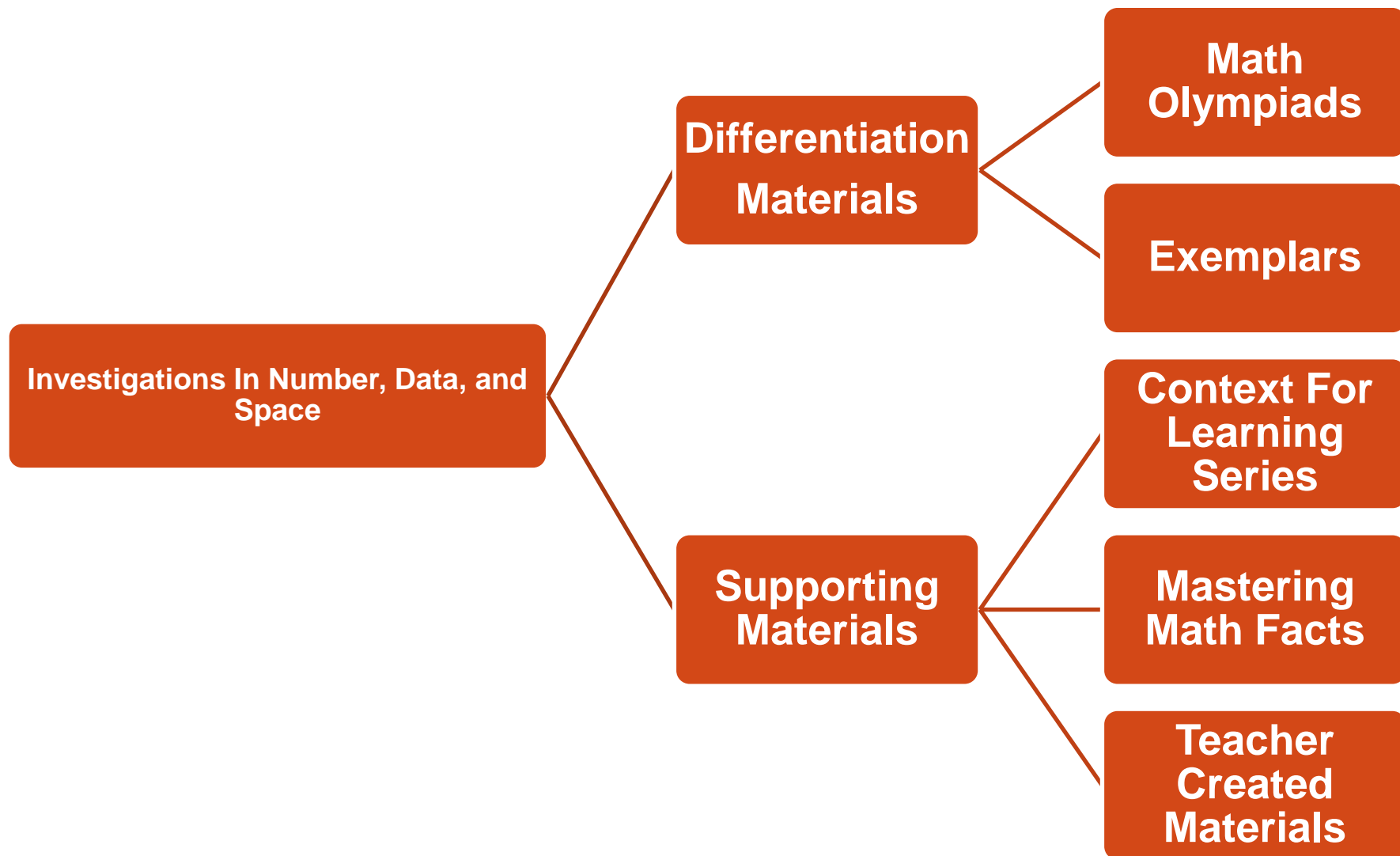
# Current Elementary Math Program: Investigations in Number Data and Space

- Created by Technical Education Research Centers (TERC) in Cambridge, Massachusetts
- Funded by National Science Foundation



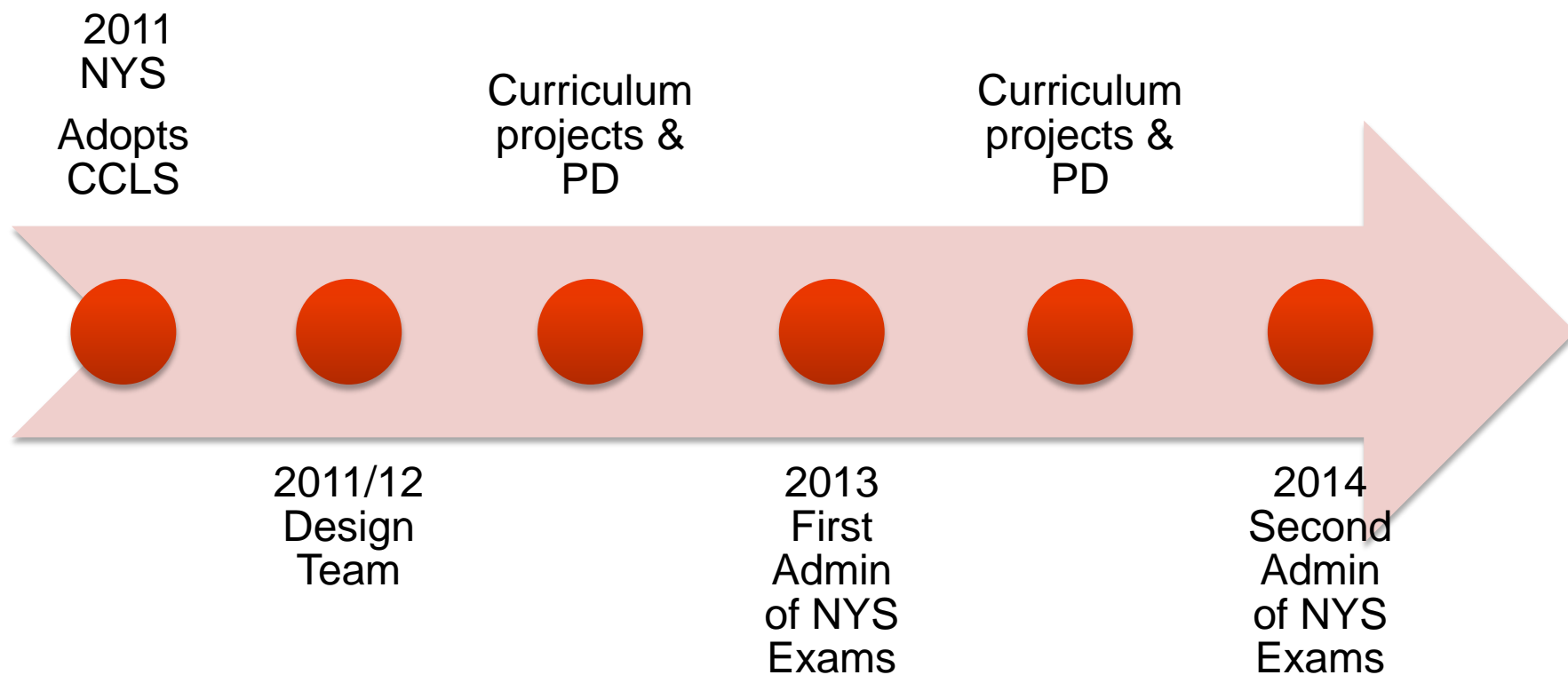


# Components of the Elementary Math Curriculum



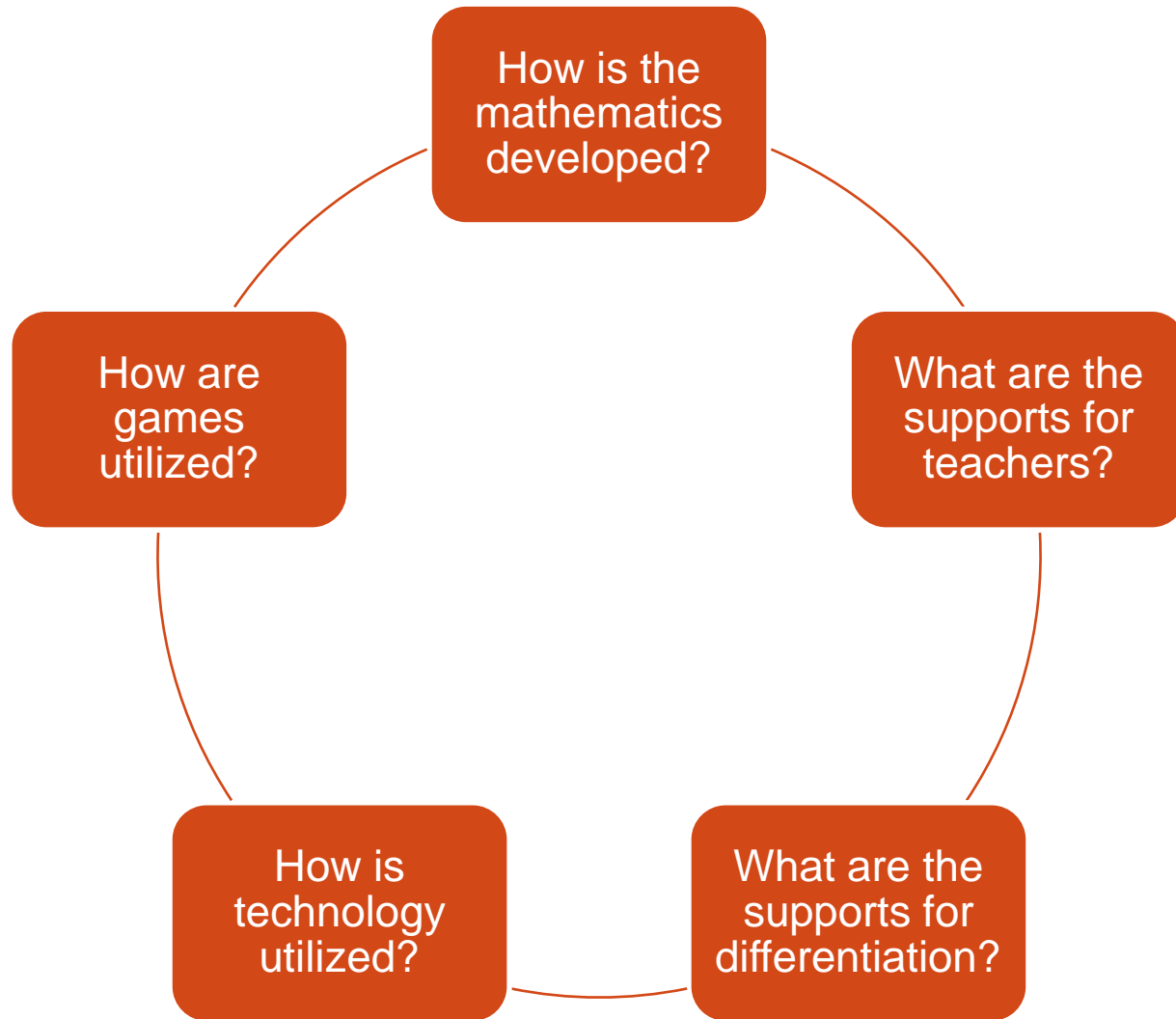


# Common Core Implementation Timeline





# Guiding Questions







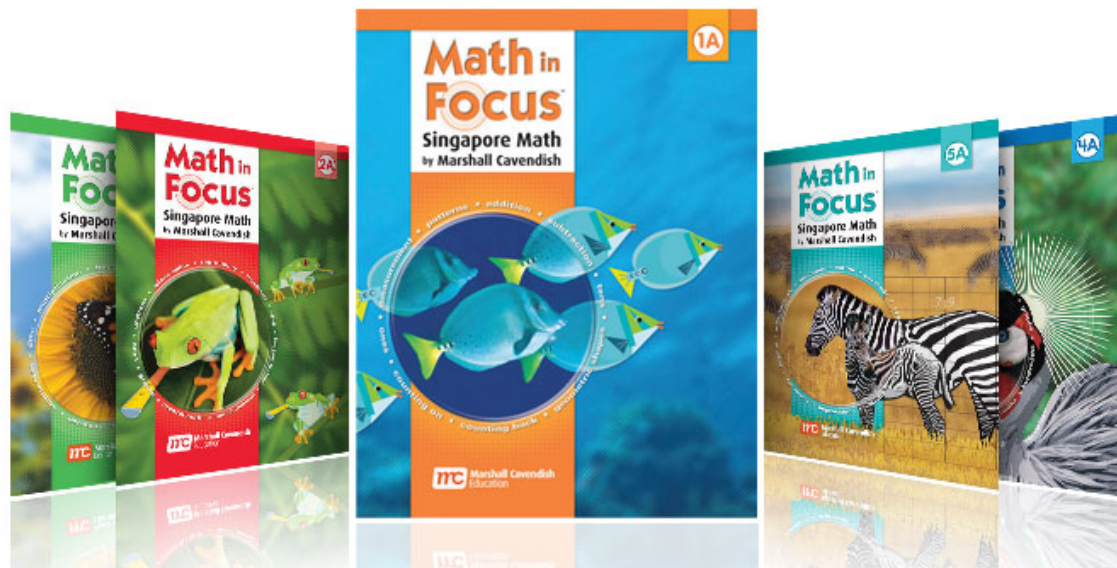
# Elementary Design Team: Program Analysis and Recommendations

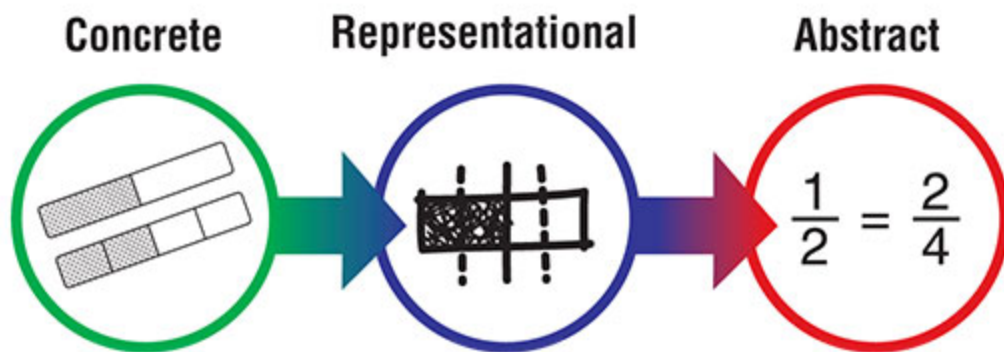
- Primary Math
- Math In Focus
- Go Math!
- Envisions
- EngageNY Modules
- Investigations



# Math In Focus

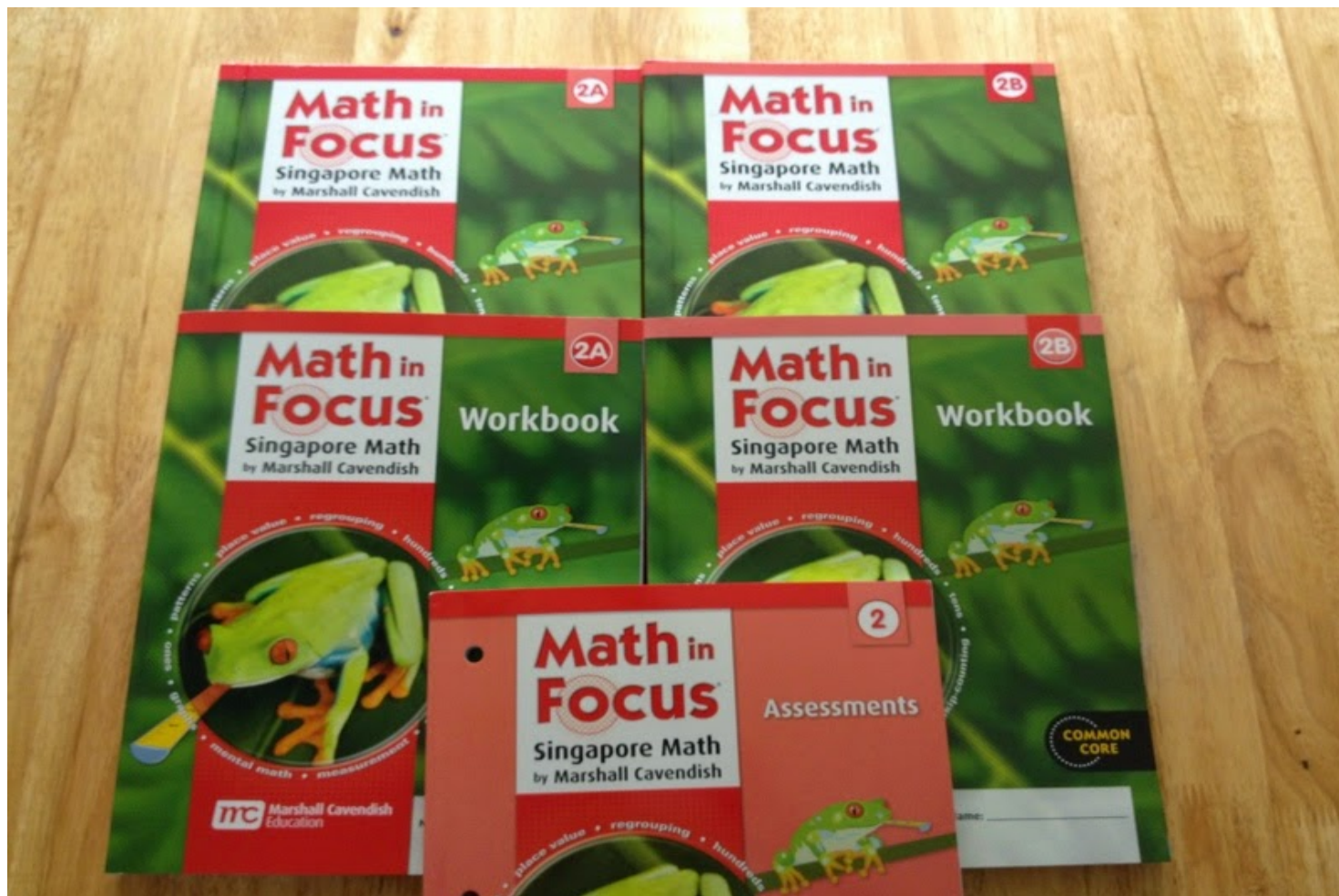
**Math in  
Focus™**  
Singapore Math  
by Marshall Cavendish







# Math In Focus Components



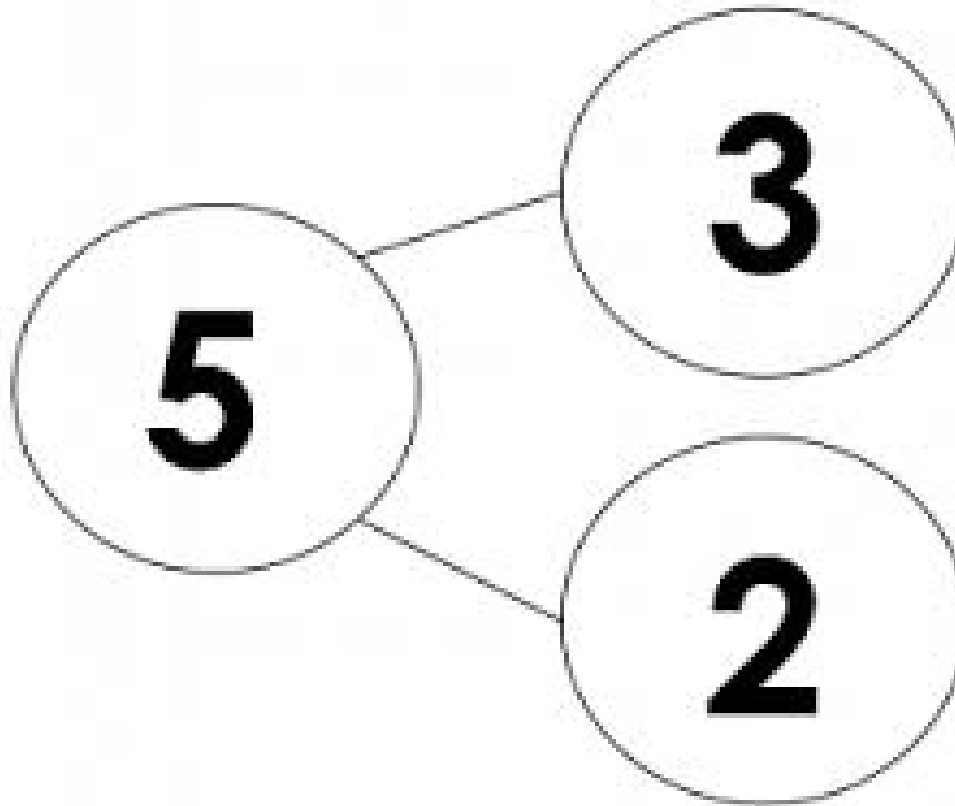


# Math In Focus: Strengths

- Rigorous
- Differentiation Resources:
  - Enrichment book, re-teach book, extra practice book.
- Multiple Problem Solving and Computational Strategies are developed
- Pictorial, Concrete, Abstract
- Games



# Number Bonds



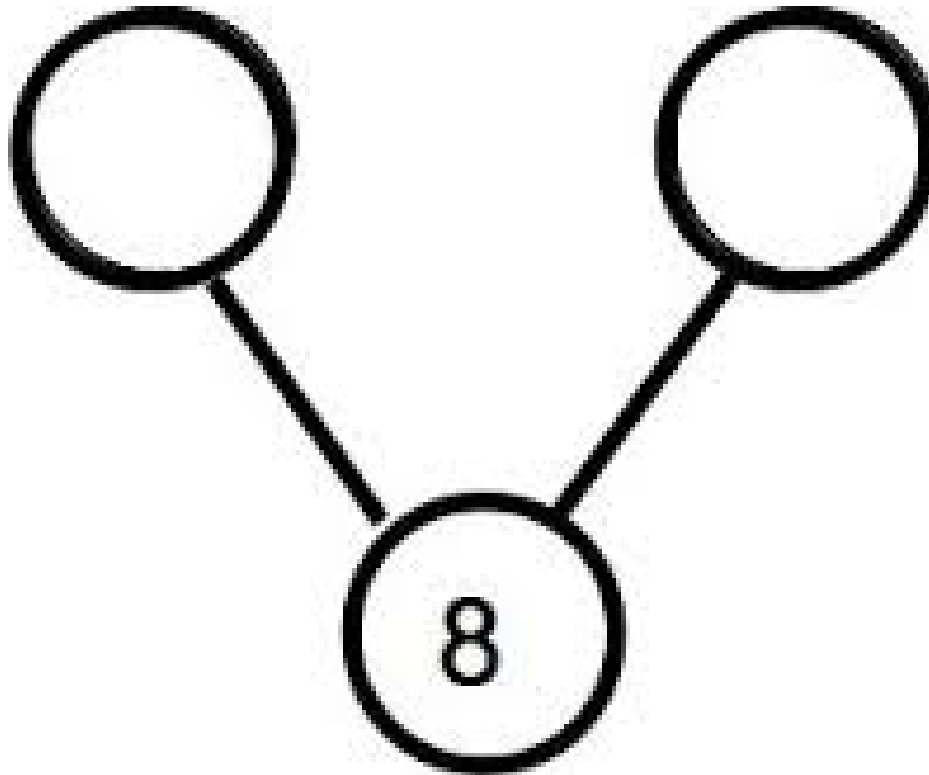




Date	Number Bond	Coins	Total Value
1-3-14			20¢
1-4-14			
1-5-14			20¢
1-6-14			30¢
1-7-14	 		30¢
1-8-14			
1-9-14			10¢
1-10-14			
1-11-14	 		25¢
1-12-14	 		10¢
1-13-14			10¢
1-14-14			
1-15-14			
1-16-14			



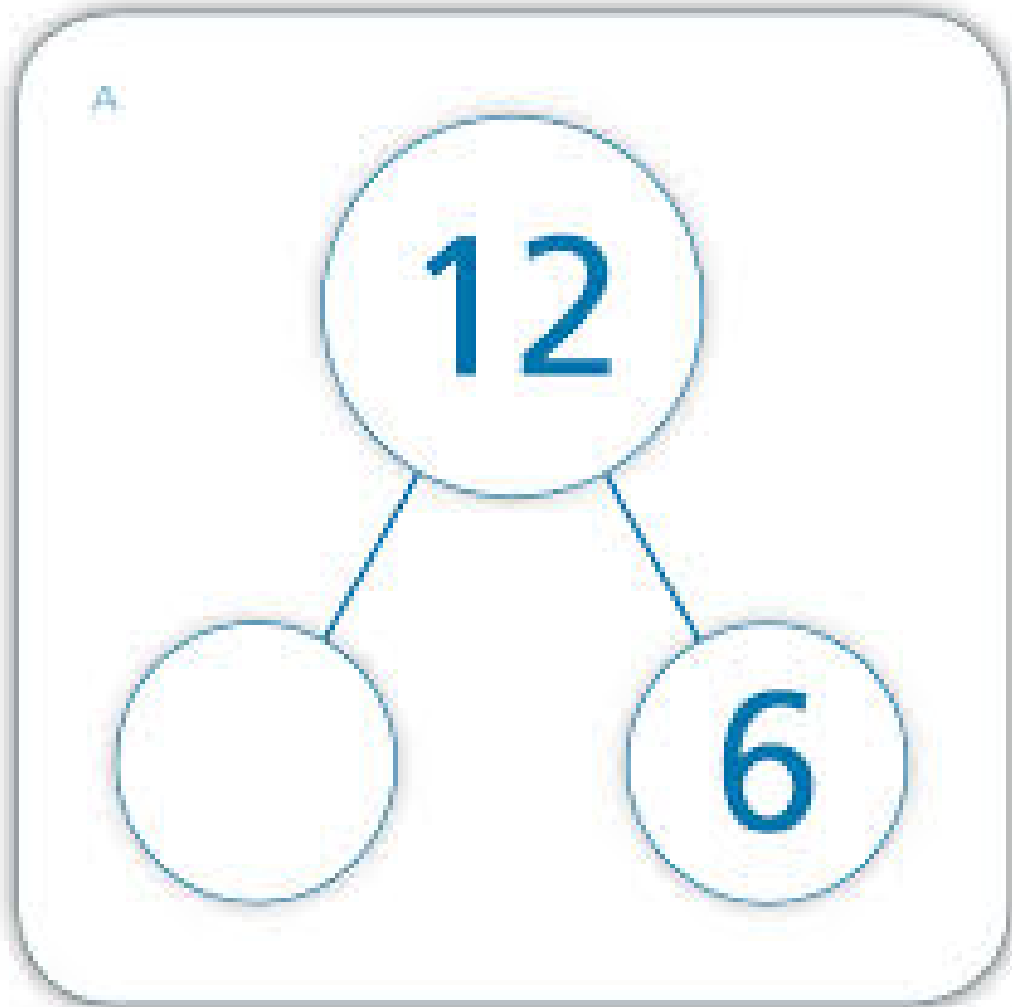
# Number Bonds







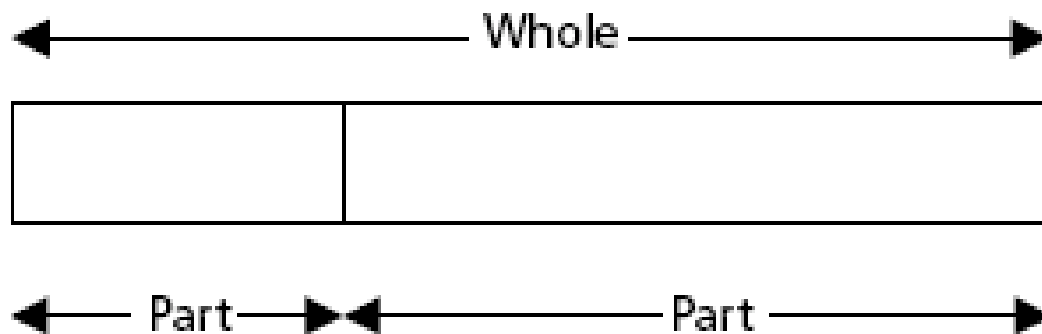
# Number Bonds





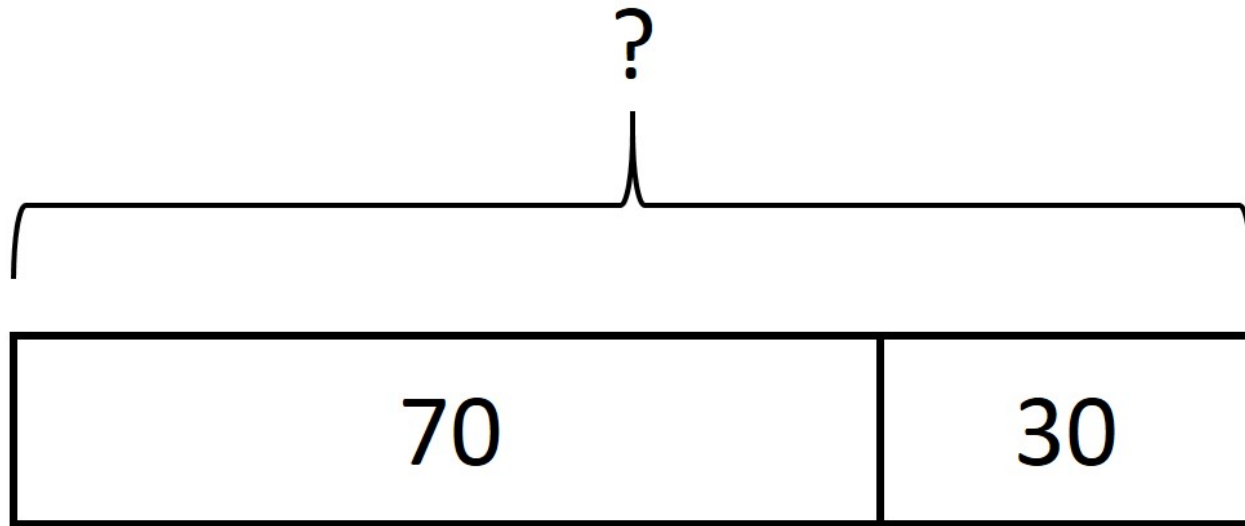
# Bar Models

(a) Type 1: part-whole model (addition and subtraction)





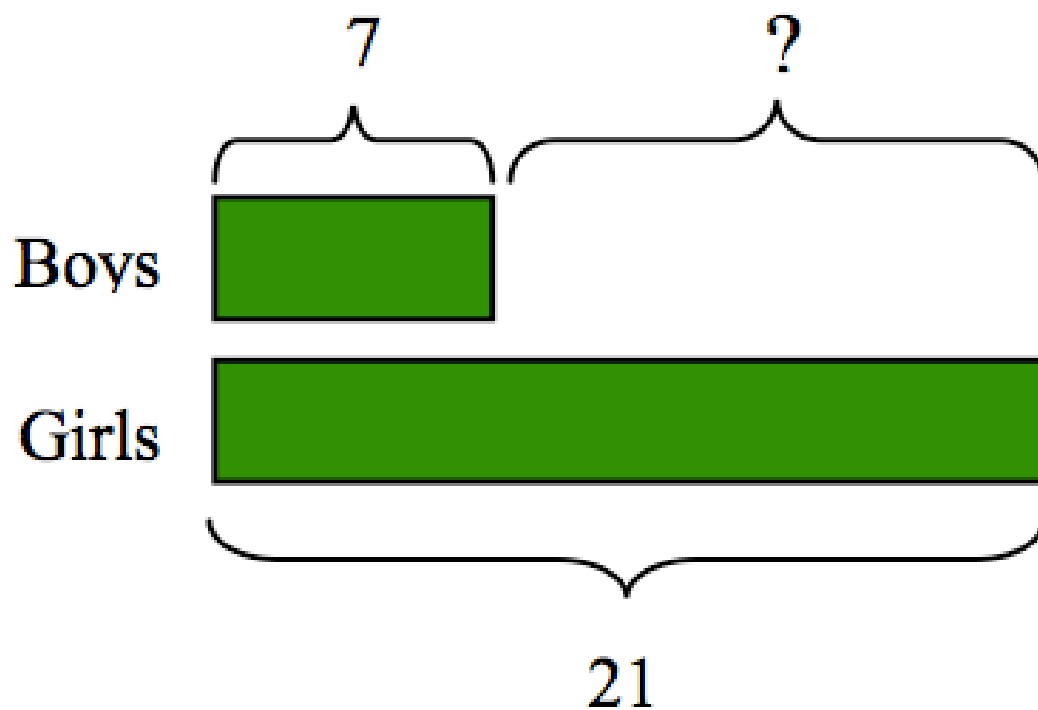
# Bar Models



$$70 + 30 = 100$$



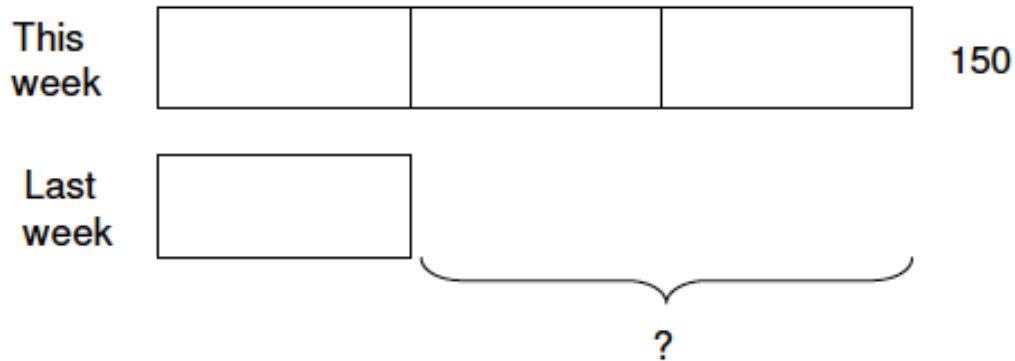
# Bar Models





# Bar Models

**Example:** I earned three times as much money this week as I did last week. This week I earned \$150. How much more did I earn this week than last week?



$$3 \text{ units} = 150$$

$$1 \text{ unit} = 50$$

$$150 - 50 = 100$$

I earned \$100 more  
this week than last  
week



# Math In Focus Districts

Districts	Previous Programs
Edgemont	Everyday Math
Pelham	Investigations
Rye Neck	Unknown
Pleasantville	Teacher Created
Bedford	Trail Blazers
Manhasset	Everyday Math
Jericho	Unknown
Port Washington	Investigations
North Shore	Everyday Math
Greenwich CT	Everyday Math
Weston CT	Everyday Math



# Implementation Plan

- 2014/2015
  - Grades 4 and 5 receive professional development and implement units on Measurement and Geometry
  - Create scope and sequence for 2015/2016 school year
- 2015/2016 school year full implementation



# QUESTIONS AND ANSWERS